



APRIL-2022

ANALYSIS

IMPACT OF WAR BETWEEN RUSSIA AND UKRAINE ON FOOD SECURITY

Introduction

The key aim of the research is to show the impact of the war between Ukraine and Russia on global food security. There are certain reasons and factors for reducing agricultural production and the export of agricultural products from Ukraine and Russia due to war. The ongoing war in Ukraine affects food security, rising food prices, and shortages of crops in different countries. Of course, such developments will have both economic and political consequences in near future. Analysis shows that a quarter of global wheat exports come from Russia and Ukraine. Forty percent of wheat and corn from Ukraine go to the Middle East and Africa, which are already grappling with hunger issues, and where further food shortages or price increases risk pushing millions more people into poverty. UN's International Fund for Agricultural Development (IFAD) analysis shows that price increases in staple foods, fuel and fertilizer have a direct impact on the poorest rural communities. For instance, in Egypt, prices of wheat and sunflower oil have escalated because of Egypt's reliance on Russia and Ukraine for 85 percent of its wheat supply and 73 percent of its sunflower oil. Another country Lebanon imports around 80 percent of its wheat from Russia and Ukraine.¹ All aforementioned examples clearly show that the consequences of the

¹ <https://reliefweb.int/report/world/impacts-ukraine-conflict-food-security-already-being-felt-near-east-north-africa-region>

bloody war between Ukraine and Russia will hit the economies of many states, and the poorest and vulnerable countries in the world will be affected more, threatening their food security.

The present research is based on the Food and Agriculture Organization of the United Nations (FAO), the International Monetary Fund (IMF) reports, governmental documents and expert opinions from Ukraine. The war between Ukraine and Russia started in February 2022, and during the bloody military operations, losses among civilians and military staff from both sides reached a catastrophic number. The military operation area covers about 15 percent of the Ukrainian territory.

Touching upon the ongoing war, and its social and economic consequences for Ukraine, it is worth noting the followings;

- Reduction of economic activity by 30 percent;
- UA Hryvna's fall in value by 10 percent;
- Migration of about 3,6 million people to different countries;
- Internal migration from the Northern, Southern, and Eastern regions to the western part of the country (about 10 million people);
- Blockade ports in the Black Sea and capture and destruction of ports in the Azov Sea by the Russian forces.

For Russia, the main social and economic consequences of the ongoing war in Ukraine as a result of sanctions are the followings;

- Reduction of economic activity, the estimated number is about 9 percent of GDP in 2022;
- Ruble's fall in value. Russia's Ruble fell to 117 per US Dollar, a decline of 41 percent;
- Migration of people to different countries;
- Russian airlines have been banned from most European and North American airspace;

- The German government has stopped the Nord Stream 2 natural gas pipeline and many others;

As the conflict continues, it is uncertain whether Ukraine will be able to harvest existing crops, plant new ones or sustain livestock production. The Republic of Azerbaijan has offered fuel for Ukraine's crop sowing campaign, which is very important for the country, as the country's current fuel shortage is one of the key challenges for the agricultural sector.

It is worth mentioning that in 2021, both Russia and Ukraine ranked among the top three global exporters of wheat, maize, sunflower seeds and sunflower oil. Russia also was the world's top exporter of nitrogen fertilizers and the second leading supplier of both potassic and phosphorous fertilizers. Many countries that are highly dependent on imported foodstuffs and fertilizers, including several that fall into the Least Developed Countries (LDCs) and Low-Income Food-Deficit Countries (LIFDCs) groups, rely on Ukrainian and Russian food supplies to meet their consumption needs². Ukraine's contribution to the world food market in 2021 was equivalent to providing food for about 400 million people³.

FAO also underlines the high risk for global agricultural markets and food security associated with disruptions caused by the pandemic and with the ongoing war in Ukraine. The main risks are the followings;

Trade risk

The suspension of oilseeds crushing operations and the introduction of export licensing requirements for some crops, all of which could take a toll on the country's exports of grains and vegetable oils in the months ahead⁴. According to the decree of

² <https://www.fao.org/3/cb9013en/cb9013en.pdf>

³ <https://agronews.ua/news/ukrayina-goduye-400-mln-lyudej-u-sviti/>

⁴ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

the Cabinet of the Ministry of Ukraine from March 5, 2022 № 207⁵ list of goods which export is subject to licensing, shown in Table 1 and Table 2.

