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War and Food (In)security – A Lesson from the Russian-Ukrainian Conflict

Abstract

The Russian invasion of Ukraine has implemented legitimate fears of a global crisis and further and inevitably aggravating existing food-security challenges. The international community is being called upon to take targeted action to address the rapidly-evolving, resultant scenarios, making it essential to go beyond immediate interim measures and to re-examine the agricultural and energy policies that underpin our global economy.

This article, without any claim to exhaustiveness, examines the inevitable link between war and the dynamics related to food security. In the first instance, a theoretical-interpretative key of the logics of violent conflicts that generate a relevant impact on global food supplies and food (in)security is provided, within the broader framework of the dynamics related to the instability of international relations which hinder the supply of energy resources and determine the volatility of general price levels. In the concluding section, there is reflection crossed reference to the ongoing Russia/Ukraine conflict as well as the devastating consequences on global food systems, already put under stress by the COVID-19 pandemic.

Keywords: Food Security, War, Crisis, Russia, Ukraine, Energy Instability, European Union

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War and Food Security. Introductory Notes

The correlation between food security and stability has always given rise to the idea of a bond prompting great peace of mind (Bruckert et al., 2016). Whereas, to the contrary, armed conflicts, especially in a highly globalised context, generating upheaval and becoming the maximum expression of an emergency (Fenucci, 2014), appear to be a determining factor in the food insecurity that also affects regions located outside the battlefield (Behnassi, El Haiba, 2022). As is well known, food security pursues the ambitious goal of achieving free access to food, both in terms of quantity and quality; *rectius*, food security comes true only when “every person, at all times, has physical, social and economic access to sufficient, healthy, and nutritious food capable of satisfying the needs and food preferences necessary for an active and healthy life” (Rodotà, 2014). If this definition, consolidated by the Food and Agriculture Organization of the United Nations (FAO), declines food security in such terms, then it is easy to understand how the extent of food insecurity - measured by the levels of malnutrition, or by the number and share of the population that consumes inadequate quantities and insufficient nutritious food to meet one’s dietary need – essentially depends on the availability and accessibility of food; availability and accessibility that, in contexts marked by conflict, creates many obstacles: “In fact, conflict is the main driver of hunger in most of the world’s food crises. Conflict breeds hunger. It can displace farmers and destroy agricultural assets and food stocks. Or it can disrupt markets, driving up prices and damaging livelihoods. In this vicious circle, conflict and lack of food break down the very fabric of society, and all too often lead to violence” (Haga, 2021). Food insecurity, the main source of geopolitical tensions and social unrest (Bellemare, 2015), exacerbates existing frustrations, upsets the social order, and pushes states towards political instability (Soffiantini, 2020).

The current Russia-Ukraine war has, in fact, generated new uncertainty, revealing the systemic weaknesses extant in the structures connected to international food security. In fact, since 2020, global average monthly food prices have generally been higher than in previous years for a variety of reasons linked primarily to the COVID-19 pandemic, which has generated obstacles in the global food supply chain. The droughts that have hit the agricultural production of various countries, natural disasters and environmental changes, along with the many conflicts in progress in the world, are added to “structural phenomena in recent decades such as the spread of poverty, the unequal distribution of resources in the face of rapid demographic growth, periodic economic crises, and political

instability contribute to food insecurity all over the world” (Zupi, 2022). The conflict also resulted in,¹ given that the entire sector of the agri-food system is now subjected to a growing level of internationalisation. In fact, the procurement of raw materials takes place on international markets, multinational companies control a large part of the distribution chain, and many countries are dependent on imports to satisfy domestic food consumption. These aspects characterise the entire agri-food chain as being highly global and complex, with evident repercussions also in terms of the minimum standards and guarantees necessary to protect the safety, health, and quality of food. Moreover, if agri-food activities are among the most vulnerable to climate change, then the need to guarantee access to healthy food must be combined with the sustainability of production, distribution, and consumption processes. In this sense, “food security is therefore increasingly becoming a global issue that is affected by the internal dynamics of individual countries or economic areas” (Giannelli et al., 2021, p. 47).

The triggered upheaval, with all the human-based security implications that it could entail, crept into the sheaf of pre-existing challenges that had already put pressure on prices and supply chains in addition to the fact that dependencies on international trade were already at the centre of attention before the Russian invasion of Ukraine, due to the unprecedented shock caused by the disruption of food systems caused by the COVID-19 pandemic, amplifying the level of alert either on strategic dependencies and the resilience of supply chains global, or on their ability to cope with vulnerabilities (Hellegers, 2022). Thus, the food crisis that is spreading is certainly not happening in a vacuum, but is grafted onto a context that is already strongly and dramatically marked by the COVID-19 pandemic, an energy crisis, maritime constraints, and recent climate-induced events (Nicas, 2022). In this sense, the war is part of a context characterised by the consequences of the pandemic, highlighting the criticalities of global supply chains, causing the increase in the price of raw materials that worsen and amplify a worsening of food security. This war involves Ukraine, one of the world’s granaries, from which 34% of the wheat, 27% of the barley, 18% of the corn, as well as 73% of the sunflower oil products come, are exported via Black Sea ports, and which reach many countries of the Mediterranean, the Middle East, and sub-Saharan Africa. For its

¹ An information note from the FAO highlighted that Ukraine and Russia are among the most important producers of agricultural products in the world, FAO, 2022. *The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the current conflict*, 25th March 2022, <https://www.fao.org/3/cb9236en/cb9236en.pdf>.

part, Russia is among the world's largest producers of potash (17%) and nitrogen fertilisers (15%). The shock of the agricultural commodity and fertiliser supply chains, as well as the energy crisis linked to sanctions against Russia and the evident logistical limitations due to the war reduce the availability of these products on the markets with an effect also in the medium term. Additionally, at the global-offer level, there are the export bans imposed by some countries such as Argentina and Hungary.

