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The review "Russian economy. Trends and outlooks" has been published by the Gaidar Institute since 1991. This is the 45th issue. This publication provides a detailed analysis of main trends in Russian economy, global trends in social and economic development. The paper contains 5 big sections that highlight different aspects of Russia's economic development, which allow to monitor all angles of ongoing events over a prolonged period: the monetary and budget spheres; financial markets and institutions; the real sector; social sphere; institutional changes. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts confirming the conclusions.

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3.3. Russia's transportation complex in 20231

1. Achievement s and new tasks of the transportation sector

The transportation complex is the most important component of the modern Russian economy, playing a systemic role, including in terms of the quality of life of the population and economic growth. In the previous years, the transportation industry faced a large number of challenges and crises related to the COVID-19 pandemic and international sanctions restrictions. Accordingly, the priorities for the transportation complex were to adapt to changes in the economy, overcome the "transportation blockade" and rebuild the industry. In 2023, the objectives of the transportation complex development were outlined.²

One of the achievements of the transportation industry in 2023 is the growth of cargo and passenger flows within the country. Thanks to the redirection from international to domestic transportation, the volume of passenger air transportation was restored. The number of international destinations increased: regular air service was established with 37 countries. The trends that emerged in 2022 continued: a decrease in the volume of cargo turnover by pipeline and air transport, growth in cargo transportation by sea and an increase in the role of motor vehicles in cargo transportation.

The transportation industry is facing new challenges. In 2023, another package of sanctions was adopted against Russia, affecting the transportation and logistics sectors. In particular, the 10th package of EU restrictions included a ban on the transit through Russia of dual-use goods and technologies exported from the EU to third countries. The 11th package of EU restrictions included bans

on the transportation of goods to the EU by road with trailers and semi-trailers registered in Russia (exception: transportation between the Kaliningrad region and "mainland" Russia), a ban on exports to Russia of new and used cars with an engine capacity of more than 1.9 liters, electric cars and hybrid vehicles, as well as a ban on access to EU ports and gateways for vessels, ship-to-ship transshipment if it is suspected that the vessel is in violation of bans on the importation of Russian crude oil and petroleum products into the EU by sea or is carrying Russian crude oil and petroleum products purchased at a price above the ceiling price.

In December 2023, the 12th package of EU sanctions was approved, which, among other things, included restrictions on exports of lithium batteries and servo motors for drones, freezing of assets of PJSC "Tupolev", obligations to notify and inform the European Council on the resale of vessels, in particular tankers, to third countries.³ Tankers transporting Russian oil were included in the

¹ Authors: Yu. Yu. Ponomarev, Candidate of Economic Sciences, Head of the Infrastructure and Spatial Studies Department, IAES RANEPA; Rostislav K.A., Researcher at the Infrastructure and Spatial Studies Department, IAES RANEPA; Researcher at the Quantitative Analysis of Economic Effects, Gaidar Institute.

² Belousov: The task of breaking the transportation blockade can be removed from the agenda // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/15/dorozhnye-napravleniia.html

U.S. sanctions list: after the imposition of restrictions, 20 out of 50 tankers under sanctions stopped shipment of Russian oil.4 In response to the sanctions, Russian carriers developed alternative routes for cargo deliveries (in particular, via the North-South corridor) and expanded cooperation with Turkey, China and Belarus. Transportation via Azerbaijan, Turkmenistan and Kazakhstan⁵ doubled compared to 2022. In addition to the new sanctions, the Russian transportation complex is facing a shortage of rolling stock and logistics infrastructure to export cargo to all directions: the Far East, South and North-West of Russia.6

Current priorities for the development of the transportation industry include increasing the carrying capacity of existing transport and logistics corridors (highways of the Eastern polygon, approaches to ports in the Azov-Black Sea and Caspian basins), restoring the transport infrastructure of new regions and integrating it into the country's transport framework, strengthening the connectivity of territories and increasing the mobility of the population, ensuring stable passenger transportation by various modes of transport, and maintaining high rates of infrastructure construction (in particular, highways), digitalization of the transportation industry and development of intelligent transportation systems, attraction of qualified personnel.⁷ Special attention is paid to the technological development of the transportation industry, promotion of import

substitution and domestic developments as part of the solution of the strategic tasks to achieve Russia's technological sovereignty.

Priorities for the development of the transportation industry form the basis of the new national project "Transport" for the period up to 2030. The new national project is at the stage of development, but it is noted that promising transport projects from the SQR (national project "Safe and Quality Roads") and CPMI (national project "Comprehensive Plan for Modernization and Expansion of Trunk Infrastructure"), which have led to positive results in the development of the transportation industry, will be transferred to the new national project, updated and continued. The concept of the new national project "Transport" will also take into account the development of foreign markets of friendly countries and the strengthening of foreign relations. The new national project will focus on the development of a backbone transport network that would unite all modes of transport, which should contribute to the balanced development of all

¹ A year and a half of sanctions. How they have affected Russia and what experts predict for 2023? // TRANS.INFO. URL: https://trans.info/ru/poltora-goda-sanktsiy-kak-oni-povliyali-na- rossiyu-ichto-prognoziruyut-ekspertyi-v-2023-godu-2-353621

