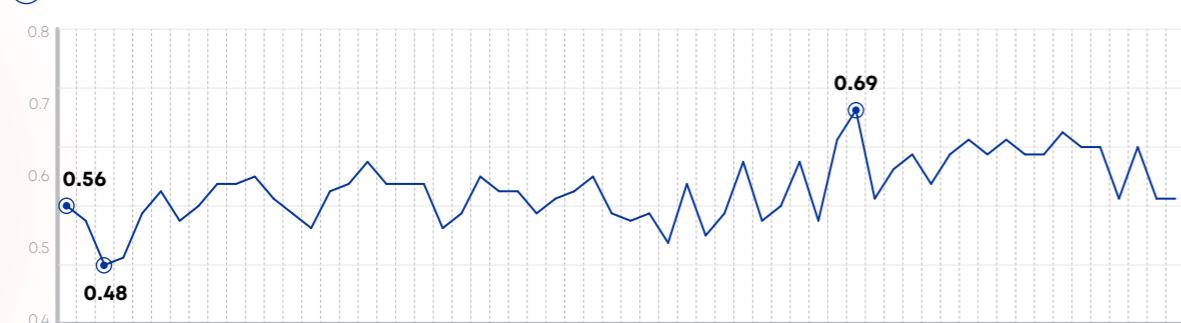


CONTAINER TRANSPORTATION MARKET OVERVIEW

KEY CONTAINER MARKET TRENDS IN 2022

CONTAINER AVAILABILITY

CONTAINER AVAILABILITY INDEX (CAI) FOR 40-FOOT CONTAINERS IN SHANGHAI



Source: Container Xchange

The highest index was recorded at the beginning of Q4 2022 (0.69). The improvement was due to a decrease in trade between the countries on the back of lower demand – some businesses were forced to limit or suspend their operations due to the energy crisis. Rising commodity prices also contributed to the decline in demand. The exodus of some logistics companies from Russia did not cause a significant shortage of container equipment in the country, as container flows declined along with it.

In 2022, bunker fuel prices continued the growth seen since late 2021 and peaked in Q2. The peak growth period came at the start of the special military operation and the sanctions on Russia that followed. Due to the factors that led to the global energy crisis, fuel prices rose significantly. In Q3 2022, fuel prices dropped to last year's levels.

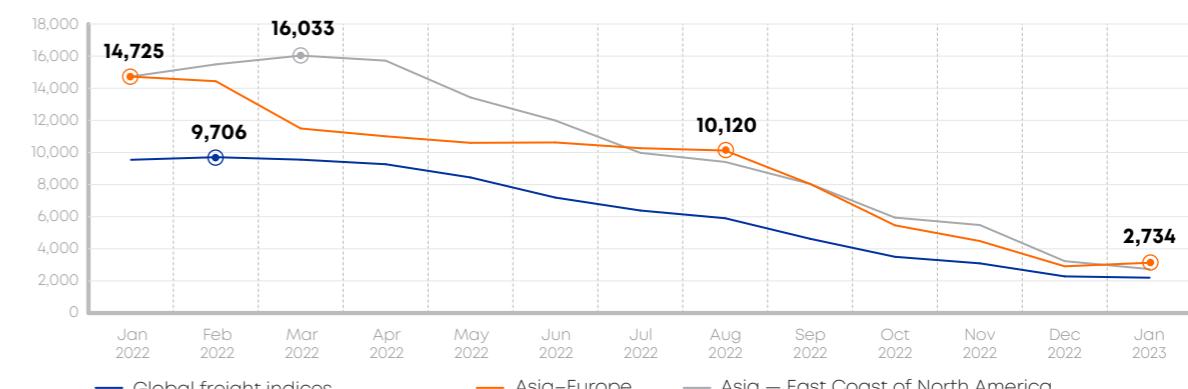
BUNKER FUEL PRICES

BUNKER FUEL PRICES, USD/TONNE



Source: Drewry Maritime Research

GLOBAL FREIGHT INDEX IN 2022, USD



Source: Freightos

LOWER FREIGHT INDICES

2022 marked a sharp fall in global freight indices. The record high rates which emerged at the end of 2021 persisted until Q2 2022. Then, due to the stabilisation of the container equipment situation, the freight indices fell to the early 2021 values, when the economy was yet to recover, and it caused rates to rise. Due to lower demand and a weaker industrial sector, the decline in the global freight index continued until the end of the year, reaching record lows. This effect was exacerbated by the fact that during the economic recovery from the COVID-19 pandemic, capacities were expanded by market players but eventually became surplus in the face of lower demand and repeated lockdowns in China, which in turn also contributed to lower freight indices.

