



**RESHAPING MARITIME
TRADE IN THE BLACK SEA:
THE EFFECTS OF THE
RUSSO-UKRAINIAN WAR**

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TABLE OF CONTENTS

Introduction	1
Port Calls at Black Sea Ports	2
International Maritime Trade of Black Sea Countries	4
Intra-Black Sea Countries' Maritime Trade	9
Major Commodities Traded Through the Black Sea	10
Maritime-trade-related Performance Indicators	11
Closing Remarks	13
Disclaimer	14

INTRODUCTION

The Black Sea holds significant strategic importance, connecting Europe and Asia. The sea has shorelines in six countries, namely Bulgaria, Georgia, Romania, Russia, Türkiye, Ukraine, providing access to vital international trade routes. However, despite its vast potential, the potential of trade through the Black Sea remains significantly unfulfilled, as ports in the region run below their nominal capacity due to operational inefficiencies.¹ In particular, the port traffic capacity in the Black Sea is nearly 700 million tons,² which could soon further increase with infrastructure improvements. Yet, as of 2021, only 22% of this capacity was being utilized.³ Recent challenges, particularly those arising from the Russo-Ukrainian War, have exacerbated the situation, leading to a notable 5 percentage-point (pp) decrease from 2021 to 2024, bringing this figure down to 17%. Moreover, in 2021, Black Sea countries accounted for only 2.4% of global container throughput.⁴

Shortly after Russia's full-scale invasion of Ukraine in February 2022, maritime trade flows in the Black Sea were significantly reshaped, with the most pronounced impact on the grain trade. The blockade of Ukrainian ports led to a near-total halt in shipping activities from February to August 2022, causing severe disruptions in global grain supplies.⁵ The establishment of the Black Sea Grain Initiative (BSGI) in July 2022 allowed for some recovery by facilitating safe passage for grain shipments. While the BSGI helped to mitigate some of the disruptions in agricultural exports, the broader impact of the war extended beyond grain trade, affecting maritime commerce as a whole in the region. The global sanctions imposed on Russia in response to the invasion and ensuing war quickly affected Russia's shipping operations and access to global markets, as evidenced by a 24% decline in Russia's oil and gas revenues in 2023 compared to 2022.⁶ Meanwhile, other Black Sea countries, such as Romania, Bulgaria, and Georgia, initially experienced an increase in trade as cargo previously routed through war-affected ports was redirected to their ports.⁷

As the war continued, developments affecting the trade in the Black Sea changed. In particular, Russia gradually adjusted its trade patterns to mitigate the effects of sanctions and, in July 2023 it suspended the BSGI, leading to renewed tensions and attacks on merchant ships from both sides of the conflict. As of 2024, despite the ongoing war, the partial restoration of shipping routes and enhanced security measures had laid the foundations for the recovery of Black Sea maritime trade. For example, a new coastal shipping route has enabled Ukraine to export agricultural products more securely.

The profound impact of the Russo-Ukrainian War on Black Sea trade underscores the importance of thoroughly analyzing how the region has adapted to such disruptions. This publication builds upon **the previous edition**, which was released shortly after the outbreak of the war. Now, three years later, our focus shifts to examining how trade dynamics, particularly maritime trade in the Black Sea region, have evolved during this period. While we have primarily analyzed data from 2023 due to the limited availability of data for 2024, insights into last year's developments are provided, supplemented by desk research.

¹ <https://thedocs.worldbank.org/en/doc/6248f697aed4be0f770d319dcaa4ca52-0080062023/original/Middle-Trade-and-Transport-Corridor-World-Bank-FINAL.pdf>

² <https://black-sea-maritime-agenda.ec.europa.eu/sites/default/files/2022-07/CMA%20Factsheet%20Maritime%20Transport%20%28June%202022%29.pdf>

³ PMCG's calculations based on OECD data.

⁴ Global container throughput refers to the amount of cargo that passes through a port each day.

⁵ https://www.researchgate.net/publication/379704918_Impact_of_the_Russo-Ukrainian_war_on_Black_Sea_trade_Geo-economic_challenges

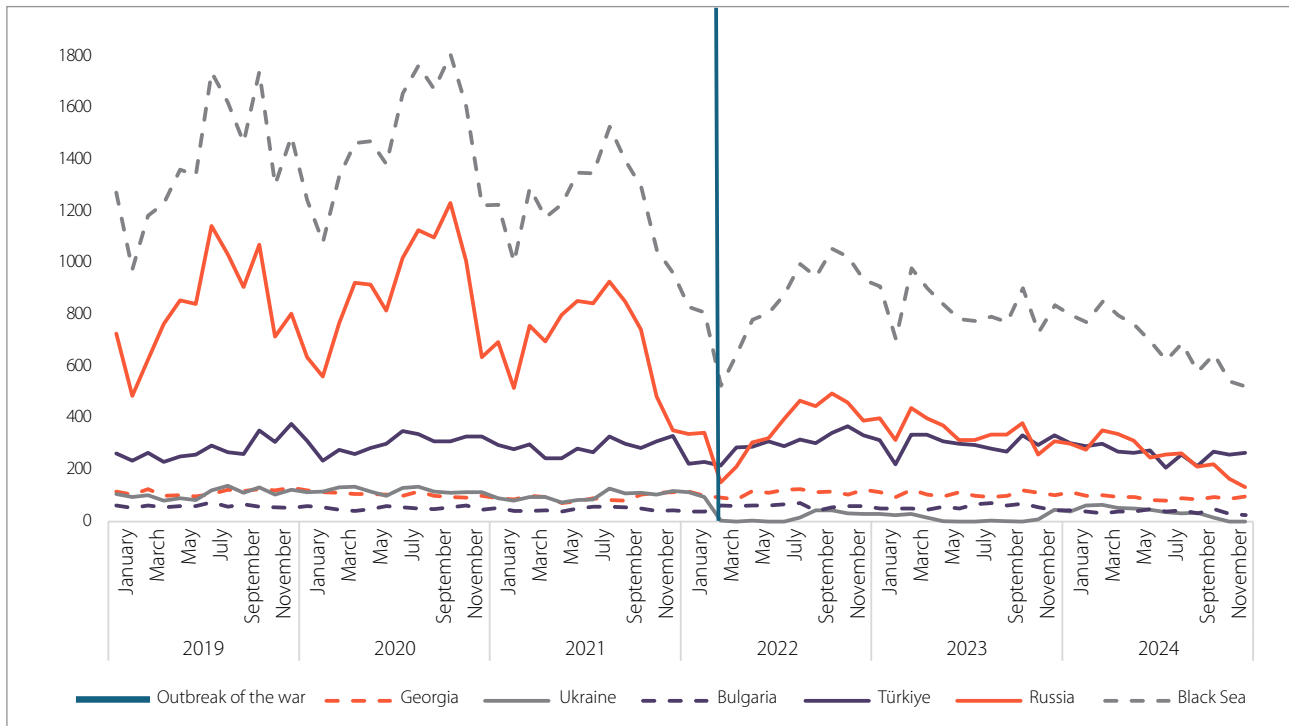
⁶ <https://www.atlanticcouncil.org/content-series/russia-tomorrow/oil-gas-and-war/>

⁷ https://unctad.org/system/files/official-document/osginf2022d2_en.pdf

PORT CALLS AT BLACK SEA PORTS

Trends in the activity at Black Sea ports can be assessed through port call data. To clarify, a “port call” is defined as the entry of a ship into a port for operations such as loading or unloading cargo. It serves as a vital metric in evaluating port efficiency and activity levels, providing valuable insights into the impact of the war on maritime operations.