² The 11th EU package of sanctions. What is important to know // RBC. URL: https://www.rbc.ru/ business/23/06/2023/6495732f9a79479fb62b4589

³ The EU has approved a new packet of sanctions against Russia // RBC. URL: https://www.rbc.ru/

politics/18/12/2023/658061119a7947040b368f4b
4 20 tankers under the US sanctions stopped shipments of Russian crude oil // Maritime News of Russia. URL: https://morvesti.ru/news/1679/107570/

⁵ IA year and a half of sanctions. How they have affected Russia and what experts predict for 2023? // TRANS.INFO. URL: https://trans.info/ru/poltora-goda-sanktsiy-kak-oni-povliyali-narossiyu-i-chto-prognoziruyut-ekspertyi-v-2023-godu-2-353621

⁶ Logistics infrastructure shortage is the most important topic of Transport Week 2023 // Vedomosti. URL: https://spb.vedomosti.ru/press_releases/2023/11/15/defitsit-logisticheskoi-infrastrukturivazhneishaya-tema-transportnoi-nedeli-2023

⁷ Mikhail Mishustin outlines six priorities for Russia's transportation complex // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/15/dvizhenie-po-glavnoj-doroge.html

transportation industries and improve transport connectivity within the country.

3. Transport performance indicators in 2023²

In 2023, the share of the transportation sector in gross value added³ stood at 6.9% (an increase of 0.4 p.p. by 2022). In the structure of GVA (gross value added) of the transport sector, the activities of land and pipeline transportation prevail: this type of activity accounts for 65% of the total gross value added of transportation. The balanced financial result (profit minus losses) of the transportation industry organizations, excluding small and medium-sized enterprises, in January-November 2023 amounted to Rb2153.8 bn, which is 1.34 times higher than in 2022.⁴ The share of profitable organizations in the industry went up from 69.1% in 2022 to 71.6% in 2023, which is comparable with the figure for 2021 (71.4%).

Freight traffic activity

According to the estimates of the Ministry of Economic Development of the Russian Federation, ⁵ the indicator of freight turnover of transport in 2023 declined by 0.6% relative to 2022, by 2.9% to the level of 2021. Excluding pipeline transportation, freight turnover increased by 1.9% as compared to 2022 (by 2.1% as compared to 2021). The main contribution to the growth of freight turnover was made by road and sea transportation. The highest growth occurred in October: 2.9% vs. the corresponding period of the previous year.

⁵ On the current situation in the Russian economy. 2023 Outcome. URL: https://www.economy.gov.ru/material/file/a30ffe689e1cd3fa8f083b2d7aa36cb1/o_tekushchey_situacii_v_rossiyskoy_ekonomike_itogi_2023_goda.pdf

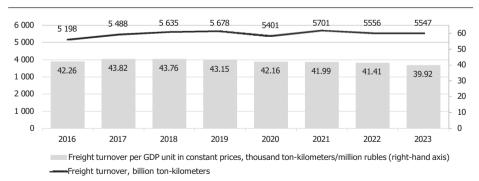


Fig. 3. The dynamic of freight turnover, 2016–2023

Sources: Rosstat, own calculations.

¹ Belousov and Savelyev: new national project "Transport" to be developed by summer // TASS. URL: https://tass.ru/interviews/19775727

² Excluding statistical information on Donetsk People's Republic (DPR), Luhansk People's Republic (LPR), Zaporizhzhya and Kherson oblasts.

³ GDP produced. Annual data on OKVED-2 in current prices // Rosstat. URL: https://rosstat.gov.ru/ statistics/accounts

⁴ Socio-economic situation in Russia. January 2024 // Rosstat. URL: https://rosstat.gov.ru/storage/mediabank/osn-12-2023.pdf

Freight transportation intensity¹ fell in 2023 compared to previous years, indicating a relatively more efficient use of transport and an increase in value added to the economy through the transportation industry. Despite the small drop (less than 1%), freight turnover remained almost at the same level as in 2022. Relative to 2021, when the domestic economy was recovering from the pandemic and international sanctions had not yet been imposed, freight turnover decreased by 2.7% (*Fig. 3*).

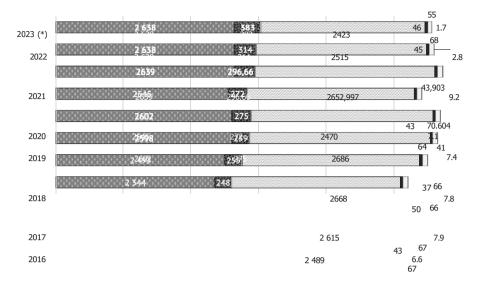
The main decline in cargo turnover was in air operations (-39%) owing to the current (continuing) restrictions on access to international markets and the reorientation of cargo flows to road transport and rail container freight. To a lesser extent, cargo turnover of inland waterways (-19%) and pipeline (-3.7%) transportation decreased. The most stable situation is observed with regard to the rail freight turnover (change within 1% upward). The greatest increase in freight turnover was shown by road transport (22%). Positive dynamics of cargo turnover is also observed in maritime transport (3%). The structure of cargo turnover by types of transport in 2023 has not changed significantly: the share of air service, inland waterway and pipeline transport has slightly decreased, while the share of road and rail transportation has increased (*Fig. 4*).