Table 1: Quotas of goods, the export of which is subject to licensing

N №	Goods	Code of Ukrainian classification of goods of foreign economic activity
1	bovine animals, alive	0102
2	Frozen beef	0202
3	Meat and edible meat offal, salted or in brine, dried or smoked; edible flours and meals of meat: meat of bovine animals	021020
4	Rye	1002
5	Oat	1004
6	Buckwheat	1008 10 00 00
7	Millet	1008 29 00 00
8	Sugar	1701
9	Salt, suitable for human consumption	2501 00 91 00

Source: <https://www.kmu.gov.ua/npas/pro-vnesennya-zmin-u-dodatki-1-i-5-do-postanovi-kabinetu-ministriv-ukrayini-vid-29-grudnya-2021-r-1424-207>

⁵ <https://www.kmu.gov.ua/npas/pro-vnesennya-zmin-u-dodatki-1-i-5-do-postanovi-kabinetu-ministriv-ukrayini-vid-29-grudnya-2021-r-1424-207>

Table 2: List of goods, the export of which is subject to licensing

№	Goods	Code of Ukrainian classification of goods of foreign economic activity
1	Wheat and a mixture of wheat and rye (meslin)	1001
2	Corn	1005
3	Meat and edible meat offal, salted or in brine, dried or smoked; edible flours and meals of meat: meat of bovine animals	021020
4	Chicken meat	020711 020712 020713 020714
5	Eggs of domestic chickens	0407 21 00 00
6	Sunflower oil	512 91 00

Source: <https://www.kmu.gov.ua/npas/pro-vnesennya-zmin-u-dodatki-1-i-5-do-postanovi-kabinetu-ministriv-ukrayini-vid-29-grudnya-2021-r-1424-207>

It should be noted that the export of wheat and a mixture of wheat and rye (meslin), corn, sunflower oil, sugar, salt, and cereals will be probably limited. For an urgent

solution to many problems related to agricultural exports, the Verkhovna Rada of Ukraine has appointed Mykola Solsky as the new Minister of Agrarian Policy and Food of Ukraine ⁶.

Price risk

It should be underlined that the steep reduction in grain and sunflower seed exports by Ukraine and Russia create push-up international food and feed prices by 8 to 22 percent above their already elevated levels. This would keep international prices elevated well above baseline levels⁷.

Logistical risks

In this context, the main logistical risk for the Ukrainian export is blocking ports in the Black Sea as well as the destruction of ports in the Azov Sea by the Russian Navy. It should be emphasized that around 60 percent of Ukraine's agricultural products are exported by sea⁸. Touching upon the issue, it is important to note that throughput capacity at the seaports of Ukraine is about 7 million tons of grain per month. Also, the throughput capacity of Ukrainian railways to EU countries is about 1 million tons of grain per month. The Ukrainian government planned to reconstruct its railways' system in order to increase the throughput capacity of railways to EU up to 5 million tons⁹. Despite the fact that the majority of key grain silos and storage facilities in Ukraine are not under Russian control, however, railway connections have been damaged by the war. Nonetheless, almost 50 percent of available wheat was stored on elevators and farms where active fighting is taking place (Donetska, Kyivska, Luhanska, Mykolaiivska, Khersonska and Chernihivska oblasts) ¹⁰.

⁶ <https://minagro.gov.ua/news/ministrom-agrarnoyi-politiki-ta-prodovolstva-ukrayini-priznachenomikolu-solskogo>

⁷ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

⁸ <https://niss.gov.ua/news/komentari-ekspertiv/ukrayina-ta-hlobalna-prodovolcha-bezpeka-v-umovakh-viynny>

⁹ <https://www.epravda.com.ua/rus/publications/2022/03/25/684674/>

¹⁰ <https://www.fao.org/3/cb9171en/cb9171en.pdf>

Production risks

It is worth mentioning that uncertainty in ongoing war does not give a clear picture of whether Ukraine will be able to harvest its crops or not. By the opinion of Ukrainian experts, if the military situation does not worsen significantly, Ukraine will be able to harvest the main crops at 70 percent of the annual average¹¹. FAO suggests that between 20 and 30 percent of the areas under winter cereal, maize and sunflower seed production are in the battle zone¹².

