



TRANSPORT POLICY RESPONSES

TO THE WAR IN UKRAINE

No. 1, 11 July 2022

Dealing with the War's Impacts on Ukraine's Ports: How to Get More Grain to the World

At a Glance

- Ukraine is the world's third-largest grain exporter but the war has rendered most Ukrainian ports unusable. Grain exports have plummeted.
- Many countries in Africa and Asia depend on Ukrainian grain. The drop in exports has driven up food prices and raised fears of shortages and hunger.
- Ukraine can shift some grain exports to European ports with spare capacity. However, rail transport is complicated because of different rail gauges.
- Exporting Ukrainian grain via foreign ports adds transport costs of USD 150 or more per tonne. This is triple the average intercontinental shipping cost.
- An international agreement creating safe maritime corridors in the Black Sea would best safeguard grain exports from Ukraine.

The Issue

Ukraine was the world’s third-largest grain exporter in 2021

Ukraine’s share of world grain exports before the war was 18% for maize, 12% for wheat and 12% for barley.¹ The country transported around 90% of its peacetime grain exports by sea. In 2019, Ukraine’s ports handled 55 million tonnes of grain, around one-third of their total cargo volume. Ukraine estimates that 90% of the regular port turnover is affected by war-related inactivity. In May 2022, Ukraine’s grain exports were down 64% compared to May 2021.²

The war in Ukraine has rendered most of Ukraine’s ports unusable

Three of Ukraine’s 18 ports are still operating, six are blocked and nine are under Russian control. The bulk of Ukraine’s grain exports was covered by four seaports: Chornomorsk, Mykolaiv, Odessa and Pivdennyi (Seaport South).³ All four remain under Ukraine’s control and most of the equipment at these ports is still functioning. The grain terminal in the port of Mykolaiv was destroyed by Russian shelling.⁴ However, Ukraine assesses the overall damage to its port infrastructure as “moderate”.⁵

While the ports are more or less intact, exit and entry for ships is not possible: navigable waters are heavily mined and the Russian navy, despite setbacks, dominates the Black Sea. Russia also controls large stretches of Ukraine’s coast, including the ports of Berdyansk, Kherson, Mariupol and Skadovsk and those on the Crimean peninsula, namely Evpatoria, Feodosia, Kerch, Sevastopol and Yalta.

Which Ukrainian ports are still operating?

Adapted from National Council for the Recovery of Ukraine from the Consequences of the War (2022)



¹ International Grains Council, “[Databank: Ukraine production and trade \(main grains & oilseeds/production\)](#)”, GEN(21/22) Misc.1, 2022.

² Emerging Europe, “[Solutions are needed fast to unblock Ukrainian grain exports, says UN chief](#)”, 19 May 2022.

³ Shramenko, N. and D. Muzylyov (2020), “[Analysis of the grain market in Ukraine and the directions of the development of grain cargo transportation logistics](#)”, *Technical Service of Agriculture, Forestry and Transport*, No. 18, 2020.

⁴ Reuters, “[Russian attack destroys warehouses of major Ukrainian commodity terminal, company says](#)”, 7 June 2022.

⁵ National Council for the Recovery of Ukraine from the Consequences of the War, “[Draft Ukraine Recovery Plan: Materials of the ‘Audit of war damages’ working group](#)”, July 2022, p. 37.

The Impact

Part of Ukraine's exports has shifted to ports close to the Romanian border

For Ukraine, only the three inland ports of Izmail, Reni and Ust-Dunaysk on the Danube River remain fully operational.⁶ Port calls in Izmail increased 284% and calls in Reni 46% in May 2022 compared to January. However, there are limits to the amount of cargo that can be shifted to these ports. The entrance to the Sulina canal, which provides passage to both ports, was congested for several days at the end of May, with around 100 ships waiting to transit. One-third of these ships were due to load Ukrainian grain.

Some cargo has shifted to rail and to ports outside Ukraine

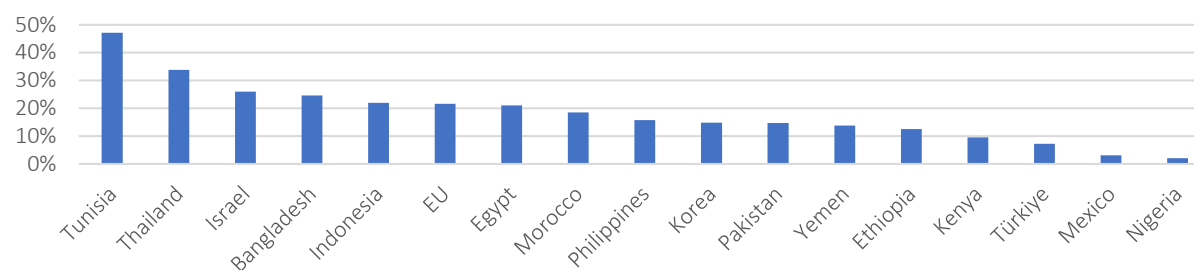
In April 2022, 492 000 tonnes of grain left Ukraine by rail, mostly via the western border with Poland. In May, Ukraine shipped its first grain by sea since the beginning of the war, exporting around 71 000 tonnes of maize via the port of Constanța in Romania.⁷ The Bulgarian port of Varna is also preparing to handle Ukrainian agricultural products. Repairs to the 20-kilometre-long rail line from the Danube port of Giurgiulești (Moldavia) to Galati (Romania) will allow the latter port to handle further shipments.⁸