In contrast to freight turnover, the volume of freight traffic rose, which is probably due to the continuing trend of shortening freight transportation routes owing to the restrictions. According to the operational data for 2023, the volume of freight traffic increased by almost 9% compared to 2022 (*Fig. 5*). The growth of freight traffic is attributed to the stabilization of supply chains. To a greater extent, cargo maritime transportation increased (19.4%), which is explained by the growth of loading volumes through Russian seaports.² Road transportation showed about zero growth in freight traffic (0.23%).

Freight transportation intensity or "burden" of the economy with the work of transport – the amount of cargo turnover (the sum of products of the weight of each batch of transported cargo by the distance of its transportation) per unit of GDP.

² The Ministry of Transport commented on the growth of freight turnover and passenger transportation in 2023 // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/29/v-mintranse-prokommentirovali-rost-gruzooborota-i-passazhirskih-perevozok-v-2023-godu.html

Section 3 The real sector

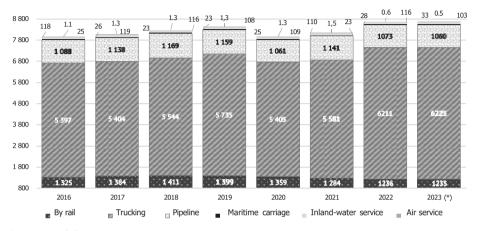




^{*} Operational data.

Fig. 4. Freight turnover structure by the type of transportation, bn ton-kilometers, 2016–2023

Sources: Rosstat, own calculations.

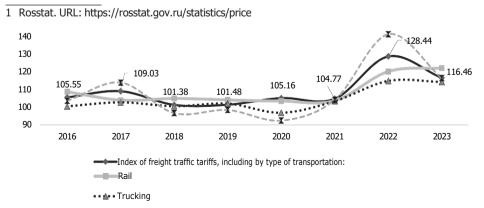


^{*} Operational data.

Fig. 5. Freight traffic structure by the type of transportation, mn t, 2016–2023 *Sources:* Rosstat, own calculations.

As in the previous year, the strongest decrease in freight traffic was in air services (-23%). Inland waterway (-11%), pipeline (-1.2%) and rail (-0.11%) transportation also declined.

In 2023, the growth of freight traffic tariffs slowed down. In the industry as a whole, freight traffic tariffs grew by 16%, which is lower than the previous year's level (*Fig.* 6). However, the growth of freight traffic again exceeded the average growth rate of prices for all goods and services (7.42% in December 2023 vs. December 2022¹), the same as a year earlier. The growth of tariffs was



- X − Pipelines

Fig. 6. Dynamics of freight traffic tariffs (aggregate and by the type of transportation)

December on December of the previous year, %

Sources: UISIS (URL: https://fedstat.ru/indicator/31076); own calculations.

facilitated by the indexation of tariffs for freight traffic, in particular, by railway transportation, by 8% from January 1, 2023¹ (tariffs of JSCo "Russian Railways" – by 10%²), tariffs for freight and passenger railway transportation, including surcharge for infrastructure overhaul – by 10.75% from December 1, 2023.³ Rosneft tariffs for oil transportation services were increased by 5.99% from January 1, 2023.⁴ From February 1, 2023, in accordance with the growth of consumer prices, the tariff for travel on federal highways by heavy-duty vehicles with a permitted maximum weight of over 12 tons was increased.⁵

Passenger transportation

In 2023, the passenger traffic turnover including streetcar, trolleybus and subway increased by 12% to the level of 2022. Transport mobility of the population within Russia also increased significantly in 2023: 3,722 mn pass – km/mn people in 2023 compared to 3,318 mn pass – km/mn people in 2022 ($Fig.\ 7$). One of the factors affecting the transport mobility of the population was the rise in the availability of inland transportation within Russia, in particular due to an increase in the number of subsidized regional air routes. 6

An increase in passenger turnover is observed for almost all types of transportation. Passenger turnover of inland waterway (17.7%), air (16%), sea

¹ FAS approved indexation of railway tariffs for passenger transportation by 8.1% from 2023 // TASS. URL: https://tass.ru/ekonomika/16422521

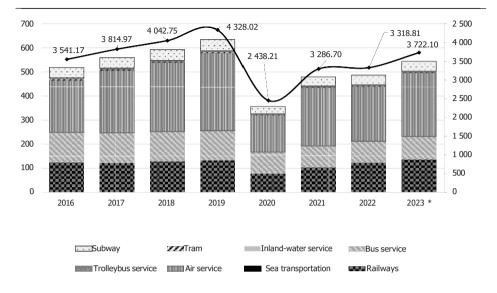
² Russian Railways tariffs to increase by 10% // Kommersant. URL: https://www.kommersant.ru/doc/5651246

³ Russian Railways tariffs to rise again from December 1 // RZD Partner.ru. URL: https://www.rzd-partner.ru/zhd-transport/opinions/tarify-rzhd-s-1-dekabrya-snova-podrastut/