The sown area of winter wheat for the 2022 harvest in the battle zone in Sumy region was 2.6 percent of total crops in Ukraine, in Mykolaiv region - 6.7 percent, in Kherson region - 7.0 percent, in Odesa region - 8.4 percent, in Kharkiv region - 8.8 percent, in Zaporizhia region - 10.0 percent. A total number of which is equal to 43.4 percent¹³.

According to FAO Information Note, in the case of the Russian Federation, although no major disruption to crops already on the ground appears imminent, uncertainties exist over the impact that the international sanctions imposed on the country will have on food exports¹⁴. The restriction of agricultural exports by the Russian government will negatively affect the supply of grain. And in this case, the risks are the followings;

Humanitarian risks

FAO's simulations suggest that the global number of undernourished people could increase by 8 to 13 million people in 2022/23, with the most pronounced increases taking place in Asia-Pacific, followed by sub-Saharan Africa, and the Near East and North Africa¹⁵.

¹¹ <https://www.ukrinform.ua/rubric-economy/3439574-vijna-i-posivna.html>

¹² <https://www.fao.org/3/cb9013en/cb9013en.pdf>

¹³ <https://niss.gov.ua/news/komentari-ekspertiv/problemni-aspekty-posivnoyi-kampaniyi-v-ukrayini-u-2022-rotsi>

¹⁴ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

¹⁵ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

Touching upon the ongoing war between Ukraine and Russia, IMF Managing Director Kristalina Georgieva noted that “The war in Ukraine is devastating the lives of millions of people and severely affecting the Ukrainian economy. The war and the unprecedented sanctions imposed on Russia are having far-reaching consequences. Africa is particularly vulnerable to impacts from the Ukraine war through four main channels—increased food prices, higher fuel prices, lower tourism revenues, and potentially more difficulty accessing international capital markets”¹⁶. This statement clearly reveals that the consequences of war will be high on the agenda for many states as economies are expected to be hit hard after the war. In this regard, she also emphasized that the impact on the world economy of war and sanctions imposed on Russia due to the invasion may provoke in the Middle East the preconditions for a new "Arab Spring".

Regarding food security in Ukraine, according to FAO analysis, if the conflict spreads and continues, there will be increased stress on food security in Ukraine until food from the next harvest becomes available in the summer. For rural households without stocks or other resources, or with smaller landholdings or without a primary income-earner, including many of the disabled, widowed and elderly, the food security situation will be much more precarious.

Within densely populated urban areas, there have already been significant and severe disruptions to supply chains and markets. Consumption gaps are already evident in conurbations where it has been documented those active hostilities have prevented households from accessing markets over consecutive days, assuming food is even available¹⁷.

¹⁶ <https://www.imf.org/en/News/Articles/2022/03/08/pr2267-statement-kristalina-georgieva-meeting-unece-african-min-finance-cent-bank-gov-impact-ukraine>

¹⁷ <https://www.fao.org/3/cb9171en/cb9171en.pdf>

Energy risks

Another very important risk related to the war in Ukraine is the shortage of energy and high energy prices. After the war campaign, fuel supplies from Belarus and Russia to Ukraine were stopped. According to the Ukrainian consulting group A-95, the abovementioned countries accounted for 43 percent of gasoline, 67 percent of diesel, and 51 percent of liquefied petroleum supplies to Ukraine. At the present, fuel to Ukraine is now delivered from Lithuania, Poland and Romania by rail and road. It is important also to note that Azerbaijan's state oil company, SOCAR, has agreed to provide Ukraine's firefighting and ambulance services with free petrol for the duration of the conflict.¹⁸

Taking into account the abovesaid the agricultural sector of the country will inevitably be affected by the sharp increase in energy prices, that has accompanied the conflict¹⁹. It is worth noting that according to Deputy Chairman of the All-Ukrainian Agrarian Council Denis Marchuk about 250,000 tons of diesel fuel are needed to ensure crop sowing by June 1, 2022. Towards this end, according to Ukrainian President Volodymyr Zelensky, Azerbaijan has offered fuel for crop sowing campaign²⁰ which is highly important for Ukrainian food security.