The lack of grain from Ukraine could cause food shortages

Ukraine is projected to lose 24 million tonnes of grain export potential in the 2022/23 season.⁹ Yet many countries depend on grain from Ukraine. In 2021, Ukraine provided 25% or more of the wheat imports of Bangladesh, Israel, Thailand and Tunisia. It provides nearly half of Tunisia's wheat imports and more than one-third of Thailand's (see chart). The Food and Agricultural Organization projects that with scarce supply and high prices the number of undernourished people could increase by 8 to 13 million in 2023.¹⁰

Which countries depend on wheat from Ukraine?

Wheat imports from Ukraine as share of total wheat imports, 2021



The decline of exports from Ukraine is reshaping global grain flows

More South American grain exports now stay in the Atlantic region. African imports from there have surged. In April 2022, 306 000 tonnes were loaded in Brazil for Egypt; more than double than in April 2021. The United States loaded 512 000 tonnes bound for Egypt in the same month, up 88%. China has turned to Australia for wheat: shipments more than doubled in April 2022 compared with April 2021.¹¹

⁶ Lloyd's List, "[Three Ukraine ports still fully operational says Lloyds agency](#)", 28 April 2022 (subscription only).

⁷ Lloyd's List, "[Ukraine's minor ports adapt to wartime trade](#)", 6 May 2022 (subscription only).

⁸ Lloyd's List, "[Ukraine ships first seaborne grain cargo since invasion](#)", 5 May 2022.

⁹ US Department of Agriculture, Foreign Agricultural Service, "[Grain: World Markets and Trade: Commodities and Data](#)", May 2022.

¹⁰ UN Food and Agricultural Organization, "[The Importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the war in Ukraine](#)", Information Note, 10 June 2022.

¹¹ Lloyd's List, "[More grains stay in Atlantic in trade flow shift](#)", 25 May 2022.