⁴ Transneft's oil pumping tariffs to increase by 5.99% in 2023 // Interfax. URL: https://www.interfax.ru/business/876015

⁵ Indexation of the tariff in the Platon system will make it possible to increase the volume of road repairs // Ministry of Transport of the Russian Federation. URL: https://mintrans.gov.ru/presscenter/news/10590

⁶ In 2023, subsidized air services in the Far East grew by 13% // RZD Partner.ru. URL: https://www.rzd-partner.ru/aviation/news/v-2023-godu-subsidirovannye-aviaperevozki-na-dal-vostoke-vyrosli-na-13/

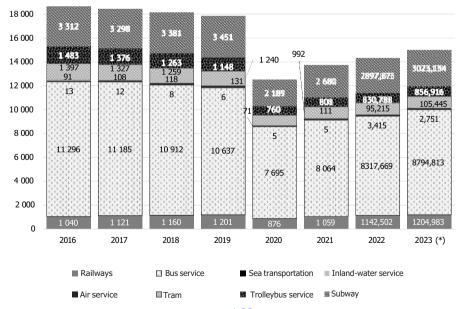


---Population transport mobility (right-hand axis)

Note. Transport mobility of the population is the ratio of passenger turnover to the average annual population (mn passengers/km/m people).

Fig. 7. Structure of passenger traffic by types of transportation, bn passengers/kilometers, 2016–2023

Sources: Rosstat. URL: https://rosstat.gov.ru/statistics/transport; URL: https://rosstat.gov.ru/folder/12781; UISIS. URL: https://fedstat.ru/indicator/43534, own calculations.



^{*} Operational data (adjusted for streetcar, trolleybus and subway).

Fig. 8. Passenger traffic pattern by the type of transportation, mn persons, 2016–2023 *Sources:* Rosstat, own calculations.

(16.5%) and railway (11%) transportation has grown to a greater extent. In addition, the passenger turnover of bus transportation (6.7%) and subway (3%) increased. A decrease in passenger turnover is noted for streetcar (-0.42%) and trolleybus (-1.7%) types of transportation. There were no significant changes in the structure of passenger turnover, but there was an increase in the share of air service. The growth of air passenger turnover is attributed to an increase in the number of international flights.¹

The volume of passenger traffic in 2023 went up by 4.8% against 2022. The main contribution to the growth of passenger traffic volumes was made by inland waterway (+15%) and air service (+11%). Positive growth in passenger transportation volumes was observed for rail (5.5%) and bus (5.7%) transport, as well as trolleybus (3%) and subway (4.3%). On the contrary, the volume of passenger traffic by sea (-19%) and, to a lesser extent, by streetcar transport (-0.5%) decreased. The structure of transportation has not undergone significant changes, the shares of all modes of transportation are relatively stable over time (Fig.~8).

3. Sanction challenges and performance indicators of certain types of transportation

Railway service

In 2023, application of load on the Russian Railways network decreased by 0.2% to 1,232 mn tons.² The year-on-year reduction was due to a decline in loading of the main cargoes (coal and oil products) in Q4 2023 on the back of the temporary embargo on exports of oil products introduced by the Russian Government at the end of September. At the year-end, export loading by rail in the direction of seaports grew by 0.5% to 334.7 mn tons with export shipments in the north-western direction increasing by 3.5% and in the southern and Far Eastern directions decreasing by 2.5% and 0.4%, respectively.³

In 2023, there was an upsurge in the shipment by rail of cargoes that are not subject to restrictive measures or are subject to them, but to a lesser extent. In particular, the loading of grain (+37%), coke (14%), ferrous scrap (7%), industrial raw materials (6%), fertilizers (5%), ferrous metals (2%) rose. The high performance was due to a number of factors: high demand for agricultural products on the world market, the absence of restrictive measures and a good grain harvest, an increase in containerized fertilizer shipments to underutilized northwestern port terminals and growth in port capacity. Construction freight transportation volumes declined amid a slowdown in loading dynamics in Q4 2023 due to the completion of a number of major infrastructure projects.⁴ The

^{*}Operational data (adjusted for streetcar, trolleybus and subway).

The Ministry of Transport commented on the growth of freight turnover and passenger traffic in 2023 // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/29/v-mintranse-prokommentirovali-rost-gruzooborota-i-passazhirskih-perevozok-v-2023-godu.html

² Loading on the Russian Railways network in 2023 amounted to 1 bn 232.3 mn tons // Russian