The government of Ukraine adopts certain laws and measures to help farmers. For example, aiming to improve the supply of motor fuel, the Government yesterday submitted to the Verkhovna Rada of Ukraine a bill abolishing the excise tax on fuel and reducing the VAT rate from 20 percent to 7 percent. In general, Ukraine significantly simplified the customs procedures for the supply of petroleum products²¹.

According to FAO report ²² based on information provided by the Ukrainian Ministry

¹⁸ <http://caspiabarrel.org/en/2022/03/socar-provides-special-vehicles-with-free-fuel-in-ukraine/>

¹⁹ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

²⁰ <https://www.globaltimes.cn/page/202203/1257055.shtml>

²¹ <https://www.ukrinform.ua/rubric-economy/3439574-vijna-i-positivna.html>

²² <https://www.fao.org/3/cb9171en/cb9171en.pdf>

of Agrarian Policy and Food, as of March 2022, only a fifth of almost 1300 large agribusinesses surveyed by the government had sufficient fuel to plant this spring. The survey also reveals that preparedness to cultivate this spring is compromised due to poor availability of other agricultural inputs such as seeds: 58 percent of what is required is available; nitrogen fertilizer: 40 percent of what is required is available; NPK fertilizer: 55 percent of what is required is available; pesticides: 28 percent of what is required is available; equipment: 41 percent of what is required is available. It should be noted that the production and cost of fertilizers depend on energy sources.

According to the First Deputy Minister of Agrarian Policy and Food of Ukraine Taras Vysotsky (12 March), agricultural producers purchased 80 percent of mineral fertilizers, and there are enough to get above-average yields. Also, 75 percent of the required seeds, which are already in Ukraine, were purchased as well ²³.

Exchange rate, debt, and growth risks

In March of 2022, the UA Hryvnia fell in value, and a decline of 10 percent against US Dollar. While Russia's Ruble fell to 117 per US Dollar, a decline of 41 percent in April. According to various analysis, war-induced damages to Ukraine's productive capacities and infrastructure are expected to entail very high recovery and reconstruction costs. A lasting ruble depreciation would negatively affect investment and productivity growth prospects in Russia²⁴.

Global food security

Ukraine is one of the five world-leading exporters of agricultural products. It is the first in the export of sunflower oil and meal, the second in the export of barley and rape, and the third in the export of rye and sorghum. Ukraine provides almost 10 percent of world grain supplies. According to the Institute of Agrarian Economics (IAE), Ukraine's revenue from the export of grain crops in 2021 amounted to \$12.3 billion,

²³ <https://minagro.gov.ua/news/stanom-na-zaraz-ukrayina-maye-dostatno-rezerviv-produkciyi-dlya-spozhivannya>

²⁴ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

the largest trading partners were China, which imported \$2.55 billion, as well as Egypt (\$1.39 billion) and Turkey (\$0.92 billion).²⁵

Azerbaijan has signed the Joint Declaration with Ukraine, and in this Declaration the “Agreement on Cooperation in Food Security” and a memorandum of understanding on “Cooperation in the Agrarian Sector” are strategic documents for the future food security of Azerbaijan. Ukraine has a favorable climate for large-scale agriculture and highly productive agricultural land. Ukraine allows farmland rental, and this is in the interest of Azerbaijan, which will be able to invest in the agricultural sector and plant mainly winter wheat in Ukraine. Through this, Azerbaijan will be able to increase its wheat production, decrease imports, and better coordinate prices. Ukrainian–Azerbaijani cooperation in this field is strategically important for the latter’s future food safety.