However, global food insecurity caused by the conflict in Ukraine reflects a problematic issue, indeed it is a wicked problem; complex, unpredictable, indefinite and, in some ways, intractable by its nature: "The war ushered in a period of higher food prices and reduced fiscal budgets, owing to previous bouts with COVID-19. Governments are thus less capable of providing income support to mitigate the impacts of rising food prices. A further risk is that hunger can feed into further conflict, raising the potential for further social instability driven by poorer segments of society with limited food access, especially should this coincide with climate disruptions in importing countries" (Montescaloros-Sembiring, 2022). After a period of decline in the last decade, the hunger issue shows once again its alarming and worrying face; the UN foresees a sort of so-called "hurricane of hunger" in the least developed countries of the world. "Hunger is on the rise globally for many reasons, including climate change, the COVID-19 pandemic, and internal conflicts. But with blocked ports and exports limits from both Russia and Ukraine, countries that rely on them for staple foods are at a loss. Shortages of fertiliser and fuel are also making it difficult to produce crops such as wheat, corn, sunflower, and safflower, complicating a critical planting season that starts in April in Ukraine. The lack of ability to plant this year could lead to fewer crops and an even worse outlook for food security" (Diaz, 2022).

The forecasts, therefore, are not optimistic; the ongoing war will increase this trend and this will undermine, (Berlinger, 2022).² *sine, dubio*, the results achieved in the food safety sector during the last decade, including those pursued through the Sustainable Development Goals. In short, it is a war which, by intercepting a global food system that is tired and under stress due to further conflicts – including the unequal distribution of resources, the spread of poverty, a health and environmental crisis, political instability – risks drastically aggravating the spread of general food insecurity, and to complicate the pursuit of goal 2 of the Sustainable Development Goals (SDGs) – Zero Hunger – a goal which aims to end hunger, achieve food security, improve nutrition and

² Experts estimate that 7.6 to 13.1 million people are threatened.

promote sustainable agriculture, and that, of course, greatly depends on the progress made under SDG 16 – Peace, Justice, and Strong Institutions – which aims at promoting inclusive societies. This means that, in addition to the quantitative objective of eliminating hunger (so-called “Zero Hunger”), objective 2 also includes a sub-objective relating to the quality of food, aiming to eradicate malnutrition in all its forms, and an objective of economic transformation aimed at increasing agricultural productivity and the income of small farmers by guaranteeing a model of sustainable agriculture (Zupi, 2022). In this regard, it is worth remembering that “(Civil) wars and violent conflicts are a drastic setback for every type of sustainable development. Conflict-affected countries are far from reaching the milestones of all SDG targets such as food security, including SDG 1 – ‘No Poverty’, or SDG 10 – ‘Reduced Inequalities’, in the first place. Food security, in turn, is necessary to achieve progress on SDG 16” (Kemmerling et al., 2022).

Undoubtedly, all armed conflicts weaken the ability of nations, families, and individuals to meet their food needs and can also hinder the cultivation, harvesting, processing, transport, and marketing of food. “There is no doubt that conflict exacerbates food insecurity. Conflict can reduce the amount of food available, disrupt people’s access to food, limits families’ access to food preparation facilities and health care, and increase uncertainty about satisfying future needs for food and nutrition” (Simmons, 2013). In particular, conflict can affect the ability of food systems and supply chains to function properly; production decreases due to producers being engaged in war operations, being unable to produce or even fleeing the country, agricultural inputs suffer a substantial interruption in foreign markets, and agricultural yields and water infrastructure are destroyed by military operations (Behnassi, El Haiba, 2022). Increasingly, armed conflicts can affect consumers’ ability to access sufficiently adequate food due to their declining purchasing power or the problem of food availability, they also involve an increase in food prices on local and international markets with negative effects on the import of food products in low-income countries, and, finally, they affect the ability of international food aid to meet growing food needs in times of crisis. Therefore, at present, the set of food risks, as a worrying outcome of armed conflicts, deserves to be considered, albeit briefly.

There is no doubt, as already pointed out, that many of today’s food crises are linked to wars and violent conflicts. Equally indubitable are the impacts of clashes and displacements (Gerlach, Ryndzak, 2022) on food security in the form of the destruction of agricultural land, irrigation systems and infrastructure, and chronic food insecurity, in turn, can

become a key factor in prolonging or intensifying conflicts, instigating a vicious cycle of violence and hunger (Martin-Shields, Stojetz, 2019). Therefore, there are many interconnections between food insecurity and violent conflicts; these correlations are often characterised by a high degree of complexity and contextualisation which, just as often, coincide with multi-layered crises which, in turn, contemplate the proliferation of terrorist groups and criminal networks, also implementing the fragility of the state (Kemmerling, 2022). It is rather peculiar, and at times surprising, to note that (Brück et al., 2016), conceptually, the encounter between the two thematic fields has scarcely been targeted analytically. In terms of food and nutrition research, the criteria for determining the state of food insecurity have been identified on the basis of four dimensions – availability, access, stability, and safety – which also include a series of variables referring to the sectors of health, food, and agricultural production prices. Constant analytical monitoring, which assesses global, regional, and national food security, in order to implement knowledge and identify needs, identifies the presence of conflicts as one of the drivers of food insecurity.³ On the other hand, on the side of conflict studies, the research identifies and distinguishes between the duration and intensity of violent conflicts, the causes, the key factors and the methods of mobilisation, but although there are numerous investigations, a categorisation of conflicts is still missing, which includes food insecurity as a qualifying indicator.

Recently, in order to overcome this gap, the web of relations between wars and food insecurity has been a subject of reflection which is worth mentioning; regarding the impact generated, four dimensions have been identified – destruction, conflict-induced displacement, food control, and “hunger” (United Nations Security Council, 2018) as a weapon of war – which are key amplifiers of a sort of vicious circle that occurs between the two poles. The unfolding of these dimensions determines the inevitable implementation of food insecurity, contributing to increasing structural vulnerability within the affected societies; rising food prices and social inequalities, exclusion from political decision-making and the (prosperous) fragility of the state are, in turn, potential triggers of violent conflicts. Increasingly, this vicious circle is directly or indirectly influenced by external influencing factors such as pandemics, economic shocks, natural hazards, and climate change (Kemmerling et al., 2022).