Graph 1: Number of port calls in the Black Sea region⁸



Source: PortWatch

Prior to the war, the number of port calls in the Black Sea region was relatively stable, with some seasonal fluctuations. However, the outbreak of the conflict brought immediate disruptions, particularly for Russia and Ukraine. The timeline below highlights key developments and events affecting port activity before and since the start of the war:

- **November 2021** - Russia experiences a pronounced decline in the number of port calls, potentially tied to early military preparations, which is later compounded by the effects of international sanctions, restricted trade routes, and rising geopolitical tensions.
- **March 2022** - Port calls in Ukraine nearly come to a halt, reflecting the severe impact of the conflict on maritime infrastructure, port access, and overall security in the region.
- **August 2022** - Port calls in Ukraine begin to recover, largely due to the BSGI, established in July 2022, allowing three Ukrainian ports to resume partial operations and serve vessels exporting grain and foodstuffs via a humanitarian corridor in the Black Sea. As a result of the BSGI, the volume of grain traded increases, albeit far below pre-war levels.⁹

⁸ The data cover the following ports: Bulgaria - Varna; Georgia - Poti and Batumi; Ukraine - Berdyansk and Pivdennyi; Russia - Taganrog, Temryuk, Tuapse, Rostov-on-Don, Azov, and Yeysk; and Türkiye - Samsun, Trabzon, and Ereğli. Data for ports in Romania were not available.

⁹ https://www.pmcresearch.org/policypapers_file/10b463da28605874e.pdf

- **May 2023** - Port calls in Ukraine fall sharply to almost zero after Russia effectively cuts the port of Pivdennyi out of the BSGI agreement, according to Ukraine's claims.¹⁰
- **July 2023** - Russia announces its decision to end the BSGI.
- **August 2023** - Following the collapse of the BSGI, Ukraine adopts new routes through Reni and Izmail, transit corridors through the European Union (EU), and a maritime corridor along the western Black Sea coast near Romania and Bulgaria. However, in the initial stages, Ukraine struggles to counter Russia's naval dominance due to limited resources, weak maritime strategies, and a lack of safety guarantees for shipowners.
- **December 2023** - Port call activity begins to recover, highlighting the growing importance of Ukraine's new shipping scheme.¹¹ In response to the initial challenges, by late 2023, Ukraine enhances its security and navigation tactics, targeting Russian naval vessels and infrastructure to expose vulnerabilities in Russia's Black Sea fleet. The Ukrainian government also introduces a state-backed compensation scheme to cover damages caused by Russia, reducing financial risks for maritime operators. These measures effectively revive shipping activities and strengthen Ukraine's maritime position.¹²
- **November and December 2024** - Port calls in Ukraine drop to zero and declined significantly in Russia. This could be attributed to escalation in the Russo-Ukrainian conflict in late November 2024. Furthermore, in mid-November 2024,¹³ Russia suspends gas deliveries to Austria via Ukraine. This is followed by Ukraine's refusal to extend the transit agreement with Gazprom in an effort to cut off revenues that could fund Russia's war efforts.¹⁴

Thus, significant challenges remain, as evidenced by the severe decline in port calls in Ukraine and Russia at the end of 2024, following a brief recovery. Notably, military actions and sea mines continue to pose substantial threats to commercial shipping in the region. Since the conflict began, more than 100 sea mines have been detected in the Black Sea, most of them near Ukrainian ports, creating hazardous conditions for vessels.¹⁵

Meanwhile, port calls in some other Black Sea countries, namely Türkiye, Bulgaria, and Georgia, slightly increased in 2022 and 2023 but returned to pre-war levels in 2024. The average number of port calls in Georgia increased significantly in 2022 (20.1% YoY) but gradually settled down in 2023 and 2024. A similar trend applied to Bulgaria, where port calls increased in 2022 (16.9% YoY) but slowed down in 2023 and subsequently fell below pre-war levels in 2024. In Türkiye, port calls increased slightly in 2022 (1.3% YoY) and 2023 (3.4% YoY) but began to decline in 2024. Overall, regional port activity as a whole has demonstrated the lasting consequences of the conflict, sanctions, and the reorientation of global trade routes.

¹⁰ <https://www.reuters.com/markets/commodities/ukraine-says-russia-has-blocked-black-sea-grain-export-deal-again-2023-06-01/>

¹¹ https://www.pmcresearch.org/policypapers_file/a6bc65bcbbf078655.pdf

¹² https://en.cfts.org.ua/articles/the_ukrainian_maritime_corridor_is_the_key_breakthrough_of_2023

¹³ <https://apnews.com/article/russia-ukraine-november-2024-crucial-week-0555d1af20edcb8dcf8aef47d868db22>

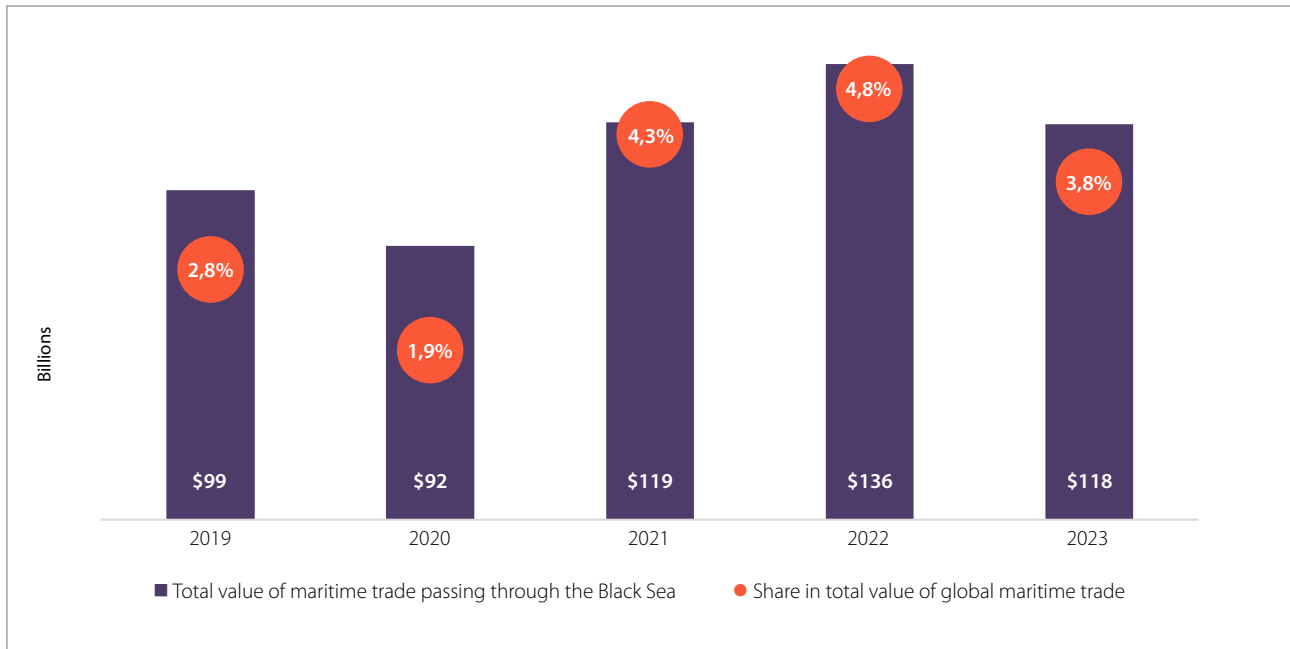
¹⁴ <https://www.reuters.com/markets/commodities/austrias-omv-informed-by-gazprom-that-deliveries-be-reduced-0-says-platform-2024-11-15/>

