Moscow has sought to block, limit, and control Ukraine’s ability to export agricultural commodities to global markets as part of its war in Ukraine. The most powerful tool that the Kremlin has used to achieve these aims is the blockade of trade routes on the Black Sea and Sea of Azov. As long as food prices are high and because Russia maintains control of Black Sea trade routes, Moscow can use this stranglehold on Ukrainian grain as critical leverage to extract concessions in negotiations with Ukraine and other countries.

On October 29, Russia suspended its cooperation in the Black Sea Grain Initiative (BSGI), the Turkish-brokered agreement reached in July 2022 that allowed the passage of Ukrainian food commodities by sea. By November 1, wheat futures jumped by nearly 10 percent. After three days of tense negotiations, Russia announced it would temporarily rejoin the agreement by November 2, and wheat prices recovered by the end of the day. While expensive fuel, COVID-related disruptions, and droughts have contributed to historically high grain prices, Russia’s actions are largely to blame for these fluctuations.

The BSGI has allowed Ukraine to export a significant share of last year’s and this year’s harvest. The agreement has largely functioned as intended, and the successful renewal of the BSGI for a further 120 days, announced on November 17, is thus good news. Nevertheless, many millions of tons of grain are still stuck in Ukraine. Ukraine and its allies have been exploring alternative export routes, but rail and road remain an expensive and limited way to bring grain to global markets.

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Ukrainian Grain and Russian Obstructions

The blockade of the Black and Azov Seas began even before the full-scale invasion of Ukraine. On February 8, Russia transferred six large naval vessels to the Black Sea, allegedly to participate in military exercises, which then proceeded to block all commercial trade to and from Ukrainian ports. Upon the launch of the invasion on February 24, Russian forces threatened ships carrying grain with direct attacks and with mines placed in the waters of the Black Sea. Some ports were occupied (Mariupol, Berdyansk, Skadovsk, and Kherson) and others were targeted or blocked (Pivdenny, Mykolaiv, Olvia, Odesa, Chornomorsk, and Bilhorod-Dnistrovsky). Russian forces damaged export and storage infrastructure, including many grain elevators across the country and port infrastructure needed for transferring grain to ships, including at the Nika-Tera facility in Mykolaiv and at the port of Odesa.

The Kyiv School of Economics (KSE) estimates preliminary damage to port infrastructure at $622 million and that the sea blockade is costing Ukrainian farmers $11.9 billion (since late July), making it the most significant way the war has affected Ukrainian agriculture and food processing. More broadly, Russia’s blockade and assaults on ports have resulted in major economic losses for Ukraine estimated at $1.5 billion by the government and rising. Because of the blockade, Ukraine accumulated significant surpluses of grain. By June, before the current harvest and before the negotiation of the grain corridor brought some relief, Ukraine had a surplus of nearly 23 million tons of grain.

Before February 2022, Ukrainian grain fed more than 400 million people worldwide. In the years immediately before the war (2019–21), Ukraine accounted for almost 10 percent of the world’s exports of wheat, 15 percent of corn, 15 percent of barley, and 50 percent of sunflower oil. Agriculture accounted for about 20 percent of Ukraine’s GDP (including related industries) and more than 40 percent of total export revenues. The Black Sea region specifically accounted for 30 percent of world wheat exports, as well as 20 percent of corn and 75 percent of sunflower oil. In peacetime, Ukraine exported up to 5 million tons of agricultural products every month through the seaports of Odesa and Mykolaiv alone.

The negotiated grain corridor and alternative export routes have enabled the export of significant amounts of grain this summer and fall, but monthly grain exports are still well below prewar numbers. The harvest of this year’s crop, together with the remaining crop from last year, is creating a significant surplus of grain on the domestic market, leading to plummeting grain prices in Ukraine and the cutting of farm-gate prices to nearly half their prewar value. The value of exported grain, meanwhile, has increased dramatically, from $30–40/ton (before the war) to $180–200/ton, because of a significant increase in world crop prices.
More generally, food prices increased sharply this past spring and summer, threatening food security in many low- and middle-income countries in Africa and Asia. The UN Food and Agriculture Organization (FAO) predicts that world food and feed prices could rise 8–20 percent by the end of 2022 as a result of the war. Although food prices have trended downward since a historical high point in March, they remain far above what they were in recent years. Wheat and other food commodity futures, as noted above, have also responded with wide swings to war-related events.