With regard to the first intercepted dimension – destruction – it should be emphasised that violent clashes generate, to use the metaphor, a destructive mass that first of all exploits the vulnerability of human

³ See the annual reports produced by the FAO, IFAD, Unicef, WFP, and WHO on the state of food and nutrition security in the world.

beings in various ways, causing vicious circles of violence and hunger, and particularly affecting the agricultural sector, which suffers more damage compared to other economic sectors. Most of the battles and fights, which take place in rural areas, where, incidentally, it is easier to hide (Fearon, Laitin, 2003), deal severe blows to small-scale agriculture and livestock – commodities which we know play an important role in the production of subsistence economies – by exposing them to the destructive effects of war. The destruction (due to bombing) or contamination (due to land mines and chemical weapons) of agricultural areas, as well as the decimation of infrastructure (irrigation systems, roads, bridges, and buildings) not only entail massive agricultural production losses, but could also force farmers to abandon the sector because they are no longer able to cultivate the fields due to a lack of access to seeds, fertilisers, credit, and capital, all caused by the uncertainty of access to buyers and markets (Bauman, Kuemmerle, 2016). Added to this are the dynamics associated with the reconstruction of war-torn countries, whose rehabilitation of areas for food production and supply requires quite a long time; cleaning up the battlefields, rebuilding the physical infrastructure, and establishing operational governance structures. It takes both years and resources, not to mention that post-conflict reconstruction phases are often complicated by bitter disputes over access and ownership issues (Van Leeuwenn, Van Der Haar, 2016).

Of course, war-based devastation and degradation of agricultural land and its related infrastructure provokes the second dimension; conflict-induced, large-scale displacements that not only result in the collapse of agricultural production and infrastructural degradation, but also abruptly disrupt the chains of local and regional supply by increasing the prices of food on local markets. At the same time, displaced people have to give up their livelihoods as food producers, and are thus exposed to food insecurity themselves, especially if they cannot eventually resume agricultural activities (Bruck et al., 2016).

With regard to the third dimension identified – the control of food – it should be noted that during violent wars, the supplying of food acquires strategic economic importance for any armed group. The presence and governance of armed groups have a direct impact on local food security and the control of production areas. Historically, the supply of food to large armies went hand in hand with the plundering of food supplies *and* the plundering of families and civilian markets. Although looting is still a common strategy for armed groups, the links between the presence of armed groups and food security are not necessarily destructive; armed groups often show a strong interest in increasing local food production.

Fighters can take direct control of agricultural resources and livestock for sustenance or impose taxes on these products. Consequently, people in conflict-affected contexts also adapt their practices to political changes and (local) political actors. To protect their livelihoods and food security, people (voluntarily or forcibly) cooperate with armed groups (Martin-Schiels, Stojetz, 2019). Individuals can support armed groups to take advantage of a conflict through better economic opportunities, and access to food, farmland or livestock. Moreover, the way in which armed groups deal with food production is a significant indicator of their relationship with local communities (Oberschall, Seidman, 2005).

Finally, with regard to the fourth dimension – hunger as a weapon of war – we note how, in cases of violent conflicts directed against specific social segments (that of the ethnic, religious or political), food insecurity can even become a weapon of war (Messer, Cohen, 2015) and turn into a real intentional military strategy that includes cutting food supplies to harm hostile armed groups and those who support them, and, in some cases, the creation of humanitarian access barriers for the distribution of aid. Blocking access to food and destroying food infrastructure – filling wells and canals with concrete, destroying arable land (the so-called “scorched earth” policy) – represent violent techniques calculated not only to spark mass hunger, malnutrition, and hunger among the population, but also to encourage displacement and erase the memory of those who once lived there (Wimme, Schetter, 2003).

Indeed, to the critical consequences generated by wars and suffered by the social sphere can we add a worsening of diplomatic relations between countries; the balance of power is regulated through drastic measures, as well as through spurious uses of one’s resources, up to and including dramatically resorting to the use of arms, nullifying any geopolitical stability.

International Stability Under Siege

The international order is made up of a set of extremely unstable relationships, as the mathematician René Thom prophesied it would be during the 1950s. With regard to the main causes, the scholar identified them in a series of vectors, such as the cyclical nature of various crises, the wearing down of some institutions, but, above all, war. The start of the era of extreme uncertainty was also marked by the establishment of new alliances, such as that of BRICS, in Southeast Asia. The strategies of these new actors are developed through the Chinese Belt and Road Initiative, which in fact rewrote the geopolitical routes against the rubble of liberal

globalisation (Di Lucia, 2022). The role of the hegemonic powers appears to be fundamental for reordering the directives of the global establishment through the establishment of diplomatic plots.

The concept of hegemony translates into a combination of so-called “hard” and “soft” power. The first interpretation is purely of a military nature, with the USA and the Russian Federation being the main exponents, as holders of atomic weapons; the second interpretation, on the other hand, is of a financial and charismatic nature, as represented by the Popular Republic of China, and due to the fact that it possesses US public debt securities, raw materials, and an extensive production chain (Gruppi, 1977). The extreme variety of these international actors and the security nihilism that prevails in foreign policy do not always allow diplomacy to fulfill the role for which it was designated, and relations between states can lead to exhausting power relations. The medium powers often adopt an illiberal logic that turns into an aggressive foreign line, while the great powers usually assume a democratic and liberal attitude; therefore the proliferation of invasions and conflicts is on the agenda. The need to curb this shock has been identified by international law, which has criminalised any practical implementation of the *jus ad bellum*. Indeed, the new system repudiates the use of force as a crime against peace, as history taught us to do during the Eichmann, Pinochet and other dictators’ trials (Dogliani, 2022). For this reason, the European Council decided to adopt policies against the Russian Federation and its invasion of Ukraine. In this regard, the EU institution has adopted five packages of sanctions against Putin’s state. The first prohibits marketing, especially export through the Donetsk and Lugansk channels and the Nord Stream 2 gas pipeline. The second package is aimed at sanctioning measures mainly against President Putin, Duma members, and, in particular, Minister of Foreign Affairs Lavrov. The third, on the other hand, refers to logistical sanctions. For example, it is linked to the aviation sector, but also to the main banks, such as Bank *Otkritie* and Bank *Rossiya*. The fourth package affects the privileged class of oligarchs, and due to the fact that the business lobbies that have retained great patrimonial advantages, it is no coincidence that the G7 excluded Russia from the “most favoured nation” clause in the World Trade Organization. The fifth package is aimed at diversifying sources of gas supply, so it tends to block coal imports and freeze assets, including wood and vodka, to the European Union. Finally, a series of precautionary measures was also adopted against the media, including the information centers Sputnik and RT/Russia Today (Ali, 2022).