¹⁵ <https://www.jmu.edu/news/cisr/2024/09/12-blacksea.shtml>

INTERNATIONAL MARITIME TRADE OF BLACK SEA COUNTRIES

While port activity provides a valuable measure of operational efficiency and regional accessibility, a broader perspective on maritime trade is essential to understand the economic dynamics and trade flows of Black Sea countries.

Graph 2: Total value of maritime trade through and within the Black Sea¹⁶



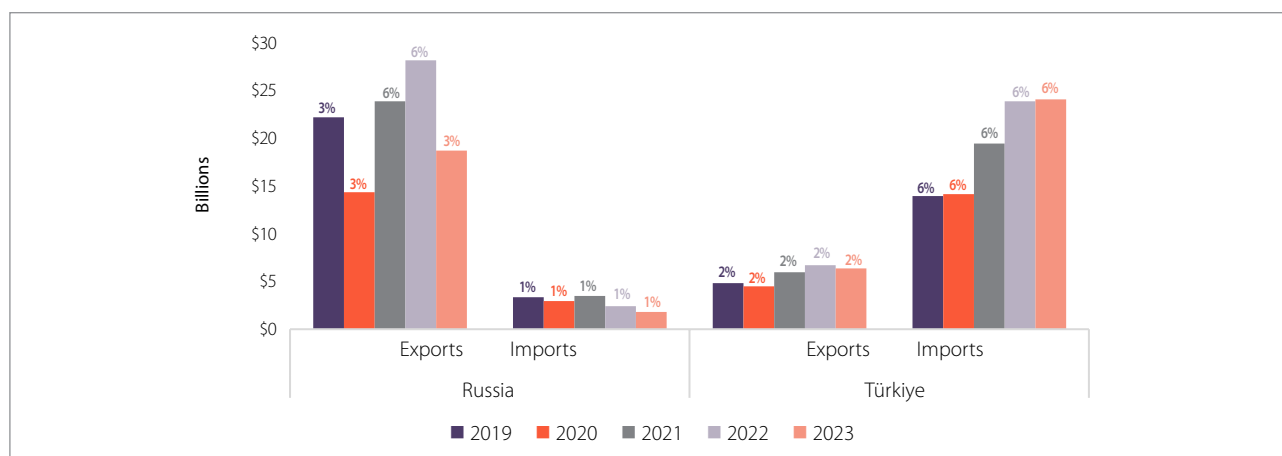
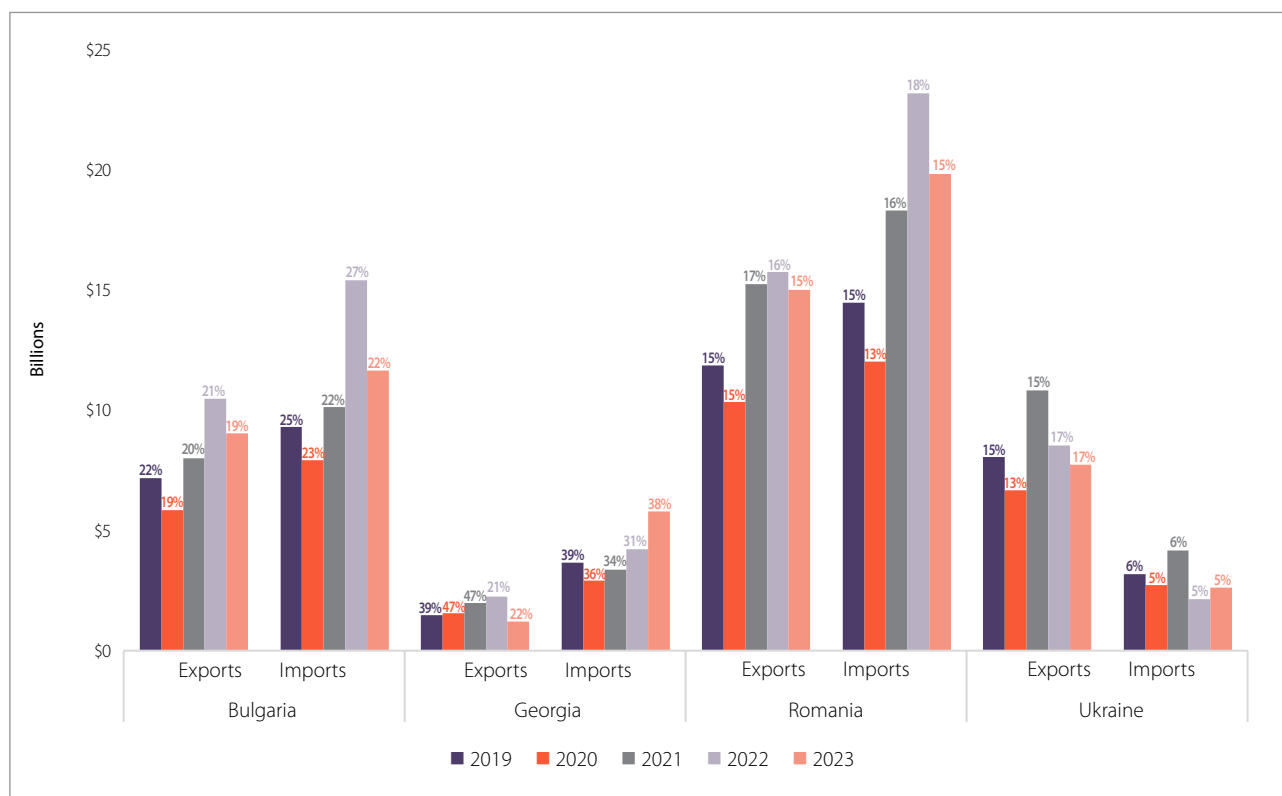
Source: UN Comtrade

In 2019, the total value of maritime trade through and within the Black Sea was \$99 billion, representing 2.8% of global maritime trade. This figure declined in 2020, likely due to the onset of the COVID-19 pandemic and the consequent economic disruptions. By 2021, the region had not only recovered but had surpassed pre-pandemic levels, with its share of global maritime trade increasing by 1.5 pp compared to 2019.