RUSSIAN CONTAINER MARKET REVIEW

Sanctions impacted most countries' economies, their trade relations, and container flows. The Russian container market was severely affected by the following factors:

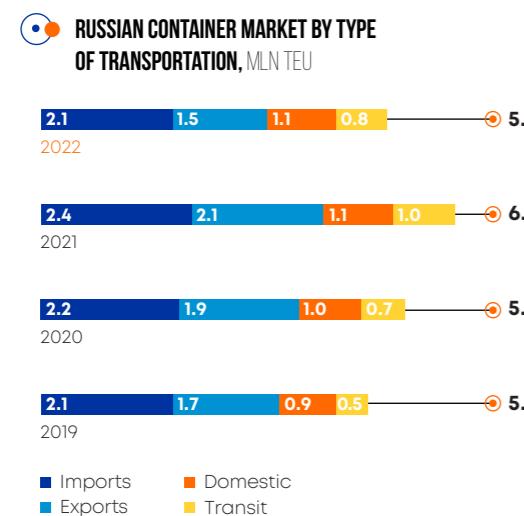
- exit of major players from the logistics market;
- disruptions in the supply of key commodities needed in multiple industries;
- external bans on imports and exports of certain groups of goods;
- restrictions on Russian vessels in European ports;
- restrictions on Russian land transport in European countries;
- restriction on the provision of bulk carriers to Russian vessel owners, etc.

The above events not only led to a decline in Russia's container market in 2022 but also to a redirection of container flows and the emergence of new routes.

In 2022, Russia's container market decreased by 17% (1 million TEU), almost equal to the pre-lockdown levels. The container market in Russia saw a shift of foreign trade flows in addition to an overall decline in volume in 2022. Due to the EU sanctions and restrictions on Russian vessels entering European ports, flows through St Petersburg's ports decreased. Consequently, Q2 and Q3 2022 saw the reorientation of container flows partly to the ports of Novorossiysk and, to a greater extent, to the ports of the Far East. In addition, a number of countries restricted trade relations with Russia, which resulted in a significant redirection of flows towards the Asian region and countries such as Turkey, India, and Belarus. This also led to a redirection of containers from ports

in the northwest to the Russian Far East and south. In Q4, a situation emerged that hindered the growth of foreign trade across the country's far eastern border: due to a post-pandemic increase in China's demand for coal and the resulting limited access of Russian exporters to bulk carriers, the Far East railway lines were jammed, preventing containers from passing through the country's far eastern border in their previous numbers. The critical situation on this route contributed to the introduction of government subsidies for carriers across the north-west border, which caused a temporary reorientation of containers to St Petersburg ports at the end of 2022.

All these developments contributed to a redistribution of usual routes in the Russian container market.



Source: Russian Railways data, Morcenter-TFC

IMPORTS

At the end of 2022, the decrease in container imports (-291 thousand TEU) was mainly attributable to a drop in traffic through the ports of St Petersburg (-570 thousand TEU). Despite the overall decline, there was a redirection of containers to land border crossings in the Russian Far East (+225 thousand TEU) and, to a lesser extent, to far-eastern ports (+97 thousand TEU).

EXPORTS

Export was the main driver of Russia's container market decline – down 25% YoY or -521 thousand TEU. The strongest decline was in the exports via St Petersburg ports with some volumes shifting to the Far East (to both ports and inland terminals).

DOMESTIC SHIPMENTS

The domestic transportation was the only one to remain flat YoY. That said, during the year (starting in May) there was a dip in the market relative to 2021 due to the effect of a decrease in container equipment amid withdrawal of international players from the logistics market.

TRANSIT

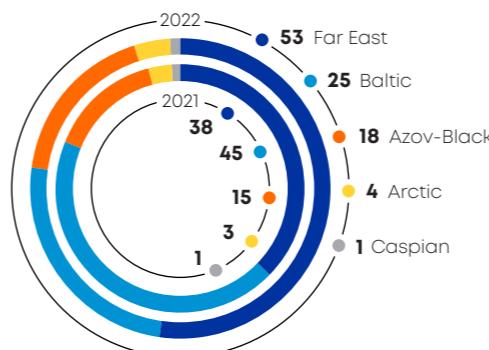
In 2022, container transit plummeted (-228 thousand TEU) mainly in the Asia-Europe direction (-256 thousand TEU), due to the desire of some countries to switch to alternative transit routes (trans-Asian route, deep sea) bypassing Russia. Container traffic from Asia to Central Asia (+22 thousand TEU) also increased compared to 2021, due to the transit of auto parts from Korea to Kazakhstan and Uzbekistan.