The evolution of so-called “defensive alliances” and blocks opposed to the use of force also derives from the modification of the constitutive

features of a conflict. In this way, it appears that a valid geopolitical interpretation is undoubtedly needed to analyse how wars have undergone structural change over the years.

In the first place, the projections have changed. From 1990 to 2014, conflict dynamics were oriented in a regional context, rather than in an international context. The conflict of territorial annexation has given way to the war of space fragmentation, with a strong involvement of civilians, and whose focus lies in sub-Saharan Africa and the Middle East (Baliki, Brück, Stojetz, 2018).⁴ In this regard, an analytical unit has been set up, namely, the World Governance Indicators Government Effectiveness Score, to indicate the adequacy of governments and the stability of peacekeeping policies (Baliki, Brück, 2017). Specifically, the indicator is aimed at identifying that which can be described as so-called “fragile states”, stigmatised for the failure to carry out the nation-building process, as well as being characterised by an unfinished transition to democracy and security. The re-ordering of the conflictual dynamics at the regional level has intensified heterogeneity and local peculiarities, both as regards food products (influenced by the geopolitics of the place) and for the welfare state policies implemented by governments (depending on the territorial characteristics).

To reach the present day, the current Russian-Ukrainian conflict has shifted the centre of gravity of directives back to Europe. The “military operation”, as announced by Vladimir Putin, was intended to “de-nazify” the government of Kiev. Nevertheless, the “operation” has undergone a dramatic transformation, passing from a blitzkrieg to a war of attrition. The military aggression against Ukraine has upset all the balance between powers in a year already heavily marked by the legacy of the COVID-19 pandemic, as well as by the death of a valid mediator, namely, Gorbachev. The generational transition from the former Secretary General of the CPSU to the current government was the trigger for a series of determining elements in the internal and global scenario. Gorbachev, the father of *perestroika* and *glasnost*, conferred negotiating flexibility on his executive, ushering in the end of the cold war through the logic of escalate to de-escalate. The current president instead re-established escalation domination, thereby re-proposing the despotic tsarist doctrine (Risi, 2022). Furthermore, political authoritarianism has favoured the expansion of the middle classes, which have expanded their power through the privatisation of entities. The economic monopoly and the oligarchy have

⁴ On this point, Baliki G., Brück T., Stojetz. From 2014 to 2016, the number of deaths in violent conflicts rose from 4900 to 102,000, while in 2017 the number of victims amounted to over 9000 in Sudan, Nigeria, Yemen, and Somalia.

facilitated the “vertical” setting of power, above all through corruption and the control of information (Rosso, 2022).

Secondly, the globalisation of the economy has centralised the role of resources and the arms market. The “military-industrial complex” of the former US president, Dwight Eisenhower, was realised from the moment in which General Dynamics and Raytheon Boeing actively participated in foreign policy, as indeed the energy organisations already do, as observed in the development of the so-called “OGAM complex” (oil, gas, mining). It is no coincidence that in the foreign sphere, Putin is playing on highly-strategic negotiating tables, as seen during a meeting chaired by the Shanghai Cooperation Organization in Samarkand in September 2022, in which Iran and Pakistan also took part. Russia and the People’s Republic of China are backing each other over the annexation of Taiwan and Ukraine, among other things, and links are also facilitated by a gas pipeline that connects the two countries (Cangelosi, 2022). Now, it is possible to understand how the holding of resources is closely related to the outcome of the wars, determining the first constitutive feature of the new conflicts. In this new scenario, the participation of corporations proves to be fundamental and a substitute for that of democracies, as legal entities take relevant decisions. An example of this would be when the Federal Energy Regulation cancelled the climate control plan to revitalise production (Grande, 2022).

Thirdly, the new military strategies are characterised by a lack of morale, and, in fact, do not exclude targets such as civilians. The risks that the inhabitants face are extremely high, which is why internally-displaced persons can easily end up in the clutches of organised crime. In this regard, the Council of Europe’s Group of Experts on Trafficking (GRETA) has raised the alarm, appealing to the need to apply adequate regulatory protection (Viviani, 2022).⁵ Among the various instruments, there is decision 2022/382, which in article 1 establishes temporary protection for stateless persons, for their families, and citizens of third countries; article 2 indicates protection for displaced persons from the same geographical area; the third category, on the other hand, covers irregular stateless persons in Ukraine (Scissa, 2022).

To sum up, the current Russian-Ukrainian conflict embodies all the peculiarities of new conflicts. Moreover, it has settled outside the border, highlighting a series of distortions along with the results of globalisation, first of all making evident the structural defects of the production and

⁵ Approximately 3.9 million Ukrainians left their country, 92% of them moving to neighbouring countries, such as Poland, Romania, and Hungary, while 271,000 refugees moved to Russia from Donetsk and Lugansk.