In 2022, despite the outbreak of the Russo-Ukrainian War, the total value of maritime trade passing through the Black Sea increased by 14.6%, reaching its highest level during the analyzed period. However, in 2023, the trend reversed. The total value of maritime trade in the region declined by 13.2%, resulting in a 1.0 pp reduction in its share in global maritime trade. This downturn underscores the prolonged effects of geopolitical tensions, expanding sanctions, and shifting trade routes on the Black Sea's maritime trade. It also reflects how countries and shipping companies have adapted to disruptions in supply chains and market access, rerouting cargo away from conflict-prone Black Sea ports to minimize risks such as higher insurance costs and potential military action.

¹⁶ The total value of maritime trade includes only the Black Sea ports of Türkiye and Russia, and excludes their ports on other seas.

Graph 3: Black Sea countries' trade via Black Sea ports: exports and imports and share in total trade



Source: UN Comtrade

In 2022, Ukraine, victim to the war that began in February, experienced substantial YoY declines in both maritime exports and imports of 21.0% and 48.5%, respectively. However, in 2023, its imports began to recover, increasing by 22.6% YoY, largely driven by increased imports from the EU and China, which became Ukraine's largest trading partner among individual countries in 2023, surpassing Poland. In addition, there was a notable rise in imports of machinery and equipment. In contrast, exports continued to decline, though at a less pronounced rate of -9.4%, primarily due to a global drop in grain prices, one of Ukraine's main export products, despite an increase in the volume of goods sold.¹⁷

Meanwhile, in Russia, maritime imports through Black Sea ports declined YoY by 30.2% in 2022, while maritime exports continued to grow, increasing YoY by 17.8%, largely due to the weak enforcement, excessive loopholes, delays, and incompleteness of the international sanctions imposed on Russia.¹⁸

¹⁷ <https://www.osw.waw.pl/en/publikacje/analyses/2024-01-22/falling-exports-ukraines-foreign-trade-second-year-war>

¹⁸ https://pmcresearch.org/periodic_show/525/Re-assessment-of-the-Effectiveness-of-Sanctions-Against-Russia

Moreover, Russia gradually adjusted its trade patterns to mitigate the effects of these sanctions by expanding its “shadow fleet,”¹⁹ exploring alternative shipping methods, and strengthening relations with non-Western countries, such as China and India.²⁰ As the conflict persisted, sanctions were expanded and intensified. For example, in 2023, the EU banned Russian coal imports and imposed additional restrictions on Russian banks. Consequently, in 2023, maritime exports also declined significantly, falling by 33.6% YoY. This drastic drop in exports from Russia in 2023 could be attributed to the fact that, despite the redirection of exports towards Asian markets, particularly China and India, fuel was often being sold to those countries at discounted prices,²¹ coupled with a significant drop in global commodity prices, especially for oil and gas.²²

As for the remaining Black Sea countries, in 2022, when the Russo-Ukrainian War began, exports and imports of goods continued to grow in all of them, while Ukraine and Russia faced the consequences of the war. This growth was primarily driven by the redirection of transport routes away from the countries involved in the conflict. However, in 2023, the high growth observed in the previous year across these countries slowed down, signaling a weakening of trade flows and reflecting the terms-of-trade shock the region experienced in 2022. Initially, redirecting trade flows from Ukraine and Russia to other Black Sea countries seemed feasible but, as time passed, it is likely that these flows gradually began to bypass the region entirely, and alternative routes were found and favored. Meanwhile, in Bulgaria and Türkiye, both exports and imports declined in 2023.

Analyzing the share of maritime trade passing through the Black Sea as a percentage of total trade demonstrates the extent of the dependence of certain Black Sea countries on maritime trade through the Black Sea.

Among these countries, Georgia stands out as the most dependent on Black Sea maritime trade overall, particularly with regard to imports (37.5% in 2023). However, its reliance on exports through the Black Sea dropped sharply in 2023 (-20.5 pp YoY), signaling a significant shift to alternative routes and other means of transport. Ukraine is more dependent on exports through Black Sea than imports through the Black Sea. Indeed, Ukraine’s reliance on Black Sea ports for exports slightly increased after the war broke out, rising by 1.7 pp YoY in 2022 and by 0.4 pp in 2023, reflecting the continued use of maritime routes for key commodities despite regional disruptions. However, its reliance on imports through the Black Sea remains very low (5% in 2023). Türkiye and Russia are the least reliant on Black Sea maritime trade, primarily due to them having ports on other seas. Russia’s dependence on Black Sea ports in terms of exports halved YoY in 2023, reflecting a significant redirection of trade flows to alternative ports.

Alongside maritime exports and imports, analyzing the balance of maritime trade in goods among Black Sea countries, which refers to the difference between a country’s exports and imports, helps to gain an understanding their economic stability, trade competitiveness, and dependence on external markets.