Railways. URL: https://company.rzd.ru/ru/9397/page/104069?id=290211

Growing at the bottom // Kommersant. URL: https://www.kommersant.ru/doc/6478439

Russian Railways passengers went for a record, freight almost missed the mark // Gudok.ru. URL: https://vgudok.com/lenta/passazhiry-rzhd-poshli-na-rekord-gruzy-chut-ne-dotyanuli-zheleznodorozhnyy-holding-zavershil

drop in transportation volumes was partly caused by an increase in the downtime of locomotives for repairs. There was no fall in exports of key cargoes (coal, oil and oil products) over the year due to an increase in the volume of shipments to the markets of China and India. Thus, the volume of rail transportation between Russia and China surged by 36% by 2022 to 161 mn tons, in particular due to the active operation of a new border crossing point – the Nizhneleninskoye – Tongjiang railway bridge. Container transportation through the Russian Railways network increased significantly: by 14% to 7.4 mn TEU (twenty-foot equivalent unit). The Kemerovo Oblast (225 mn tons), Sverdlovsk Oblast (66.5 mn tons), Krasnoyarsk Krai (48.6 m tons), Perm Krai and Belgorod Oblast (44 mn tons each), and Irkutsk Oblast (42.4 mn tons) are the leaders in terms of freight loading and shipment by rail in 2023. The highest loading growth was recorded in the Republic of Mari El: 3.6 times by 2022.

Loading dynamic by rail is constrained by existing infrastructure limitations, as well as logistical issues at certain destinations. For example, the handling capacity of Novorossiysk railway station (the number of freight cars that can be handled by the station with the best use of tracks and technical equipment⁵) in the Azov-Black Sea basin is 1.6 times lower than that of the adjacent non-revenue tracks.⁶ In 2023, BAM was equipped with new facilities: access roads to stations were modernized, dozens of railway sections were extended with second tracks.

Despite visible successes in modernizing and expanding throughput capacity, according to the Center for Infrastructure Economics, the infrastructural constraints of the eastern polygon, through which exports to Asia and the Pacific are shipped, do not yet allow to fully meet transportation needs even in the domestic market.⁷

Partially solving the problem and ramp up deliveries to the east is the replacement of the open railway freight car fleet at the Eastern Range with innovative open railway freight cars with greater capacity, which will increase carrying capacity by boosting the car's load capacity.⁸ A total of 63,500 rolling stock units were produced in 2023, of which 19,600 were universal open railway freight cars, 18,500 were hoppers, 11,700 were platforms, 8,500 were tank cars,

The effects of big construction and record harvests. What 2023 was like for freight traffic // Gudok.ru. URL: https://gudok.ru/content/amp/analitika/gruzoperevozki/1654875/

² Russian Railways recorded 36% growth in the volume of transportation with China in 2023 // Interfax. URL: https://www.interfax.ru/business/945988

³ URL: https://portnews.ru/news/358312/

⁴ JSC RZD has identified the top 5 leaders in 2023 among Russian regions in terms of dynamics and loading volumes // RZD Partner.ru. URL: https://www.rzd-partner.ru/zhd-transport/news/v-oao-rzhd-opredelili-top-5-liderov-2023-goda-sredi-rossiyskikh-regionov-po-dinamike-i-obemam-po-gruz/

⁵ Draft Order of the Ministry of Transport of the Russian Federation "On Approval of the Methodology for Determining the Carriage and Traffic Capacity of Public Railway Infrastructure" (prepared by the Ministry of Transport of Russia on 05.03.2018).

⁶ Logistics must be logical // Vgudok. URL: https://vgudok.com/lenta/logistika-dolzhna-byt-log-ichnoy-prezident-putin-prizval-razvivat-transportnuyu-infrastrukturu

⁷ Railway logistics // Vedomosti. URL: https://www.vedomosti.ru/industry/infrastructure_develop-ment/articles/2023/09/20/996062-zheleznaya-logistika

⁸ Innovostochny polygon of Russian Railways // Vgudok. URL: https://vgudok.com/lenta/innovostochnyy-poligon-rzhd-premer-mishustin-prizval-zheleznodorozhnikov-otpravlyat-na-bam-i

4,600 were boxcars, and 200 were dump cars. The largest increase in the volume of railcar production was noted for hoppers, tank cars and boxcars. In aggregate, sales of freight cars in 2023 went up by 28% compared to 2022. Having said that, in 2023 the sales and lease price of freight cars increased: the cost of a boxcar increased by 8%, the lease rate of a boxcar increased by 5%, and the lease rate of a fitting platform rose by 30%.

Implementation of infrastructure projects continues. On December 15, 2023, a new double-track Kerak tunnel was put into operation at the Kovali-Ulruchii section of the Trans-Siberian Railway in the Amur Region. In the Murmansk Region, traffic was launched on the railway line Vykhodnoy – Lavna to the new seaport in the Kola Bay "Lavna", which will be launched in 2024. The project of a high-speed railway (HSR) from Moscow to St. Petersburg has reached the stage of feasibility. In the future, a high-speed rail link from Moscow to Yekaterinburg, Minsk, Adler, Lugansk and Donetsk may be designed.