The Black Sea Grain Initiative: A Limited Stop-Gap Measure

The Russian blockade, damages, occupation, and closure of trade infrastructure continue to give Moscow valuable political leverage. Lifting or circumventing the blockade has been a goal for Ukraine and its partners since the start of the war. There have been a number of proposals to this end; the Turkish-brokered BSGI was ultimately the most successful, which, on the whole, has functioned as intended. Signed by Ukraine, Russia, Turkey, and the UN on July 22, 2022, the BSGI established the parameters of a partial easing of the naval blockade as a way for Ukrainian food crops to reach world markets. The initiative partially lifted the blockade. It opened three Ukrainian seaports (Odesa, Chornomorsk, and Pivdenny), allowing the export of at least 3 million tons of agricultural products each month since July. According to a KSE forecast, the total economic benefits from unblocking the three Ukrainian ports will amount to $5.5 billion in the 2022-23 growing season.

Per the BSGI, ships exporting grain from Ukraine through the Black Sea are protected by a special buffer zone of 10 nautical miles. To facilitate and monitor the terms of the BSGI, a Joint Coordination Center (JCC), under the auspices of the UN, was established. Russia had been under pressure from countries in the Middle East and North Africa who have suffered from the consequences of the blockade in particular, and from Turkey, which played an enormously important role in cajoling Russia to agree to the BSGI’s terms.

The partial easing of Russia’s blockade has already had significant economic consequences. As of this month, 4,427 voyages have carried over 10 million metric tons of corn, wheat, sunflower and rapeseed, soybean, and other foodstuffs from Ukrainian seaports. The Ministry of Agrarian Policy and Food hopes that Ukraine will be able to export around 4 million tons of grain via the grain corridor in the coming months (if it remains open), which approaches prewar exports of 5 to 6 million tons per month. This year’s harvest is likely to yield about 55 million tons of grain, 18 million tons of which will be needed in Ukraine. Ukraine’s GDP could rise by 2 percent in 2023 if the remainder can be exported in this year’s growing season.
Despite the increase in Ukrainian exports via the grain corridor, the BSGI is a limited stop-gap measure—a “better-than-nothing” solution against the backdrop of Russia’s continued control of the Black Sea region for at least three reasons:

1) Russia was able to negotiate a number of concessions. Western countries agreed to lift (and not impose further) sanctions on the Russian agricultural and fertilizer sector in exchange for the grain corridor. The EU modified financial sanctions to allow payments for these exports, and the United States similarly excluded trade in agricultural commodities and seeds from its sanctions. This means that Russia is not facing sanctions-related restrictions on its own abundant harvest, allowing it to take advantage of high prices in global food-commodity markets.

2) The first agreement was only valid for 120 days and expired on November 19. A new 120-day agreement was reached on November 17. The limited duration of both these agreements gives Russia the opportunity to renegotiate terms and extract further concessions from Ukraine and the West. In the lead-up to the negotiations of the November agreement, Russia’s representative to the UN, Gennady Gatilov warned in an interview with Reuters on October 13, 2022, that Russia “is prepared to reject renewing the deal next month unless its demands are addressed.” As noted above, Russia temporarily suspended its participation on October 29. Russia’s temporary withdrawal in late October also showed the country’s willingness to use the blockade as a leverage tool. Ukraine is therefore working to develop alternative export routes for grain and other food commodities.

3) What is more, the BSGI is politically tenuous. Although Ukraine and Russia were signatories, they did not legally enter into an agreement with each other. Both Russia and Ukraine have accused the other of violating the spirit, if not the letter, of the agreement. Russia attacked port infrastructure in Odesa just days after signing the agreement, an act widely condemned, including by the UN’s secretary General Guterres, but one without any real repercussions for Russia. Meanwhile, Russia has repeatedly accused the West of not following through on agreed-upon concessions to the sanctions regime, claiming that Russian fertilizer and food exporters are facing undue trade barriers.