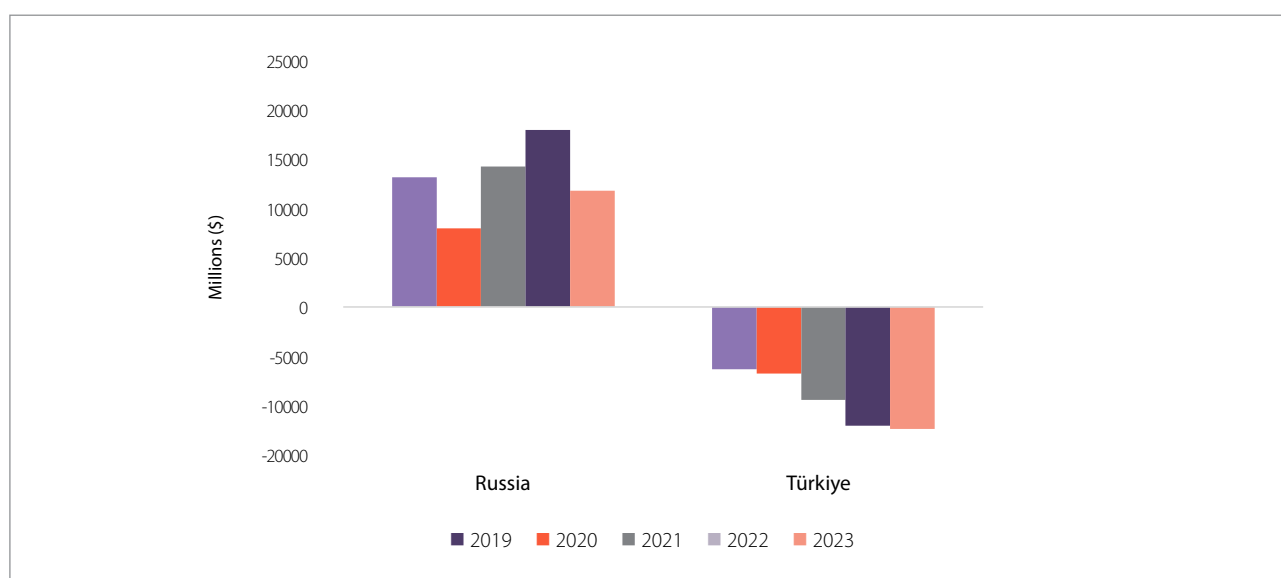
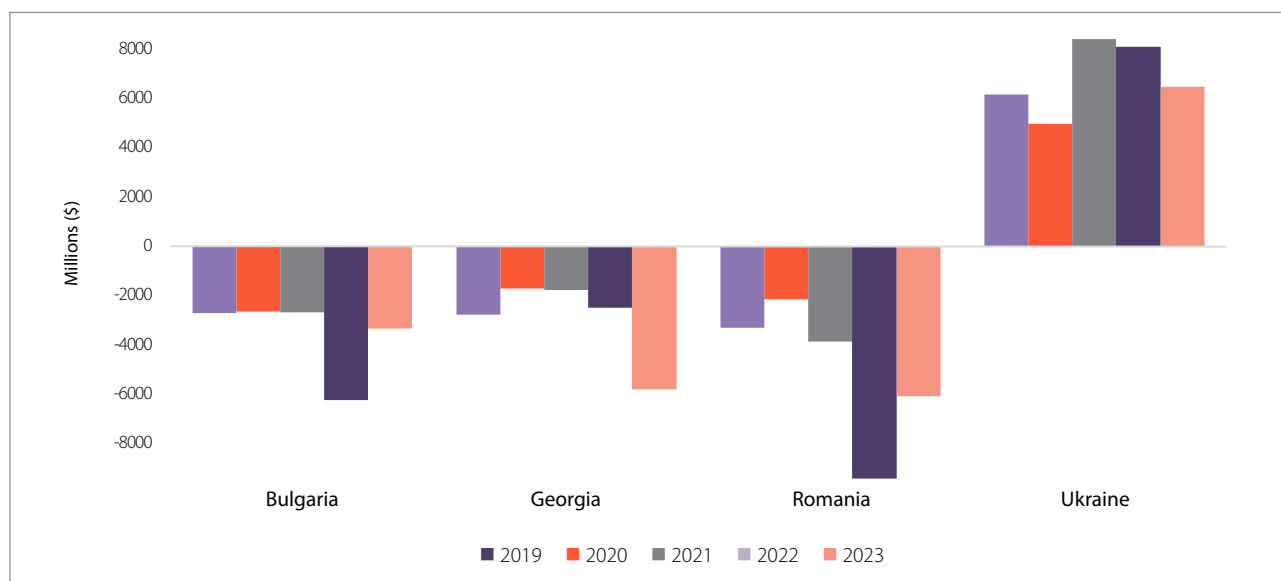
¹⁹ A “shadow fleet” refers to a network of vessels engaged in covert or illicit maritime activities, often designed to bypass international sanctions or evade regulatory oversight. For example, Russia employs opaque ownership structures, false documentation, coordinated transshipments, and deceptive flagging in jurisdictions with lax controls, such as Panama, Gabon, the Marshall Islands, and Liberia. Many of these vessels are aging tankers, averaging 18 years, well beyond the industry standard of 15 years for scrapping, and often lack proper maintenance or insurance, increasing the risk of accidents, spills, and environmental disasters. For more information, see <https://static.rusi.org/maritime-sanctions-taskforce-conference-report.pdf>

²⁰ <https://kinacentrum.se/en/publications/russia-china-economic-relations-since-the-full-scale-invasion-of-ukraine/>

²¹ <https://innovationreform.org/wp-content/uploads/2024/03/2024-02-Russia-energy-china-and-india.pdf>

²² <https://www.imf.org/-/media/Files/Research/CommodityPrices/WEOSpecialFeature/CSFApril2023.ashx?utm>

Graph 4: Maritime trade balances in goods (2019-2023)



Source: UN Comtrade

Notably, Russia and Ukraine are the only Black Sea countries with a positive maritime trade balance (also referred to as a trade surplus). In 2022, Russia’s trade surplus significantly increased by 25.9% YoY, reaching \$22.6 billion, mainly driven by rising exports and declining imports due to sanctions and trade disruptions. However, in 2023, the trade surplus fell sharply by 34.5% YoY, nearly reversing the previous year’s growth. This decline suggests that the substantial surplus in 2022 was not an indicator of economic strength but rather a temporary consequence of the war. Ukraine’s trade surplus slightly declined in 2022 (-3.8%) as the absolute decrease in exports exceeded the decline in imports. The downturn accelerated in 2023 (-20.1%) as exports fell further, while imports rebounded.

In 2022, following the outbreak of the Russo-Ukrainian War, maritime trade deficits deepened across all Black Sea countries. Türkiye recorded the largest deficit, reaching \$15.1 billion. In 2022, its maritime trade deficit increased by 27.9%, driven by a rise in imports, particularly from Russia. Meanwhile, the trade deficits of Romania and Bulgaria increased the most significantly, by 143.3% and 133.7%, respectively. However, in 2023, signs of stabilization began to emerge in some countries. Of note, the trade deficits of Bulgaria (-46.9%) and Romania (-35.4%) markedly decreased YoY,

while in Türkiye, the growth in trade deficits slowed down by 25.0 pp, indicating progress in managing trade imbalances. In contrast, the trade deficit in Georgia continued to worsen, reaching \$4.6 billion by 2023.