storage chains of resources, and then highlighting the close dependence of many countries on the export of some rural resources. (Kemmerling, Schetter, Wirkus, 2022). In fact, the two states engaged in the conflict export 30% of the global demand for rice, corn, barley, along with fertilisers and other products used in bucolic activities. The data confirm Russia's role as a major stakeholder in the international arena. As examples, it exports 18% of global coal, 11% of oil, and 10% of gas (FAO, 2022). In total, the value of global exports of agricultural products amounts to €19.4 billion for Ukraine, €24.8 billion for Russia and €5 billion for Belarus (Bergevoet, Jukema, Verhoog, 2022). However, the increase in the prices of these products was significant; in March they increased by about 50% compared to the previous month and by 80% compared to last year. The rise mainly affected the economy of dependent countries such as Egypt (\$6.6 million in imported wheat), Turkey (\$4 million), Bangladesh (\$4 million) and Iran (\$1.1 million) (World Bank, 2022). As regards our context, Italy bases 63% of its needs on soft wheat and 39% on hard wheat. Therefore, the excessive dependence on an import-led model has made us bound by other international actors, determining the need to diversify procurement markets and turn elsewhere, specifically France and Germany (Scopece, 2022). Not surprisingly, some countries have decided to launch a policy program aimed at agricultural independence, as in the case of Indonesia and India, which are negotiating access to the rural economy of Egypt, Turkey, and Libya, and which are initiating diplomatic meetings with the Nigerian, Iranian, and Romanian Ministries of Commerce (European Commission, 2022).

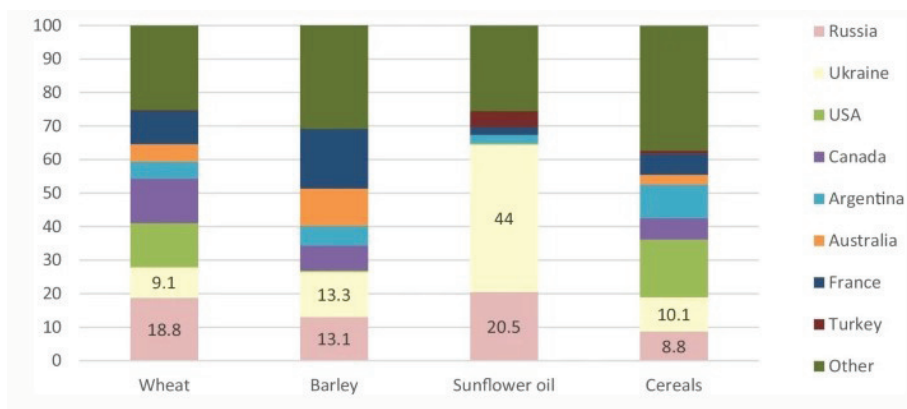


Figure 1. World Exports of Agricultural Resources in 2020

Source: FAOSTAT, March 2022, <https://www.fao.org/faostat/en/#data>.

On balance, the excessive European dependence implies the absence of a mere process of autonomy of territorial programs. In this way, it is natural that farmers are forced to take advantage of surplus silos, and therefore to raise the general price levels of their products. The influence on the global South is dramatic, with the number of people threatened by hunger increasing significantly from 7.6 to 13.1 million, against any forecast of European development goals (Nicas, 2022). The tragic social conditions add up to that of the institutions, for example the World Food Program, dependent on 50% of Ukrainian rice, is heavily threatened (Lederer, 2022). Therefore, Europe is trying to launch multidisciplinary programs aimed at a so-called ‘green revolution’, that can compete with food and economic challenges. The strategies implemented by mediation must respond to logistical challenges in such a way as to unblock the stalemate of the European agricultural market. In this regard, the United Nations World Food Program highlighted the emergency for 205 million people, double in number as compared to 2016, and especially in the Middle East. The adoption of effective solutions to facilitate foreign trade is a necessary solution and, as an example, a number of solidarity corridors have been built since summer 2022 to facilitate the transit of 61% of exports from Kiev. The Black Sea Grain Initiative allowed the transit of 3.5 million agricultural products in September 2022 (European Council, 2022). Multilateral coordination must remove trade barriers, which is why the FARM (Food and Agricultural Resilience Mission) has been established, and ties with the African Union strengthened. The global approach to food security is to adopt mitigation packages for third countries, so as to foster self-sufficiency and trade integration, as well as transparency and dialogue (Hellegers, 2022).

The tragic effects unleashed by the conflict have spilled over more so onto the food market, hence the considerable problem of food insecurity (van Meijl et al., 2022). The definition of “food security” emblematically connoted by the FAO, opens up to a complex and dynamic interpretation: four keywords, namely, availability (sufficient quantity of food); access (resources to obtain food); use (that is, nutritious, safe diets, and clean water); and stability (permanence). Access to food interpreted as purchasing power by food consumers has reached critical figures, between 8% and 10%. Specifically, the production of food goods that accesses international trade is 30% (Barazza, Cingolani, 2022).⁶ The considerable

⁶ 70% of food production comes from small businesses and generally exports only to local markets. 25% of global production comes from large Russian and Ukrainian private companies, of which 7% is exported internationally.

increase in the costs of agricultural resources of around 10% is also due to the excessive consumption of fossil energy by farmers. Those farmers employ large quantities of chemical production factors, such as herbicides and pesticides, as well as transporting products by truck or ship, with incisive effects on oil prices (Barazza, Cingolani, 2022). As a consequence, domestic consumers have adopted price fluctuation protection practices (FAO, 2022), for example, on March 5th, the Ukrainian government introduced a “zero quota” for a substantial component of its products, including salt and sugar.

Naturally, the food crisis depends on a series of economic aspects, for example, the “inventory/use” ratio is undermined by the shortage of available stocks (Bobenrieth, Wright, Zeng, 2012). This economic strangulation also derives from an excessive financialisation of the food market, the liberalisation of which intensified between 1999 and 2000, following the elimination of futures contracts capable of managing price volatility and preventing financial speculation (McKeon, 2019).

Food insecurity and the failure to adequately implement the right to food in terms of collectability provoke anti-social attitudes, confirming the anthropological difficulty of accumulating resources to survive an economic shock (Brück, 2016). Recently, the effects of the war on the international trade in food products are quantifiable and measurable through the use of a very broad and versatile economic model in the form of the so-called MAGNET (van Meijl et al., 2022). This is an analytical unit, whose main purpose is to contemplate and include the economic variables of all countries, divided according to the economic sectors; it also considers bilateral relations and also trade in food products, such as cereals and seed oil. In this way, it is possible to carry out a neoclassical interpretation of a country’s economy, both for macroeconomic variables (GDP) and for the attitude of national consumers. Such a model intercepts and evaluates the effects of war not only in the international scenario, but also in economic and social areas.