The subway infrastructure was actively developed. In particular, in 2023, traffic was opened on the MCD-3 and MCD-4 railroad lines connecting Moscow and cities of the Moscow Region, and the Great Ring Line of the Moscow subway was fully launched.⁷

Freight vehicles

In 2023, freight and passenger transportation by road shows positive dynamics. The main growth driver is domestic transportation. The domestic market of freight transportation by road in 2023 was marked by a decrease in the number of vehicles, an increase in the number of trips and high demand for long-distance transportation.⁸

The growth of freight flows by road was facilitated by switching from other modes of transportation – rail and air. Shippers – in particular, SMEs – choose road transport over rail because of the relatively high speed of delivery by road, even taking into account non-high-speed road sections, as well as economic

By the end of 2023, the carriage rolling accounted for about 69% of the train carriage construction volume // RZD Partner.ru URL: https://www.rzd-partner.ru/zhd-transport/news/po-itogam-2023-goda-v-obeme-vagonostroeniya-na-spetspark-prishlos-okolo-69/

² ĬMore than 64,000 freight cars sold in Russia in 2023 // RZD Partner.ru URL: https://www.rzd-partner.ru/zhd-transport/news/bolee-64-tys-gruzovykh-vagonov-realizovano-v-rossii-v-2023-godu/

³ By the end of 2023, the situation in the boxcar segment has not improved // RZD Partner.ru. URL: https://www.rzd-partner.ru/zhd-transport/interview/k-kontsu-2023-goda-situatsii-v-segmente-krytykh-vagonov-ne-uluchshilas/

⁴ Container market: rates for fitting platforms rose by 30% over the year // RZD Partner.ru. URL: https://www.rzd-partner.ru/zhd-transport/comments/konteynernyy-rynok-za-god-stavki-na-fitingovye-platformy-podorozhali-na-30/

⁵ A decade of big projects // Transport of Russia. URL: https://transportrussia.ru/razdely/ zheleznodorozhnyj-transport/10676-desyatiletie-bolshikh-proektov.html

⁶ Roads at high speeds // Vedomosti. URL: https://www.vedomosti.ru/industry/infrastructure_development/articles/2023/11/29/1008492-dorogi-na-visokih-skorostyah

⁷ BKL, Moscow central diameters, and social infrastructure: Moscow's main achievements in the construction sector in 2023 // Moscow Mayor's Website. URL: https://www.mos.ru/mayor/ themes/4299/10556050/

⁸ Experts summarized the results of 2023 for the road transportation market and briefed what 2024 will be like // ATI.SU. URL: https://news.ati.su/article/2024/01/25/eksperty-podveli-ito- gi-2023-goda-dlja-rynka-avtoperevozok-i-rasskazali-kakim-budet-2024-826393/

benefits: tariffs on most road sections remained unchanged in 2023 (the last indexation was in February 2023), while rail tariffs were indexed twice in 2023 (similarly in 2022).1 According to available estimates, in 2023, the volume of road freight transportation along three transport corridors – Eastern, Azov-Black Sea Basin and North-South - amounted to a record 500 mn tons.² The volume of transportation also increased on international routes, in particular, to Belarus and China, as well as to Iran, Turkey, Armenia, Georgia and Central Asia.3

The growth in passenger traffic by road is associated with the development of road tourism: in the context of air service restrictions to the southern regions of the country, the highway takes over the service of seasonally high tourist flows. In 2023, there was an increase in transportation on toll road sections. Thus, according to the data of SC Avtodor, a total of 278.7 million vehicle trips were made on the network sections, which is 18% more than in 2022.

Demand for freight transportation is constrained by its high cost and supplyside constraints: a shrinking number of logistics companies, shortage of drivers, rolling stock and spare parts, and difficulties in maintaining and repairing European-made vehicles.⁴ Over 2023, the cost of freight transportation increased by 40%⁵ In addition, not only the cost of services has grown, but also the cost of vehicles themselves. On average, automobiles increased in price by 24% over 2023, including foreign automobiles by 39% and domestic automobiles by 29.6%.6 Despite the growth in the cost of motor vehicles, according to the analytical agency "Avtostat", in 2023, more than 1 mn new passenger cars were sold, which exceeds the level of the previous year by 69%. More than 30% in the sales structure were cars of the domestic brand "Lada".7

The high demand for automotive equipment is driven, among other things, by the high pace of road and infrastructure construction in Russia. In 2023, 650 km of federal and regional roads were reconstructed and built, which is three times more than in 2022.8 More than 10 thousand km of roads were repaired, including 1,500 km of highways in the new regions. 9 Routes linking new regions with the

¹ Freight owners are leaving the railroad network for roads // RZD Partner.ru. URL: https://www. rzd-partner.ru/zhd-transport/comments/gruzovladeltsy-ukhodyat-s-zheleznodorozhnoy-seti-naavtodorogi-/

² Transport week – 2023. The key event of the Transport of Russia forum was dedicated to the new transport economics. URL: https://2023.transweek.digital/ru/media/klyuchevoe-sobytie-forumatransport-rossii-bylo-posvyashcheno-novoy-ekonomike-transporta/

³ Transportation and logistics: reorientation of directions and changes in structure // RA Expert. URL: https://raexpert.ru/researches/traffic_2023/

⁴ UAZ raised prices for its vehicles due to rising logistics costs // Vedomosti. URL: https://www. vedomosti.ru/auto/articles/2023/11/01/1003808-uaz-podnyal-tseni-iz-za-logistiki
The cargoes caused a real furor // Kommersant. URL: https://www.kommersant.ru/doc/6267981

