Research

Black Sea Bulletin

Maritime trade and port infrastructure in Black Sea countries

Ukraine

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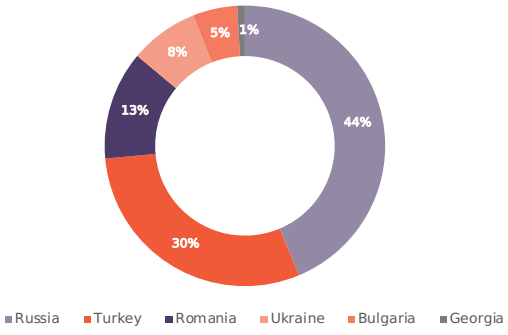
The Black Sea region is often referred to as a gateway between Europe and Asia, though its potential benefits are far from being fully realized. This is especially true for the naval trade. The Black Sea region's share in international naval trade is just 2.5%, while the North Sea region accounts for 17%[1]. Water transportation of goods is vital for countries participating in global trade as more than 80% of products traded internationally are transported by sea, and for developing countries, this number is even higher[2]. Accordingly, the enhancement of maritime transportation and the improvement of port infrastructure becomes more and more desirable if not indispensable for economic development, especially in emerging nations like those in the Black Sea region.

Thus, the importance of this region's infrastructural and logistical development is apparent. However, recent drastic changes – namely the ongoing Russia-Ukraine war, which has further exacerbated the disruptions caused by the COVID-19 pandemic, are significantly hindering this development. Though, it is yet ambiguous how the war might alter the development of maritime trade in the region. On one side, as a result of Russian aggression, Ukraine and its ports have suffered tremendous losses, and Russia has been placed under heavy economic sanctions. Furthermore, this conflict and the very existence of a country as unpredictible as Russia in the region might threaten the reputational reliability of trade for the whole region, given the risk that Russia might blockade other Black Sea countries. On the other side, as Ukraine and Russia possess globally important resources (mainly food and energy), it will remain essential to find ways to transport those resources to the rest of the world. Crucially, it will also be essential to find alternative route that bypasses Russia to transport goods from Eastern countries to Europe. One such route that has the potential to solve such logistical problems created as a result of the war is the Black Sea corridor. Accordingly, this bulletin aims to analyze the pre-war state of the Black Sea region's logistics, port activity, and shipping connectivity and then provide some insights into the potential impact of the ongoing war.

General Trade Turnover in Black Sea Countires, 2020



Source : UN Comtrade

Before discussing the various indexes related to maritime logistics, it is important to look at the Black Sea region from a general trade statistics perspective. Examining the data for the year 2020, the Black Sea area only accounted for 3.8% of total global trade turnover, compared to 4.1% in 2010. Meanwhile, with a 1.7% share alone, the Russian Federation dominates in the Black Sea region but, recording a decrease of 9% compared to 2010, it is one of two countries in this region to have recorded a downward trend in trade volume (the other is Ukraine, suffering an 8% decrease). Turkey recorded a 1.1% share in 2020. This is mainly due to the fact that Russia and Turkey have the largest territories in the region. Moreover, Russia and Turkey, unlike the other four countries of the region, have access to seas other than the Black Sea, which should be considered in the analysis of general trade statistics, as well as other maritime-trade-related indicators analyzed below. Meanwhile, Georgia has the lowest trade turnover among Black Sea countries, accounting for only 0.03% of the global trade. Even though the trade volume of Georgia has recorded a 65% increase since 2010, its share has increased only by 0.01 percentage points. Other countries in the Black Sea region do not account for more than 0.5% of total international trade turnover.

Maritime-trade related indicators

The Logistics Performance Index (LPI) of the World Bank could be considered a benchmarking instrument that demonstrates countries' logistical conditions, including their infrastructure, the effectiveness of their border control institutions, and the timeliness and quality of their shipments. It may also serve to offer a broad perspective on the logistical performance of nations, including our target region. It should be noted here that the index is dated 2018, and thus does not factor in the subsequent COVID-19 pandemic and Russia-Ukraine war. However, for a complete analysis of the potential effects that those two recent shocks might cause, it is also essential to grasp the position of Black Sea countries beforehand.