Among the many economic indicators, the volatility of the Food Price Index confirms a critical trend. Starting from March 2022, it has maintained an average of 159.3 points, having an influence on about 40% on the income of consumers and more than 80% of the countries that suffer from so-called “food inflation”. According to the United Nations, around 69 countries (of a total of 1.2 billion people) are exposed to conditions of high inflation and rising energy prices. The FAO claims that there are between 8 and 13 million malnourished people. Considering Africa individually, the data are shocking, with about 33.4 million people in West Africa, 22 million between Nigeria and Sierra Leone and about

20 million in Kenya, Ethiopia, and the Democratic Republic of Congo, all contending with malnourishment (Fao, 2022).

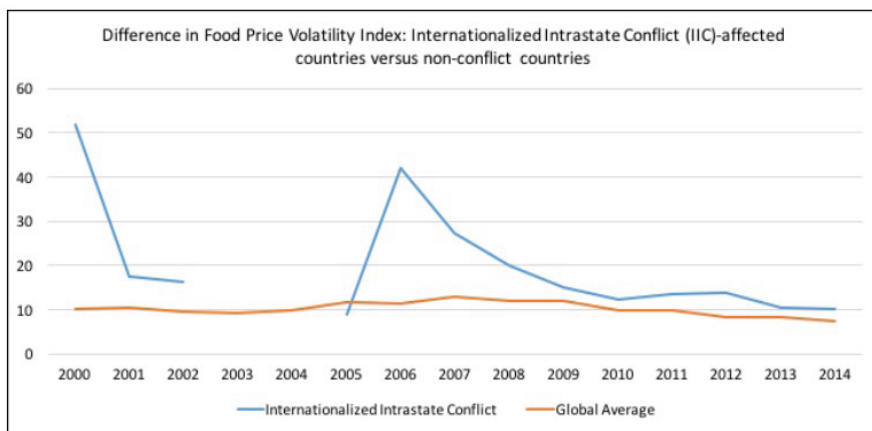


Figure 2. The Difference in the Volatility of the Food Price Index in Countries in a State of War and Those Not

Source: Brück, 2016, p. 42.

The multi-commodity crises demonstrate a strong logistical-productive instability, which is why there have been implemented strategies to combat (above all) the problems related to infrastructure, railways, and the social consequences that derive from them. The lack of access to drinking water for 1.4 million people has intensified the migratory flow; in fact, today there are about 4 million refugees who have left Ukraine due to a lack of such resources. The crisis also derives from transport difficulties both in the air sector (following the declaration of the no-fly zone), and in the energy sector. The *Henry Hub Natural Gas* pipeline manages the widespread diffusion of gas between Poland, Ukraine, and the Black Sea, which is currently experiencing a 160% price increase. *United Company Rusal*, the world's second largest producer of nickel and light metal for the automotive industry, has experienced a cost increase of \$3,200 per tonne. Another industry under attack is *Nornickel*, the world's largest exporter of mineral resources which produces stainless steel and batteries for electric cars. However, the malfunctioning of its production chain determines consumer preference for petrol cars, increasing the negative effects on the environment and ecology (Ippolito, 2022).

Finally, the causes of the energy suffocation certainly include the bombings that the various forms of infrastructure continue to suffer, the port of Odessa was the principal target for the Russians, as it plays

a crucial role for grain exports (Guidi, 2022). Further targets included civilian buildings such as the *Vorzel* orphanage and an apartment building in Chuhuiv, near the airport (Coluzzi, 2022). The attacks also continue in digital form, and are an example of how conflicts are changing shape and taking on the characteristics of a cyber war. The State Special Communications Service has indicated that there have been over three thousand digital attacks compromising the proper functioning of power plants (Rubini, 2022).

As regards the decisive aspect, it is necessary to stimulate communication and dialogue within the community. First of all, the establishment of an energy union such as the common agricultural policy should be among the priority objectives so as to achieve independence on the resource front (Corazza, 2022). Europe should raise awareness as regards national rural programs through the planning of a new model of integration (Battistoni, 2022) so that cooperation can be replaced with competition, as well as making adequate use of the PNRR in logistics. With regard to institutions such as Confagricoltura, the Future Food Institute, and Federalimentare, they must adopt food policy programs and also raise awareness of direct dialogue with supply chains, associations, and research institutes (Giansanti, 2022). Of course, delegations should also make their presence felt more by organising meetings not only in Belarus, but also at the General Assembly and the United Nations Security Council (Gianmarinaro, 2022). A valid alternative would be to exploit the prominence of city diplomacy, such as that in Rome, London or Paris, where delegations can meet (Baccin, 2022) to find solutions and conduct mediations (Ferrajoli, 2022).

To conclude, it is necessary to be hopeful of a possible realignment of international relations. Should one take into account the etymology of the word ‘crisis’, it derives from the Greek *krisis*, or “choice/decision”. The present, therefore, is a watershed moment, decisive for the resolution of global intrigues and problems.

The Global Impact of the Russia – Ukraine War on Food Systems: The Role of the EU

On February 24th, 2022, Russia invaded Ukraine. Since that time, the European Council and the Council of the European Union have met to discuss the situation and condemn the unprovoked and unjustified Russian military aggression. On March 2nd, EU Agriculture Ministers, meeting by video conference, discussed possible measures to be taken, including the activation of crisis monitoring tools and the introduction of

exceptional measures under the CMO for sectors affected by the increase in production costs, in order to cope with the terrible events taking place in Ukraine which have had negative repercussions on the agricultural and agri-food sectors (Council of the EU, 2022). These measures were discussed at a subsequent meeting of the Agriculture and Fisheries Council, held in Brussels on March 21st, with an invitation from the Council for the Ukrainian Minister of Agriculture Roman Leshchenko to participate. During the meeting, the Ukrainian minister asked for support for the Ukrainian people and for Ukraine; the European Commission presented concrete proposals to guarantee protection and the European Commissioner for Agriculture, Janusz Wojciechowski, first of all announced an executive regulation on private storage for the pig sector; he communicated the release of the CAP crisis reserves and, finally, announced the temporary derogation that allows the use of the land set aside. On March 23rd, the Commission presented the communication: “Protecting food security and strengthening the resilience of food systems”, which contained measures to address the consequences of the war as regards food security; “Overall, ministers welcomed the communication and measures put in place to support farmers, discussed at the March Council meeting. They agreed that, thanks to the common agricultural policy (CAP), the food supply in the EU is not at risk” (Goitre, 2022).