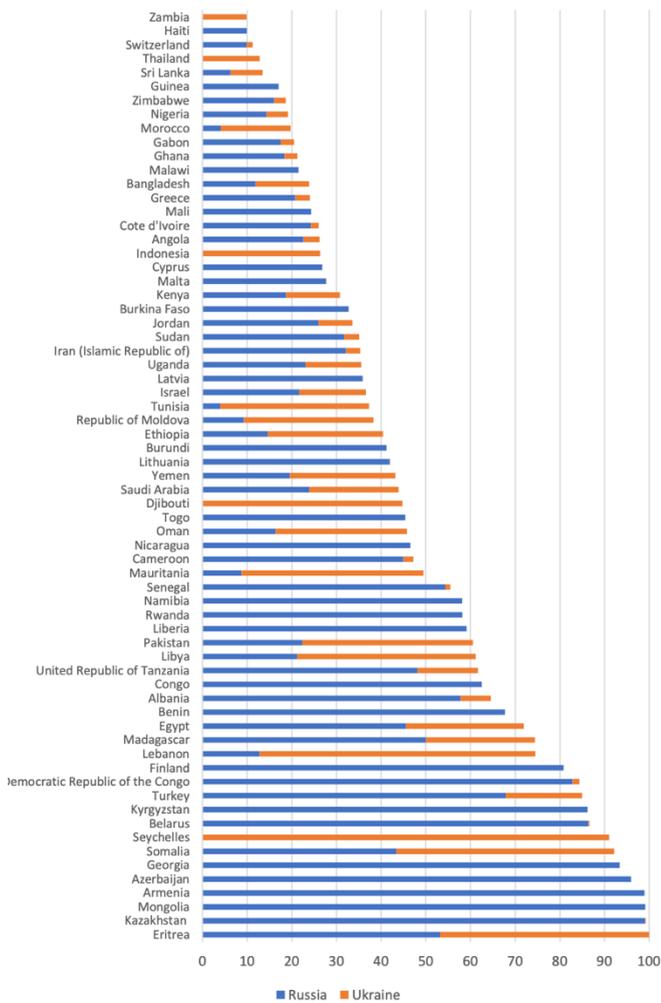
Disruptions in supplies from Ukraine could hit related industries in Europe as well. Business insider wrote that half of Spain's grain imports came from Ukrainian ports. Spain is a principal feed producer in Europe. The disruption of supplies from Ukraine will affect all EU citizens²⁶. In fact, as a result of the current war, tens of millions of people will be malnourished. Countries such as Egypt, Yemen, Lebanon, Bangladesh, Madagascar, Ethiopia and Libya will be most affected places.²⁷

²⁵ <https://odessa-journal.com/the-main-importers-of-ukrainian-grain-in-2021-china-egypt-turkey/>

²⁶ <https://www.epravda.com.ua/rus/publications/2022/03/15/684052/>

²⁷ <https://www.fao.org/3/cb9013en/cb9013en.pdf>

Picture 1: Countries Wheat Import Dependency, 2021 (%), (FAO)



Source: <https://www.fao.org/3/cb9013en/cb9013en.pdf>

Conclusion

Food security is a strategic priority for all states in the world. Many countries cannot ensure food security and highly dependent on agricultural commodities imported from other countries. Towards this end, the recent global food crisis and increased prices affected the economies of all states owing to their high dependence on foreign imports. As it was mentioned above, Russia and Ukraine are two important countries, which contribute to global food security. Therefore, the bloody war in Ukraine and

sanctions against Russia will have a negative impact on food security around the world. The main reasons can be characterized as follows;

- Lack of fuel, seeds, fertilizers, and plant protection products in Ukraine;
- Fighting in the zone of agricultural production in Ukraine;
- Blocking of ports in Ukraine;
- Export restrictions in Ukraine;
- International sanctions against Russia;
- Export restrictions in Russia.

Of course, each war has the consequences in the global economy, and the Ukraine-Russian war will also have certain consequences. It is important to underline the major consequences;

- Disruption of transport and production chains in Ukraine;
- Shortages in the war zone in Ukraine;
- Decline in exports and rising prices for wheat, sunflower oil, corn, and other agricultural products;
- Risk of grain shortage in North Africa and the Middle East;
- Risk of social tension in North Africa and the Middle East.

Of course, above stated consequences and reasons are not all however, mentioned risks and consequences clearly show that the war in Ukraine must be stopped as soon as possible, and the international community should help Ukraine with crop sowing campaign. Azerbaijan as a strategic partner of Ukraine has already offered help in this campaign however, ongoing clashes are a serious danger for the cultivation and harvesting of wheat crops. Disrupting agricultural production and trade from Ukraine and Russia threatens global food security by rising food prices and creating scarcity, especially for countries highly dependent on exports. To sum up, the war proved that countries should diversify not only energy supply sources but also food supply sources. Therefore, it should be key priority for many countries to increase domestic

sources and support farmers by offering high buying prices for domestic agricultural commodities.

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