CONTAINER HANDLING

In the reporting year, container handling in Russian ports changed across the basins dramatically. In 2022, only the shares of the Caspian and Arctic basins remained unchanged. Compared to 2021, the share of the Baltic Basin decreased by 20 pp to 25%. By contrast, the share of the Far East Basin increased by 15 pp to 53%, thus taking the lead among Russian basins in terms of container handling. The share of the Azov-Black Sea Basin also increased though insignificantly, by 3 pp to 18%.

In 2022, container handling at the port of Vladivostok increased by 3.1% YoY. Vladivostok Sea Fishing Port showed the largest increase for the year, increasing cargo throughput by 7.6% YoY. Port Vladivostok showed a 1.4% growth YoY, increasing cargo turnover to 768 thousand TEU.

BASINS' SHARES IN TOTAL CONTAINER HANDLING, %



Source: Morcenter-TFC

RAIL CONTAINER TRANSPORTATION MARKET OVERVIEW

MARKET PERFORMANCE

In 2022, railway container transportation increased by 0.09% to a new record of 4,618.8 thousand TEU.

The key contributor to the decline in volumes is the sanctions pressure, the consequence of which has been a global transformation of supply chains. In Q2 2022, a gradual reorientation of container flows towards the East began due to the following factors:

- exodus of major international shipping lines from the Russian market;
- sanctions and regulatory restrictions affecting container exports to Europe and North America and container imports of certain commodity groups from the said regions.

At the same time, the new volume did not match the capacity of the eastern railway infrastructure and land border crossings, which also had a negative impact on transport costs and delivery times.

Another factor that had a negative impact on container transportation was the significant reduction in sea freight rates on the China-Europe route.

RAILWAY CONTAINER TRANSPORTATION MARKET, K TEU

2022	2021	2020	2019	2018
1,458.2	1,111.1	1,313.4	766.2	4,618.8

2021	2020	2019	2018
1,467.8	1,122.1	1,031.3	993.6

2020	2019	2018
1,371.1	1,026.4	829.6

2019	2018
1,157.9	925.6

2018
1,000.0

Exports (dark blue), Domestic (orange), Transit (yellow)

Source: Russian Railways' main computer centre

Source: Morcenter-TFC

SHIPMENT STRUCTURE

In 2022, container transportation declined in all types of traffic except imports.

In 2022, the volume of railway export traffic decreased by 2.7% or 39.7 thousand TEU to 1,428.2 thousand TEU. Timber cargoes triggered the decline, with exports falling by 5.7% or 27.8 thousand TEU due to reduced traffic to the US, Japan, South Korea, and EU. In addition, metalware exports plummeted by 68.9% or 18.5 thousand TEU, and ferrous metal exports fell by 8.7% or 8.7 thousand TEU. However, food products showed a positive trend with their export increasing by 63.7% or 13.6 thousand TEU; grain – by 62.0% or 13 thousand TEU; and oilcake – 4.5 times or 6.7 thousand TEU. The share of exports in total traffic decreased by 0.9 pp to 30.9%.

In 2022, the volume of domestic traffic was 1,111.1 thousand TEU, down 1.0% or 11 thousand TEU compared to 2020. The transport of chemicals and soda decreased markedly by 8.5% or 21.7 thousand TEU, and of machinery, machine tools and engines by 28.2% or 18.1 thousand TEU. In addition, food traffic grew by 15.1% or 20.5 thousand TEU and that of construction materials – by 21.5% or 26 thousand TEU. The share of domestic shipments in total traffic decreased by 0.2 pp to 24.1%.