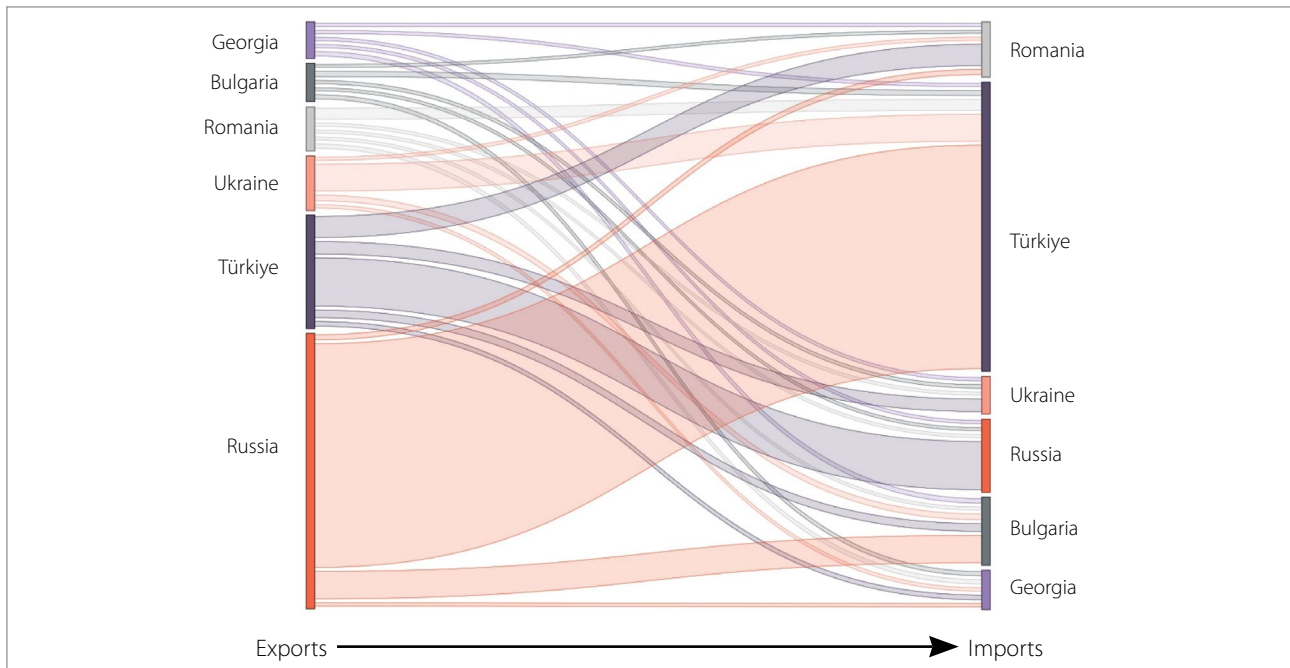
The rising trade deficits observed across Black Sea countries following the outbreak of the Russo-Ukrainian War reflect significant disruptions to regional trade dynamics. While such deficits can deplete foreign reserves and exert pressure on national currencies, their implications vary depending on the context and policy responses. In some cases, increased imports may stimulate economic growth by addressing domestic demand and supporting industries. The stabilization observed in countries like Bulgaria, Romania, and Türkiye in 2023 suggests progress being made there in addressing their trade imbalances. However, the persistent deficit in Georgia reflects ongoing challenges, including war-related disruptions as a potential bottleneck, along with structural constraints, highlighting the need for targeted economic and trade policies to restore balance.

INTRA-BLACK SEA COUNTRIES' MARITIME TRADE

When analyzing maritime trade relations within the Black Sea region, it is important to look at the import-export dynamics between and among the Black Sea countries themselves.

Intra-Black Sea maritime trade declined significantly by 10.4% in 2023 compared to 2022, primarily due to reduced trade between and among almost all Black Sea countries. Notably, Romania's maritime imports from Russia (-94.4%) and Bulgaria (-89.4%) experienced the sharpest declines.

Graph 5: Dynamics of maritime exports and imports between and among Black Sea countries (2023)



Source: UN Comtrade

In 2023, Russia's maritime exports decreased to all Black Sea countries except Türkiye, increasing by 10.2% YoY. Similarly, Türkiye's exports to Russia grew by 16.9%, largely driven by its refusal to join in with Western economic and financial sanctions imposed on Russia. This stance has allowed Turkish companies to continue trading in oil, gas, iron, steel, and other products restricted by Western sanctions, further strengthening the economic ties between the two countries. In addition, Türkiye's exports to Ukraine rose by 14.8% in the same year, mainly attributed to its neutral stance in the Russo-Ukrainian War and its role as a mediator between the conflicting sides. This growing trade relationship has been further strengthened by a free trade agreement (FTA) signed between Türkiye and Ukraine in February 2022, aimed at increasing bilateral trade volumes and fostering stronger commercial ties.²³

It is also noteworthy that Romania's exports to Ukraine increased by 28.7% YoY in 2023, which could be attributed to the deepening strategic partnership between the two countries.²⁴ Moreover, during the war, Romania has become the most important logistical hub for Ukrainian exports of grain and iron and steel products.²⁵ However, the redirection of Ukrainian exports has placed a significant strain on ports like Romania's Constanta, resulting in bottlenecks, infrastructure challenges, and delays.²⁶ In contrast, Georgia's exports to Ukraine declined sharply by 79.8% in 2023.

²³ <https://www.insightturkey.com/articles/the-impact-of-the-russia-ukraine-war-on-turkiyes-foreign-trade>

²⁴ <https://www.rferl.org/a/romania-ukraine-nato-black-sea-grain-war/33162333.html>

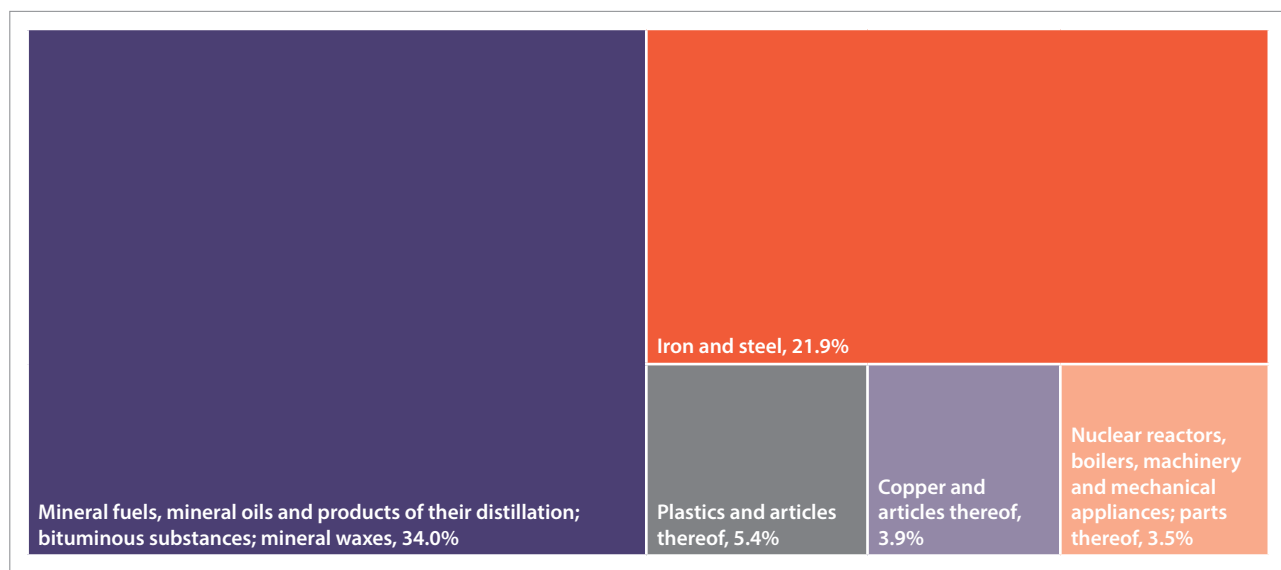
²⁵ <https://gmk.center/en/posts/balance-of-ukraine-romania-iron-and-steel-trade-analytical-review/>