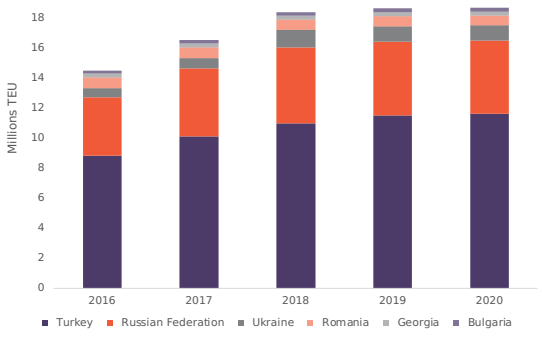
Logistics Performance Index 2018, Percentile rank (0-100)

Country	LPI Rank	Customs Rank	Infrastructure Rank	Logistics Competence Rank	Timeliness Rank
Turkey	37	47	30	37	39
Romania	50	58	58	53	45
Bulgaria	57	55	64	54	57
Ukraine	69	95	105	70	55
Russia	85	131	73	73	74
Georgia	124	109	108	139	114

Source : UNCTAD

Looking at the LPI ranking, a large variation among the Black Sea countries is visible. Turkey is the best performer in all given components, ranking 37th among 160 countries. Moreover, Turkey's trade-related infrastructure is visibly better than that of other Black Sea region countries, sitting 30th globally. Turkey is followed by Romania, which ranks 50th, while Georgia is the poorest performer in all listed components. It ranks 124th worldwide and largely lacks logistical competence. As noted above, these rankings were calculated before the start of the war and thus may not accurately reflect the current position of Black Sea countries.

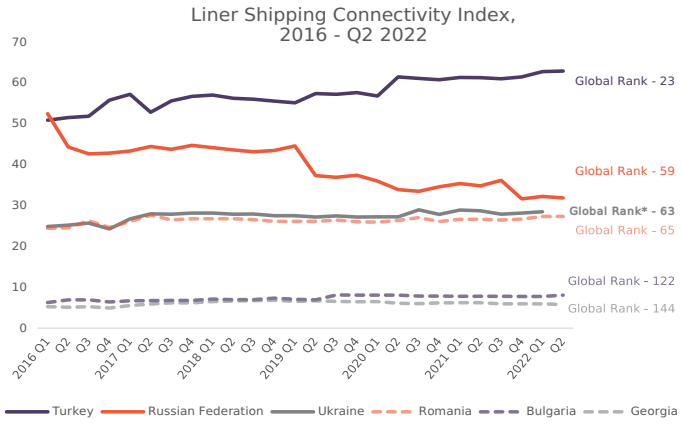
Container Port Throughput, 2016-2020



Source : World Bank

Container Port Throughput (CPT) indicates the amount of cargo that passes through a port each day. It can include both ship loadings and discharges, making it a useful indicator of port activity. Black Sea countries accounted for only 2.3% of the global throughput in 2020, however, its share has increased over time. The growth has been more rapid in 2017 and 2018, rising by 14.1% and 11.2%, respectively. Interestingly, despite the impact of the pandemic, CPT for the Black Sea countries still increased by 0.2% in 2020 compared to 2019.

It can be obtained from these data that Turkey dominates the Black Sea region in terms of number of cargo passing through its ports. It accounts for 62.2% of the region's total CPT followed by the Russian Federation, which has a 26.1% share. Bulgaria is the country in the region with the least port activity (only 1.35% of the Black Sea region's share), while Georgia accounts for only 1.39%.



Source: UNCTAD

The Liner Shipping Connectivity Index (LSCI), published by the United Nations Conference on Trade and Development (UNCTAD), is an index based on several indicators, including deployment of container ships, container carrying capacity, and number of liner shipping companies. The index scores countries based on their connectivity level to global shipping networks (maximum value in 2006 = 100) and covers all of the Black Sea countries[3].

Across Black Sea countries, growth was especially significant for Turkey, which is now 23rd worldwide. In contrast, Russia lost 21 points over the analyzed period, ending in 59th place. Ukraine (63rd) and Romania (65th) are now not far behind the Russian Federation, while Bulgaria (122nd) and Georgia (144th) are well outside the top 100, making Georgia the lowest ranking country in the region.

Despite a general worsening trend, Russia's rapid decline was most observable in Q4 2021, which could be considered part of the prelude to the 2022 Russian invasion of Ukraine. In late 2021, Russia started heavy military training near the Ukrainian border[4], making the Black Sea risky for maritime trade as doubts regarding regional peace increased. This could have affected the level of connectivity of Russian ports.

Shipping and maritime trading are highly dependent on the mobility and flexibility of ports, thus **the Container Port Performance Index** (CPPI) is a highly valuable reference.

The CPPI is a joint product of the World Bank and S&P Global Market Intelligence. The index's analysis is based on total port hours per call, classified as the amount of time taken between a ship's arrival at a port to its departure after completing its cargo exchange.

Even though the Black Sea has far-reaching maritime trade potential, countries in the region are failing to make the most of their opportunities. According to the CPPI 2021 data, there are no large ports in the region, and only one medium-sized port in Romania. All other ports in the Black Sea are categorized as small.

However, it is essential to highlight that performance is not always determined by size. For instance, one of the medium-sized ports in the region lags behind all but one of the region's small ports according to the CPPI.