During the extraordinary meeting of the European Council on 24th May 2022, the 27 EU leaders strongly condemned the Russian military aggression in Ukraine for hindering the food supply of 750 million people worldwide; the European commission, for its part, informed the EU agriculture ministers on the solidarity channels between the EU and Ukraine, identified as “alternative land routes” (Consilium, 2022), useful for facilitating the exports of Ukrainian agricultural products and to simplify customs operations and other controls. Within days of the creation of these channels, about 10 million tons of Ukrainian products were exported. With the extraordinary meeting held in Brussels between 30th and 31st May 2022, the European Council drew a series of conclusions on Ukraine and food safety. During the first day, the Ukrainian president, Volodymyr Zelenskyy, participated in a videoconference. On the first point discussed, namely Ukraine, the Council reaffirmed the unity of the European Union’s action to rescue Ukraine and condemned Putin’s actions, urging the Russian leader to withdraw the Russian military forces present in Ukraine and to respect its independence. The European Council also called for compliance with international humanitarian law and welcomed Ukraine’s application for EU membership (it would revisit this issue at its June meeting). Regarding the second point, the European

Council condemned the destruction and illicit appropriation of Ukrainian agricultural production by Russia and called on the latter to unblock Ukrainian ports on the Black Sea and allow exports from Odessa. Finally, the Member States accelerated the work on the solidarity corridors, as proposed by the European Commission. In general, this is a very difficult and important military, diplomatic, and logistical effort.

At the subsequent meeting of the European Council held between 23rd and 24th June 2022, Russia was recognised as the sole party responsible for the global food crisis, conclusions were adopted on Greater Europe and Ukraine, Moldova's applications for EU membership, and Georgia (Chamber of Deputies, 2022). The European Council has subsequently granted the status of 'EU candidate country' to Ukraine and Moldova, and is ready to grant the very same to Georgia since the future of these countries and their citizens lies in the European Union. The current conflict has greatly increased concerns about food supplies to Europe and the rest of the world. Food Security as an issue, according to the results of the FAO, is not new for the countries of the Middle East and North Africa since, even before the pandemic, estimates as regards the degree of the issue were dramatic in Syria and Yemen, but, to date, the situation seems to have deteriorated even further due to the blockade of Ukrainian food supplies (Lovotti, 2022).⁷

On May 19th, 2022, during the meeting on food security and conflicts, in the hall of the United Nations Security Council, the head of the UN said that most undernourished peoples live in areas affected by conflicts, and that the rising food prices moreover threaten the countries of the Middle East and Africa. Russian military aggression has caused a global grain crisis, and, according to US Secretary of State Antony Blinken, the responsibility for the entirety of this disaster rests with Russia, as blocking the Black Sea ports inevitably triggered a global supply crisis of wheat. However, "Vladimir Putin's man at the UN does not think so. Speaking with straight face during the meeting, Ambassador Nebenzia accused the Ukrainians of repaying the West for its arms supply with wheat. As always, for Moscow, Western politicians and media would manipulate information" (Loiero, 2022). In this regard, while France, Ireland, United Kingdom, Albania, Canada, Luxembourg, Lithuania, Japan, Guatemala, Sweden, and Norway follow the US line of thinking in that Russia is solely responsible, the Russian ambassador has accused the Ukrainians

⁷ Egypt imported 85% of its wheat from Ukraine and Russia; Israel between 60% and 70%; Morocco about 35%; Somalia even 100%; Sudan 75%; Tunisia, Lebanon, and the United Arab Emirates about half of their total supply; and Turkey imported about 78%".

and the United States of playing incomprehensible geopolitical games. Italy too, as represented by Ambassador Maurizio Massari, intervened at the Security Council, hinting at the creation of humanitarian corridors for blocked raw materials, reiterating how much “food security remains a fundamental priority and a key objective of Italian foreign policy” (Loiero, 2022).

Overcoming the global food security crisis is one of the top priorities not only of the United Nations, but also of the European Union. EU countries are collaborating with their respective international partners to ensure free world trade in food products. On 20th September, President of the European Council Charles Michel co-chaired a summit on global food security and spoke by affirming the importance of effective international coordination to ensure a global response to the world food crisis: “We need more coordination, we need more money, and in the European Union, we are stepping up our efforts. With our Member States, we have put forward a comprehensive Global Food Security Response of nearly 8 billion euros until 2024 to provide humanitarian relief along with short-term and longer-term solutions, especially to countries most in need, particularly in Africa” (Michel, 2022). Concerning support for EU agri-food production, the Council formally adopted a new, fairer, and greener common agricultural policy, which will apply in 2023. At the meeting of the Agriculture and Fisheries Council, held on 18th July 2022, ministers discussed the impact of the Russian-Ukrainian war on the implementation of the new CAP, the economic situation of the agricultural sector, the shortage of raw materials, the high prices of inputs, and it was stated that “Europe faces many challenges, and it is more important than ever to ensure stability for European citizens, and that includes our farmers. EU agriculture ministers today demonstrated their commitment to stabilising markets and contributing to food security. I hope that we will be able to obtain timely approval of the CAP strategic plans, which are one of the most important tools. Our farmers need our support as they provide quality and healthy food for all EU citizens and many others outside the EU. We must find a balance between all the objectives of the CAP, including food production, biodiversity and the climate, as well as social and economic aspects” (Nekula, 2022).