²⁶ <https://www.agroberichtenbuitenland.nl/actueel/nieuws/2023/07/19/constantia-port-romania-and-ukrainian-exports-increasing-concerns-about-capacity>

MAJOR COMMODITIES TRADED THROUGH THE BLACK SEA

Despite the lack of recent data, it is still worthwhile to examine which products were primarily traded through Black Sea countries before the war began. In 2021, mineral fuels were the primary export commodity traded through the Black Sea, totaling \$855 million, reflecting the region's reliance on energy resources and the importance of the Black Sea as a trade route for vital products. That category was followed by iron and steel (\$551 million) and plastics and articles thereof (\$135 million). Moreover, the shares of mineral fuels and iron and steel in total major commodities increased by 5.5 pp and 5.6 pp in 2021 YoY, respectively.

Graph 6: Shares of major commodities exported by sea from Black Sea countries in 2021



Source: UNCTAD

In 2021, mineral fuels were also the leading import commodity traded through the Black Sea, totaling \$630 million. This was followed by iron and steel (\$205 million) and nuclear reactors, boilers, machinery, and mechanical appliances (\$120 million). Notably, the share of mineral fuels increased significantly in 2021 by 20.1 pp YoY.

Graph 7: Shares of major commodities imported by sea from Black Sea countries in 2021

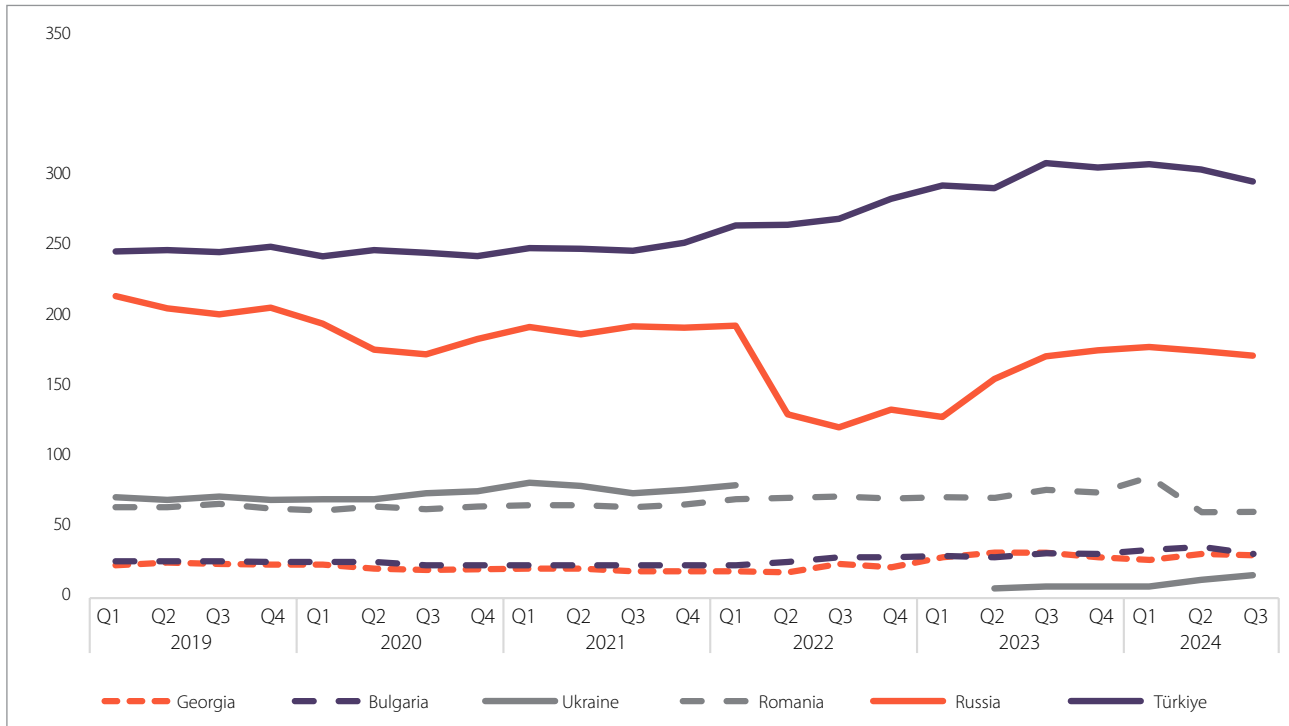


Source: UNCTAD

MARITIME-TRADE-RELATED PERFORMANCE INDICATORS

Analyzing the trends in the indicators used to measure the performance of Black Sea ports is also valuable to develop an understanding of the impact of the war on the efficiency and competitiveness of maritime trade in the Black Sea.

Graph 8: Liner Shipping Connectivity Index²⁷



Source: UNCTADstat

The Liner Shipping Connectivity Index (LSCI)²⁸ measures the extent of a country's integration into global shipping networks, reflecting its transport connectivity in relation to the import and export of manufactured goods. A higher LSCI value indicates better connectivity to world markets.

Across the Black Sea countries, Georgia, Bulgaria, and Türkiye demonstrated significant improvements in performance since the beginning of 2022, maintaining an upward trend thereafter, with some fluctuations. Türkiye's growth was the most pronounced, showing an increase of 45.84 pp in Q3 of 2024 compared to Q3 of 2021. Meanwhile, Romania also showed substantial growth from 2021 initially but experienced a sharp decline starting in Q2 of 2024, falling by 23.19 pp compared to the previous quarter.