CONTAINER TRANSPORTATION BY TYPE OF TRAFFIC, %



Source: Russian Railways' main computer centre

The volume of railway import traffic stood at 1,313.4 thousand TEU, up 27.4% or 282.1 thousand TEU. The growth was driven by chemicals and soda, whose traffic increased by 53.2% or 78 thousand TEU; metal products by 24.0% or 41.2 thousand TEU; machinery, machine tools and engines by 23.7% or 39.9 thousand TEU; paper 2.8 times or by 34.9 thousand TEU. China kept its key position in container import with an increase of 48.1% or 355.6 thousand TEU. The share of imports in total shipments went up by 6.1 pp to 28.4%.

In 2022, the volume of transit container traffic decreased by 22.9% or 227.4 thousand TEU to 766.2 thousand TEU. The consumer goods traffic decreased by 44.0% or 102.5 thousand TEU; metal products by 45.0% or 79.1 thousand TEU; machinery, machine tools and engines by 31.4% or 43.2 thousand TEU; chemicals and soda by 21% or 22.2 thousand TEU. At the same time, potash fertiliser shipments from Belarus to China began in 2022, resulting in a sharp 42.5-fold increase in the volume of mineral fertilisers in transit or by 81.6 thousand TEU. The share of transit in total traffic markedly decreased by 5.0 pp to 16.6%.

OUTLOOK FOR 2023

In 2023, due to the search for new markets in South and Southeast Asia and building new import supply chains, container flows will continue to be redirected to ports and border crossings in the Far East. At the same time, the main factor constraining the growth of container transportation despite ongoing development will remain the insufficient throughput capacity of the eastern main railway lines, railway approaches to ports and land border crossings, terminal and logistics infrastructure at border crossings.

Another negative factor affecting rail container traffic will be the continued decline in freight rates amid an increased likelihood of a global recession.

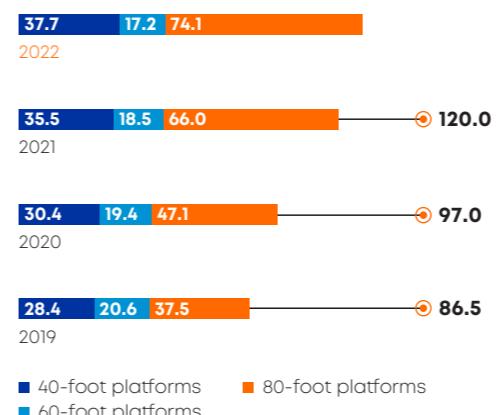
OVERVIEW OF THE FITTING PLATFORM OPERATION MARKET

In 2022, the total fitting platform fleet used for transportation across the Russian Railways network grew by 7.5% or 8.9 thousand railcars to 128.9 thousand railcars. The number of 40-foot platforms increased by 6.1%, or 2.2 thousand railcars, the number of 60-foot platforms decreased by 7.4% or 1.4 thousand railcars, and the number of 80-foot platforms increased by 12.3%, or 8.1 thousand railcars.

The fitting platform fleet is still mainly composed of 80-foot platforms, the share of which increased by 2.5 pp to 55.0% in 2022. The share of 60-foot platforms in the total fleet structure continues to decline due to the gradual retirement of the fleet, with a 2.1 pp reduction at the end of 2022. The share of 40-foot platforms has not changed much, with a reduction of 0.4 pp.

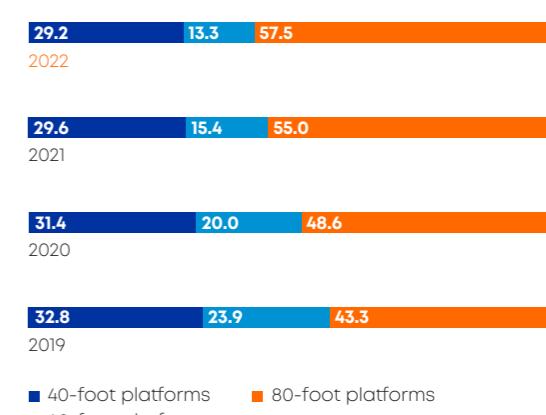
The number of 80-foot platforms purchased by operators is expected to continue to decline in 2023 due to market saturation. The fleet of 60-foot platforms will also continue to shrink, setting the stage for replacing the retiring fleet with 40-foot and 80-foot platforms.

FITTING PLATFORM FLEET PERFORMANCE¹



Source: Russian Railways' main computer centre

FITTING PLATFORM FLEET STRUCTURE, %



Source: Russian Railways' main computer centre

¹ As at the end of the year, excluding all-purpose platforms with folding fittings, timber wagon platforms with folding fittings, etc.