⁶ Car as a luxury: Why Muscovites are switching to public transportation // Novye Izvestia. URL: https:// newizv.ru/news/2023-12-21/avtomobil-kak-roskosh-pochemu-moskvichi-peresazhivayutsya-naobschestvennyy-transport-425434

⁷ Sales of new passenger cars in 2023 increased by 69% // Avtostat. URL: https://www.autostat.ru/ news/56546/

⁸ Mikhail Mishustin announced the development of the transportation industry in Russia despite sanctions // Izvestia. URL: https://iz.ru/1605715/2023-11-15/mishustin-zaiavil-o-razvitiitransportnoi-otrasli-v-rf-vopreki-sanktciiam

⁹ Mikhail Mishustin outlines six priorities for Russia's transportation complex // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/15/dvizhenie-po-glavnoj-doroge.html

Republic of Crimea and Rostov Region (Tavrida-2 highway) are being developed.¹ One of the main achievements of road construction in 2023 was the opening of the M-12 Vostok expressway linking Moscow and Kazan. On December 30, 2023, a record number of cars drove along this highway: more than 91,000.² Work is underway to eliminate bottlenecks in the transport infrastructure, particularly in the eastern direction: checkpoints have been modernized and equipped with portal inspection and examination complexes, and an electronic queuing system for trucks has been introduced.³

One of the main areas of industry development has been the expansion of the park of environmentally friendly modes of transportation. In 2023, 14.5 thousand new electric vehicles were sold – 5 times more than in 2022. Against this background, the demand for related infrastructure is growing: in December 2023, the total number of electric charging stations (ECS) was 3,783, and 1437 ECS will be commissioned in 2024. In Moscow in 2023, the length of eco-friendly routes increased by a third: electric buses, of which there are more than 1400, serve 39 city routes with a length of 450 km. In 2023, 240 electric buses were delivered to 64 regions as part of the national project "Safe and Quality Roads" (SQR). In 2023, programs were launched for preferential leasing of buses through the State Transport Leasing Company (STLC) using funds from the National Welfare Fund and special treasury loans for the purchase of new public transport by regions.

The micro-mobility transportation market has developed the most, which stimulates, among other things, the development of e-commerce. In 2023, 64 mn trips were made on electric scooters in Moscow during the season, which is 2.5 times higher than the level of the previous year.

Air service

Compared to other transport sectors, air service faced the largest number of restrictive measures. In 2023, it was possible to reduce the lag from the transportation indicators before the introduction of sanctions: the volume of passenger traffic by 10% exceeded the 2022 level. In 2023, Russian airlines carried 105 million passengers, which is higher than the plan – according to the

¹ The new Tavrida-2 highway from Rostov-On-Don to Crimea will not receive the status of an expressway // Yug Expert. URL: https://expertsouth.ru/news/novaya-trassa-tavrida2-iz-rostovanadonu-v-krym-ne-poluchit-status-skorostnoy-dorogi/

² More than 3 mn passages of vehicles were recorded along the M-12 Vostok highway // Kommersant. URL: https://www.kommersant.ru/doc/6508778

³ The Ministry of Transport commented on the growth of cargo turnover and passenger transportation in 2023 // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/29/v-mintranse-prokommentirovali-rost-gruzooborota-i-passazhirskih-perevozok-v-2023-godu.html

⁴ We see increased demand for electro-charging stations // Vedomosti. URL: https://www.vedomosti.ru/industry/infrastructure_development/characters/2024/02/06/1018771-povishennii-sprosuslugi-elektrozapravochnih-stantsii

⁵ In 2023, the length of electric bus routes in Moscow grew by 450 kilometers // Moscow Mayor's Website. URL: https://www.mos.ru/news/item/134585073/

⁶ In 2023, 4.4 thousand vehicles will be delivered to Russian regions under the National Project // Safe and quality roads. URL: https://bkdrf.ru/news/read/v-2023-godu-po-natsproektu-v-rossiyskie-regiony-postavleno-44-tys-transportnyh-sredstv

⁷ How public transportation will develop in Russia // Vedomosti. URL: https://www.vedomosti.ru/partner/articles/2023/10/11/996654-obschestvennii-transport

comprehensive program for the development of the aviation industry until 2030 – this figure is 2 mn.¹ On the contrary, freight transportation by Russian airlines in 2023 declined by 23% compared to 2022, due to more complicated logistics and competition with foreign carriers.²

Domestic transportation made the main contribution to the aggregate growth of passenger air service. Despite continuing restrictive measures on the operation of 11 regional airports, the volume of air services on domestic routes exceeded the pre-pandemic values of 2019 (+12%, or 83 mn passengers), but has not yet equaled the peak level of 2021 (87.5 mn).³ The configuration of flights is changing: the regrientation of passenger traffic to the regions and an increase in flights bypassing Moscow in 2023 led to a decrease in passenger traffic at Domodedovo and Vnukovo and an increase in passenger traffic at St. Petersburg and Sochi airports.4 The list of subsidized regional routes bypassing Moscow in 2023 includes 296 destinations, in 2024 the total number of such routes will be 270.5 In 2023, the volume of passenger transportation to the Far East grew by 13%, including 18% on subsidized routes. 6 On the whole, there is a trend towards a decrease in state support for the aviation industry; the amount of subsidies in 2023 amounted to Rb60.42 bn⁷ against Rb 172 bn in 2022.8 The decrease in subsidies, on the one hand, reduces the industry's dependence on state support, but on the other hand, creates risks of higher airfares, reduced flights and passenger traffic within the country.