The consequences of the war have manifested themselves above all on the markets and prices of agricultural products. The World Food Program,⁸

⁸ In this regard, WFP Staff, *Il WFP at G7: ‘Agire ora o i livelli record di fame continueranno ad aumentare e milioni di persone in più rischieranno la vita’*, in a World Food Program, <https://it.wfp.org/storie/il-wfp-esorta-il-g7-agire-ora-oi-livelli-record-di-fame-continuerà-ad-aumentare-e>. “WFP’s funding needs are increasing day by day. By

the main humanitarian organisation and agency of the United Nations which deals with food assistance, said that cereal prices reached a new all-time high due to the restrictions on Ukrainian exports, and asked, in this regard, to clear the port of Odessa so as to allow the passage of tons of foodstuffs blocked in ports, and which are threatened by underwater mines. One of the direct consequences of the non-reopening of ports will be the lack of space for Ukrainian farmers to store subsequent crops; “We need to open these ports so that food can enter and leave Ukraine. The world is asking, because hundreds of millions of people around the planet depend on these supplies. There is no more time, and the cost of inaction will be higher than you can imagine. I urge all parties involved to allow this food to flow out of Ukraine so that it gets to where it is desperately needed so that the looming threat of famine can be averted” (Beasley, 2022).

Globally, the Russian-Ukrainian war has led to an increase in the prices of food products and people exposed to the risk of food insecurity, already steadily increasing since 2020 due to the COVID-19 pandemic, which has jeopardised the chains’ global supply, human health, and the world food system; in this regard, the “FAO’s comprehensive and holistic COVID-19 response and recovery program is designed to proactively and sustainably address the socio-economic impacts of the pandemic. In line with the United Nations approach to ‘rebuild better’ and in the pursuit of the Sustainable Development Goals, it aims to mitigate the immediate impacts of the pandemic while strengthening the long-term resilience of food systems and livelihoods” (FAO, 2022). The agricultural system is also being badly hit by a severe climate crisis, with drought and a reduction in rainfall, along with adverse weather events and sudden heat waves and frozen snaps which limit the ability to satisfy global food needs. Although they contribute less to climate change, the poorest countries will suffer the most; these are countries in which extreme climatic events are frequent but which are structurally unable to manage such phenomena, moreover, “climate change will cause a reduction of resources that will prevent the poorest from migrating in other countries, further increasing the economic damage suffered by the poorest that will no longer be compensated by remittances from abroad” (Sabelli, 2022).

early 2022, global inflation had already raised the price WFP paid for its operations by \$42 million a month. Then the conflict broke out in Ukraine, which caused the prices of food, fuel, and fertiliser to soar, exacerbating the difficulties of global supply chains and driving up shipping costs. Today, we are forced to pay 73.6 million dollars more per month for our operations compared to 2019, an increase of 44 percent: a figure that would be enough to feed 4 million people for a month.”

According to the UN, sustainable agricultural practices must be applied to remedy this situation and combat climate change, given that 31% of global greenhouse gas emissions come from agri-food systems. In a world so unstable in terms of climate and international relations, and in which food systems are interconnected and fragile, it would be useful to invest in local production as well, rather than only favouring food aid which is “historically a controversial form of cooperation development, which is also the subject of radical criticism of their effectiveness as an element favourable to development itself. International food aid can create disincentives that penalise the agricultural sector of the beneficiary countries, allowing governments to neglect agricultural production and investment and to postpone, if not avoid, difficult political reforms. Furthermore, in the literature, there is often talk of the possibility that food aid induces a change in consumer preferences from local to imported products, creating economic and political dependence” (Zupi, 2022) and measures against the humanitarian emergency must go hand-in-hand with long-term measures for resilient food systems everywhere. It should accelerate, at a global level, the transition of the agri-food system towards sustainability, and resilience should be accelerated, creating, especially in developing countries, decent conditions for agricultural production systems. Good quality of life and health are the objectives of the European Green Deal (a European climate pact that intends to make the European economy sustainable and make Europe the first zero-emission continent in the world by 2050) and should all be considered tools to tackle the problem of energy dependence by keeping global trade in food and fertilisers open; finding new suppliers (especially for countries that are heavily dependent on imports from Russia and Ukraine) and re-launching multilateral cooperation to limit any undesirable effects. Massive humanitarian assistance for Ukrainian refugees and social assistance are also needed to mitigate the consequences of rising food and energy costs.

Conclusions

To conclude, the news regarding the terrible decision of the Russian Federation to indefinitely suspend its participation in the agreement on the export of Ukrainian wheat is very recent. The agreement was reached in July in the presence of President Erdogan and United Nations Secretary General Guterres. The Kremlin’s stance is in response to a false pretext linked to explosions 220 km away from the so-called “grain corridor” and to the worsening of relations caused by a drone attack on the Sebastopoli bay. In this way, the condition of food

insecurity is worsened, as about 2 million tons of wheat on 176 ships have been blocked, resulting in a serious supply problem for about 7 million consumers. The agreement, now denied, had fostered not only a climate of dialogue thanks to some military security clauses, but had also re-established the crucial role of Ukrainian ports, such as that of Odessa, Chernomorsk, and Yuzhny which despatched over 8 million of tons of wheat from August to the end of October (Ipai/Ansa, 2022). Naturally, diplomacy reserved strongly critical words, and, for its part, the Kremlin indicated that it would review the agreement only “after a thorough investigation into what happened in Sebastopoli”, while the foreign minister of Kiev, Dmytro Kuleba, accused the interlocutors of having planned the attack “well in advance”. More and more there is a terrible consequence at the financial level, as pointed out by the general director of SovEcon, Andrey Sizov, who prophesied the “worst possible scenario” (Tempesta, 2022).

With regard to future conditions, one hopes that valid, workable solutions can be identified as soon as possible. However, it is necessary to indicate how this conflict has underlined global interconnection. The blockade of the Russian Federation is, in fact, triggering multiple consequences in the international arena, whether they are of a financial nature in the West, or health care in Africa and the Middle East; in any case, this concatenation of effects confirms the transversal nature of food security, and how it is a right that we must all enjoy indistinctly.

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