Container Port Performance Index, 2021

Port Name	Size[5]	Total Points[6]	Rank[7]
Novorossiysk (Russia)	Small	13.6	172
Burgas (Bulgaria)	Small	8.6	195
Odessa (Ukraine)	Small	4.4	209
Varna (Bulgaria)	Small	1.5	225
Poti (Georgia)	Small	1.4	226
Batumi (Georgia)	Small	-2.2	245
Samsun (Turkey)	Small	-3.7	248
Constantza (Romania)	Medium	-12.7	272
Yuzhny (Ukraine)	Small	-52.2	317

Source: The World Bank and S&P Global Market Intelligence

Although Georgia performs poorly among the Black Sea countries in both the LSCI and CPT, the Georgian ports of Poti and Batumi (with total points of 1.4 and -2.2, respectively) are in the middle of the rankings and are ahead of three ports in Turkey (-3.7), Romania (-12.7), and Ukraine (-52.2).

Most indicators above demonstrate the pre-war state of maritime trade and infrastructure of Black Sea countries. In the seventh month of ongoing war, it is very difficult to assess its overall regional impact on these indicators. The shock in the region triggered by Russia's invasion of Ukraine continues to affect not only maritime and container trade, but the overall stability of the region. The war has destroyed the infrastructure of Ukrainian ports, making efficient operations and maritime trade challenging. According to the Ukrainian Deputy Minister of Infrastructure, the most damaged ports include Mariupol, Berdyansk, Olbia, Chernomorsk, and Nikolaev. The port infrastructure damages are estimated to equate to billions of Euros[8].

While analyzing Black sea ports, it is also crucial to consider that Russian and Ukrainian ports are vital for the world trade as these countries are significant players in global food and agriculture trade. The 2021 exports from these countries combined amounted to 30% of global wheat and 55% of the world's sunflower oil supply[9]. Thus, finding an alternative to trading in the Black Sea is a daunting prospect, given its unique place in agricultural trade. Encouragingly, Moscow and Kyiv, with help from Turkey and the UN, have reached a deal to allow the resumption of grain exports[10]. Besides the effects of the war, Black Sea trade has been impacted by sanctions imposed on Russia with banned products no longer traded. Furthermore, the impacts of the war and tensions endanger growth potential in the region as a whole. The presence of Russia in the region and the losses caused by war (for instance, after the war broke out, over 300 vessels were stranded in the Black Sea, approximately one-third of which were foreign-flagged ships)[11] will amplify the region's reputational risks and might make foreign partners hesitant to trade in the Black Sea.

Despite this gloomy background, Georgia, Romania, and Bulgaria have increased the turnover of their seaports. Alongside the above-mentioned negative impacts, the war in the region has seen other transit corridors in the Black Sea attract more attention. After the illegal Russian invasion of Ukraine, governments and businesses have sought alternative trade routes that avoid Russia, putting the Trans-Caspian corridor in particular under the spotlight. This route offers the shortest distance connecting Europe and Asia while bypassing Russia.

To summarize, as stated above, the implications of the war are ambiguous and, at the same time, critical. Thus, this topic needs further research and its positive and negative effects require constant monitoring as it is yet to be determined which effects will outweigh the others.

1. Source - https://www.researchgate.net/publication/354313134_Georgia%27s_Container_Market_and_The_Black_Sea_Region
2. Source - https://unctad.org/meeting/launch-review-maritime-transport-2022
3. For each component a country's value is divided by the maximum value of each component in 2006 as UNCTAD started the systematic annual gathering of data for the index in 2006. The latest data available for Ukraine is Q1 2022.
4. Source: https://www.euronews.com/my-europe/2021/11/24/russia-s-military-build-up-near-ukraine-is-different-this-time-say-experts
5. Size is devided into three groups: Large: more than 4 million TEUs per year; Medium: between 0.5 and 4 million TEUs per year; Small: less than 0.5 million TEUs per year.
6. The index points used to construct the ranking in the administrative approach reflect the approach as outlined in the chapter explaining the methodology, which is an aggregate of the performance of the port, weighted relative to the average across call and vessel size. A positive point means a port compares better compared to the average in one call size and vessel size category, while a negative point means that a port compares poorly to the average in one call size and vessel size category, particularly if it does not have an offsetting positive score(s) in other cell(s).
7. CPPI covers 370 ports.
8. Source: https://www.portseurope.com/ukraines-ports-infrastructure-damage-estimated-at-billions-of-euros/
9. Impact of the Ukraine-Russia conflict on global food security and related matters under the mandate of the Food and Agriculture Organization of the United Nations (FAO)
10. Source: https://www.aa.com.tr/en/russia-ukraine-war/5-more-grain-carrying-ships-leave-ukrainian-ports/2661968
11. Source: https://lloydslist.maritimeintelligence.informa.com/LL1140295/Over-300-vessels-and-at-least-1000-seafarers-are-stuck-in-Ukraine

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