Despite these problems, the BSGI has been an important solution to Ukraine’s grain problem. Nevertheless, many millions of tons of grain remain stuck in Ukraine, and Russia maintains control of the Black Sea, negotiations, and terms of the current and future grain corridors.

As it did in July of 2022, Turkey played a critically important role in negotiating the terms of the new agreement. Much of Turkey’s own food security depends on imported wheat from Ukraine and Russia, and Recep Tayyip Erdoğan wants to stabilize grain
prices. The same is true of Russia’s trade partners in Africa and the Middle East, but Turkey is alone in its ability to extract concessions from Moscow. With its control of the Bosporus and Dardanelles, Turkey has the final word about commercial and military vessels entering and exiting the Black Sea due to the 1936 Montreux Convention.

**Alternative Trade Routes**

Russia’s sea blockade made apparent the need to develop alternative export routes. Ukraine and its partners have declared their intention to improve rail, road, and river transport to and from Ukraine, but there are a number of significant logistical, infrastructural, and legal problems still to be resolved.

In the spring of 2022, Ukraine began relying on ports on the Danube, despite their limited capacity and lack of equipment to handle export logistics. Transport of Ukrainian grain by land has proved equally challenging: Ukraine lacks enough railcars to transport large volumes of grain, road cargo companies do not have enough trucks to meet demand, and fuel is expensive. An obstacle for rail transport is the difference in track gauge between Ukraine and Western Europe, making transshipment costly and cumbersome. Queues at borders are excruciatingly long because there are too few border crossings, and border checkpoints are not yet equipped to handle grain exports. Despite these challenges, Ukraine increased exports of agricultural products via land routes by 3 million tons in the eight months since the war started.

The EU and Ukraine have been in talks to enable Ukrainian grain exports to pass through EU countries and to improve logistics. For instance, a memorandum was signed with Poland for transporting goods through the ports of Gdynia and Gdański, the German government announced the creation of a “grain railway bridge” with Ukraine, and the Ukrainian Minister of Agriculture and the EU Commissioner for Agriculture have met to discuss EU subsidies and trade logistics.

Ports in other countries, such as the Baltics, have some capacity for exporting Ukrainian grain; however, Ukrainian grain needs to reach them first. Throughout the summer and fall, Ukraine has cooperated with Romania, Moldova, Lithuania, and Latvia to establish export routes by land, and there is a discussion of the possibility of using a number of ports in the Baltic, the North Sea, the Mediterranean, and the western coast of the Black Sea.

Ukrainian agricultural businesses have been trying to adapt to wartime conditions. Efforts include the opening of a logistics rail hub (with wide and narrow tracks) at the Chop railway station in Zakarpattia, the development of new ways to store grains (such as in plastic sleeves) to address surplus crops, the involvement of private agricultural holdings to move and store harvested grain as far as possible from the frontlines, and an increase in the number of checkpoints that can handle large shipments. To improve
export logistics, Ukraine, Moldova, and its EU neighbors have implemented a temporary permit- and customs-free trade regime for Ukrainian food exports to the entire EU region.

Conclusion

Russia’s blockade of the Black and Azov Seas and its attacks on infrastructure have closed or limited traditional routes for the export of Ukrainian agricultural products. The BSGI has helped Ukraine increase its exports; however, the agreement’s limited nature has necessitated the development of alternative export routes. Routes by river, road, and rail, in addition to logistical and legal cooperation between Ukraine and its partners, have helped Ukrainian commodities reach global markets, contributing to a decrease in food prices from a high point in spring and early summer.

The grain corridor, albeit important, is a limited, short-term, and precarious arrangement, as the Russian Navy can bar Ukrainian food and all other exports by sea. This constitutes real and potential direct losses for Ukrainian farmers, the Ukrainian economy, and global food security.

Russia’s ability to strangle Ukrainian grain exports gives it leverage over world food prices precisely because of serious economic and humanitarian consequences, especially if the list of countries suffering from malnutrition and hunger continues to grow. Russia holds enormous power over food prices because the Black Sea region is a crucial contributor to world grain markets. While Ukraine and its partners can and should strengthen alternative export routes, and a new limited agreement was recently reached, as long as the Black Sea blockade remains in effect, it will constitute an effective blackmail opportunity that Russia will likely use in the future.