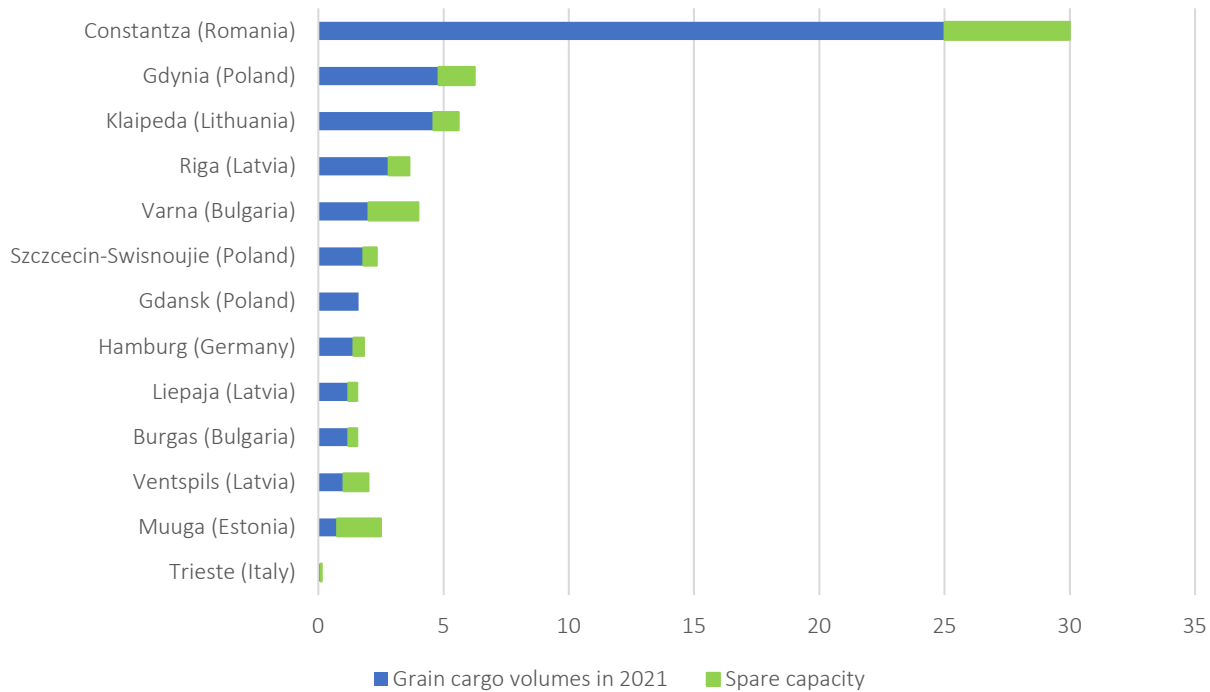
The Outlook

More Ukrainian grain could be exported through other European ports

Spare grain-terminal capacity exists in a number of European ports to handle about 15 million tonnes of Ukrainian grain per year. The ports of Constanța (Romania), Muuga (Estonia) and Varna (Bulgaria) have the largest spare capacity (see chart). An additional 10 million tonnes of capacity could be made available in the medium term by adapting other dry-bulk terminals in these ports to handle grain cargo. The existing land-transport infrastructure would enable feeding these ports with up to 15 million tonnes by rail (1.3 million tonnes/month) and 10 million tonnes by road. The ports’ maximum capacity could therefore be met, in principle. However, the possible unavailability of vehicles, drivers and logistics facilities is not reflected here. Different rail track gauges in Ukraine and the European Union require transshipment of freight or switching wagon bogies at borders, but the capacity for either is limited.¹² Also, a considerable share of existing railway capacity runs via Belarus and Poland.

How much spare capacity is available in European ports?

Grain cargo volumes in 2021 and estimated spare grain terminal capacity in selected ports (million tonnes)



Diverting Ukrainian grain exports to foreign ports adds to transport costs

The additional transport by rail or road to ports further away would add around USD 150 to the cost of exporting one tonne of Ukrainian grain. These additional costs represent around three times the average intercontinental shipping costs for a tonne of grain. Further costs may arise, for instance because Ukrainian rail gauges differ from those in Poland, requiring transshipment of cargo at the border. Additional transshipment is required at Poland’s border with Lithuania. Longer sea legs may also add to export costs (e.g. for grain that will be exported via Lithuania on the Baltic Sea rather than from Ukraine).

¹² Ukraine Open4Business, [“EU transport System not ready to transport large volumes of goods from Ukraine – Opinion”](#), 18 May 2022.

Policy Considerations

A land corridor through Belarus

Negotiating a rail corridor through Belarus would greatly facilitate access to the ports in the Baltic states by drastically shortening the distance to ports like Klaipeda, Riga and Tallinn. Moreover, the rail networks in Ukraine, the Baltic states and Belarus use the same track gauge. A Belarus rail corridor would thus avoid the two rail-to-rail transshipments of the route via Poland. Belarus is reportedly willing to discuss a corridor, provided that goods from Belarus can also be exported via the Baltic ports.¹³ However, this would undercut the sanctions imposed on Belarus, and Russia could also use it for the same purpose.

Naval escorts in the Black Sea

Several countries have mooted sending naval escorts to the Black Sea to ensure the safe passage of grain from Ukraine, among them the Netherlands and the United Kingdom. However, Türkiye has so far enforced the Montreux Convention, which prevents warships other than those based in the Black Sea from entering via the Bosphorus Strait. Under the convention, warships also need to give Türkiye's government 15 days' public notice of their intention to enter the Black Sea. Türkiye itself has offered naval escorts as part of its demining proposal, but this has not gone forward, for the reasons described below.

The risk from naval mines

Naval mines represent the most severe risk to ships in the Black Sea. They make navigation close to the Ukrainian coast extremely dangerous. Drifting mines have also been reported in the northwest, west and southwest areas of the Black Sea.¹⁴ The government of Türkiye has offered military assistance to clear mines off the Odessa coast. Ukraine has not endorsed this initiative, saying it would leave the city vulnerable to attack from the sea. Russia claims it has demined the ports of Berdyansk and Mariupol. Demining the Black Sea ports, and indeed the wider Black Sea, is paramount to restoring commercial shipping. At the same time, legitimate security concerns as expressed by Ukraine cannot be dismissed.

An international agreement for safe maritime corridors

Grain exports from Ukraine are of strategic, global importance. The potential to shift them to other European ports exists, but is limited. A cargo corridor through Belarus would be prone to abuse. Naval escorts in the Black Sea require consent from Türkiye and carry a risk of escalation. Demining coastal waters is essential for resuming exports by sea. Against this backdrop, a broadly supported international agreement to create safe maritime corridors in the Black Sea can offer a way forward. A number of countries have been calling for such an agreement. Among other things, it could focus mine-clearing efforts on mutually agreed locations and routes and place them under collective supervision with specific security guarantees.

This work is published under the responsibility of the Secretary-General of the International Transport Forum. The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Member countries of the ITF. This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

¹³ RailFreight.com, "[Belarus agrees to grain corridor to Klaipeda, but on which terms?](#)", 10 June 2022.

¹⁴ North Atlantic Treaty Organisation, "[Risk of collateral damage in the northern western, western, and southwest Black Sea](#)", 1 July 2022; London P&I Club, "[Black Sea – Mine Threat](#)", 29 March 2022.