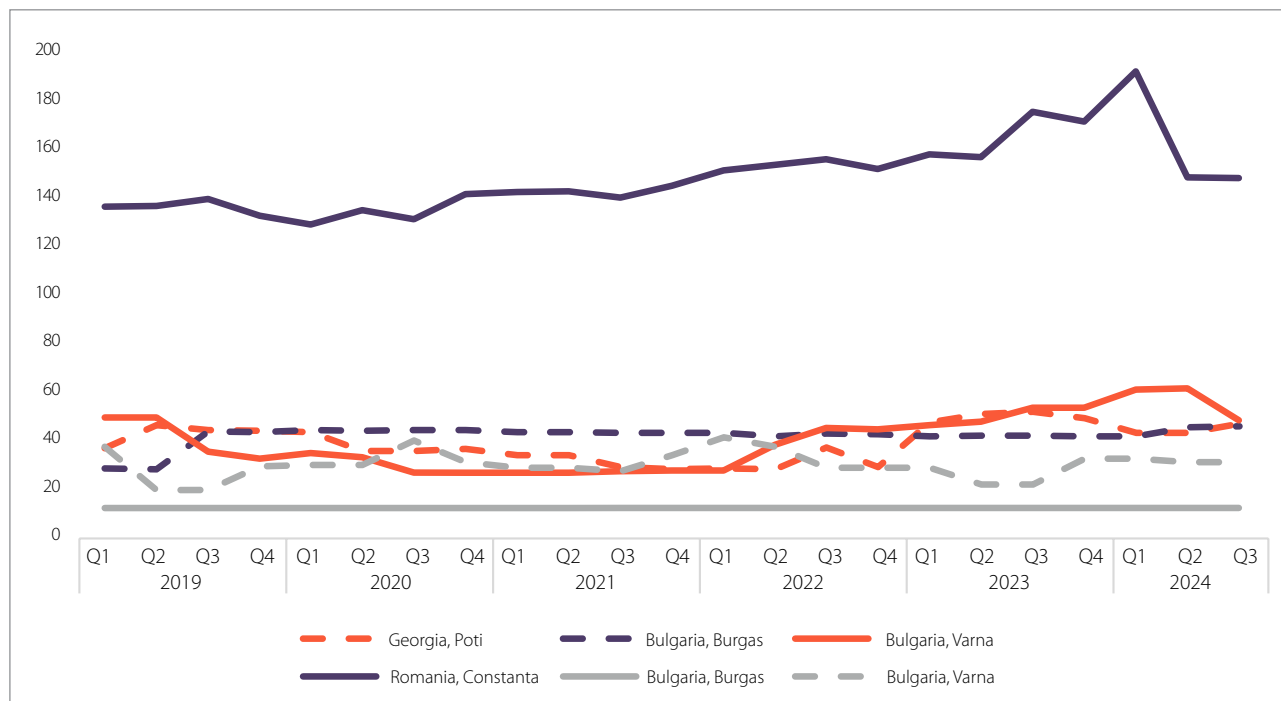
In contrast, Ukraine and Russia, heavily affected by the war, have experienced dramatic declines. Russia, after a steep drop in Q2 of 2022, began to recover steadily in Q2 of 2023. However, by Q3 of 2024, its performance was still 19.3 pp below that of Q3 of 2021. As data for Ukraine are missing from Q2 of 2022 until Q1 of 2023, we cannot draw conclusions about this period. By Q2 of 2023, however, Ukraine's performance had declined by almost 100% compared to pre-war levels. Although slight recovery has been evident thereafter, it remains significantly below pre-war levels.

²⁷ Data for Ukraine are unavailable for the period from Q2 of 2022 to Q1 of 2023.

²⁸ The LSCI is based on several components, including the number of scheduled ship calls per week, deployed annual capacity in twenty-foot equivalent units (TEUs), the number of regular liner shipping services, and the number of other countries connected through direct liner shipping services. The index scores countries based on their connectivity to global shipping networks, with the LSCI for Q1 of 2023 set to 100 as the baseline.

On the other hand, the Port Liner Shipping Connectivity Index (PLSCI)²⁹ measures a port’s integration into global shipping networks, impacting a country’s access to world markets with regard to importing and exporting manufactured goods.

Graph 9: Port Liner Shipping Connectivity Index³⁰



Source: UNCTADstat

In terms of the PLSCI, all measured ports in the Black Sea showed increased levels following the outbreak of the war, albeit their performances varied. However, the dataset does not include many ports in the region, and notably contains none in Russia or Ukraine.

Poti in Georgia saw a significant increase in its PLSCI score since the beginning of 2023, rising from an average of 31.1 in 2021-2022 to 47.9 in 2023-2024. Bulgaria’s Burgas port maintained relatively stable connectivity levels from Q1 of 2021 to Q1 of 2024, however in Q2 of 2024 its performance increased by 3.76 pp compared to the previous quarter. Meanwhile, Bulgaria’s Varna port experienced significant growth in the PLSCI starting from Q2 of 2022, increasing from an average of 34.0 in 2021-2022 to 53.3 in 2023-2024. However, its performance declined significantly in Q3 of 2024. Elsewhere, Romania’s Constanta port, with the highest performance among the mentioned ports, showed a steady increase in its PLSCI score from Q1 of 2021 to 2023. Turkiye’s Eregli port maintained consistent PLSCI levels with minimal fluctuation, while Samsun port experienced a slight decrease in connectivity following the outbreak of the war in Q3 of 2022, dropping from an average of 35.03 in 2022 to 27.5 in 2023. However, its performance began to recover to pre-war levels in 2024.

²⁹ The index is calculated using several components, including the number of scheduled ship calls per week, the number of regular liner shipping services to and from the port, and the number of other ports connected to the port via direct liner shipping services. These components collectively reflect the efficiency and frequency of a port’s shipping services.

³⁰ Data were available only for the ports displayed in Graph 10.

CLOSING REMARKS

The overall impact of the Russo-Ukrainian War on Black Sea trade has been profound, causing major disruptions in maritime flows, port activity, and trade balances across the region. The blockade of Ukrainian ports, the reorientation of trade routes, and the imposition of global sanctions on Russia have sharply reduced the number of port calls in both countries and led to the redirection of cargo flows through other routes, ultimately diminishing overall port activity, maritime trade, and connectivity despite gradual recoveries in some areas.

Upon the outbreak of the Russo-Ukrainian War, port calls in Ukraine and Russia dropped sharply, while other Black Sea countries briefly benefited from redirected trade flows. By late 2023, port calls in Ukraine had gradually recovered, supported by new shipping routes through Romania and Bulgaria. However, serious threats to commercial shipping remained. Meanwhile, Russia's port calls continued to decline due to toughened sanctions, higher insurance costs, and a shift in trade activity toward non-Western markets.

The prolonged impact of the conflict is evident in the decline of maritime trade through and within the Black Sea in 2023, along with a drop in intra-Black Sea trade. Ukraine's maritime exports and imports fell sharply in 2022, with a slow recovery in imports in 2023. In Russia, maritime imports declined, while exports initially increased in 2022, possibly due to sanctions being ineffective. However, as the sanctions intensified, exports also fell significantly the following year.

Maritime connectivity indicators reflect these shifts. Both Russia and Ukraine experienced a sharp drop in connectivity, while other Black Sea nations recorded mixed performance, illustrating the challenge faced by the region of having to navigate short-term disruptions while gradually stabilizing within a still-restricted trading environment. Looking ahead, the future of Black Sea trade will depend on geopolitical developments, the resolution of security risks, international cooperation, and the ability of regional economies to adapt to shifting trade patterns. Furthermore, collaboration between and among Black Sea countries and their joint efforts to enhance security, reliability, and the region's role as a key transit route for international trade flows will also be crucial. While recent stabilization efforts have been promising, long-term recovery will require strengthened security measures, infrastructure investments, and diversified trade strategies to ensure resilience amid ongoing geopolitical uncertainties.

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