International air services are recovering: in 2023, Russia had direct air links with 37 countries (compared to 32 countries in 2022), international passenger flights were operated by 18 Russian⁹ and 65 foreign airlines. Since the official statistics of Rosaviatsiya has not been published in the public domain since February 2022, it is not possible to assess changes in the dynamics and structure of passenger air services in 2023. According to estimates, the share of domestic

¹ Russian airlines expanded services by more than 10% in 2023 // RZD Partner.ru. URL: https://www.rzd-partner.ru/aviation/news/aviakompanii-rf-za-2023-g-uvelichili-perevozki-bolee-chemna-10/

² Russian airlines reduced cargo transportation by almost a quarter in 2023 // Vedomosti. URL https://www.vedomosti.ru/business/articles/2024/02/05/1018371-rossiiskie-aviakompanii-pochti-na-chetvert-snizili-gruzoperevozki

³ How air services changed in Russia by 2024 // T-Zh. URL: https://journal.tinkoff.ru/kuda-letim-avia-stat/

⁴ Increase in flights bypassing Moscow led to a decrease in passenger traffic at Domodedovo and Vnukovo // Aviation of Russia. URL: https://aviation21.ru/uvelichenie-rejsov-v-obxod-moskvy-privelo-k-snizheniyu-passazhiropotoka-v-domodedovo-i-vnukovo/

⁵ Subsidizing regional transportation // Rosaviatsiya. URL: https://favt.gov.ru/dejatelnost-vozdush-nye-perevozki-subsidirovanie-regiony/

⁶ In 2023, subsidized air services in the Far East grew by 13% // RZD Partner.ru. URL: https://www.rzd-partner.ru/aviation/news/v-2023-godu-subsidirovannye-aviaperevozki-na-dalnem-vostoke-vyrosli-na-13/

⁷ Ministry of Transport: subsidization of the aviation industry in Russia exceeded Rb60.42 bn // Aviation Explorer. URL: https://www.aex.ru/news/2023/11/8/263842/print/

⁸ Rosaviatsiya summarized preliminary results of passenger air services // Rosaviatsiya. URL: https://favt.gov.ru/novosti-novosti/?id=9811

⁹ Russian airlines can carry 103 mn passengers by the end of 2023 // Aviation Explorer. URL: https://www.aex.ru/news/2023/11/1/263595/

air service in 2023 is about 80%, international -20% (in 2019 -60% and 40%, respectively). Based on data for January-August 2023, traffic on international routes grew 33% over the corresponding level in 2022 to 14.6 mn passengers, the highest value since pandemic 2020. The number of passenger jets on international lines increased, averaging 85.7% from January to August 2023 (82.4% for the same period in 2022).

Over the past two years, a set of measures was implemented to restore and adapt the air transport industry to the new realities. In particular, planned work was carried out to register jets in the domestic registry, reinsure jets, replace components and software with domestic part, including the transition to Russian booking systems. An important result on import substitution in the industry was the flight in 2023 of the first Russian SJ-100 model using domestic components and the modernized IL-96-400M. In addition, serial production of composite wing and engines for the MS-21 medium-range airliner was launched, and work is underway to ramp up production capacity to produce the Tu-214 from 1–1.5 to 20 jets per year.³

Currently, the aircraft fleet includes 1,165 civil passenger jets, of which 225 have Russian registration. The share of passenger transportation by domestic aircraft is growing: from 6% in 2019 to 10.3% in 2023. Deregistration (getting rid of double registration) of aircraft and their transfer from foreign registries to the Russian aviation register were carried out in 2023. The process of buying out aircraft in service with Russian airlines from foreign leasing companies was called "de-bermudization" of the fleet. About 300 billion rubles of budget funds were allocated for this purpose. In 2023, 98 Aeroflot, 45 S7 and 19 Ural Airlines jets underwent de-bermudization. Problems with aircraft maintenance are observed at airlines with the largest share of foreign aircraft and jets with foreign components in their fleet structure.

In 2023, the development of air service infrastructure continued: 12 airfield infrastructure facilities, including 9 runways, were modernized. In particular, the airports of Arkhangelsk and Magnitogorsk opened after reconstruction. Particular

¹ Civil aviation in the Russian Federation today and its future direction // Russian Academy of Transport. URL: https://rosacademtrans.ru/aviation2023/

² Air service abroad turned out to be the highest since pre-pandemic times // Vedomosti. URL: https://www.vedomosti.ru/business/articles/2023/10/05/998874-aviaperevozki-za-rubezh-okazalis-maksimalnimi-s-dopandemiinih-vremen

³ Course on import substitution: how Russian civil aviation developed in 2023 // Aviaport. URL: https://www.aviaport.ru/news/kurs-na-importozameshchenie-kak-razvivalas-rossiyskaya-grazhdanskaya-aviatsiya-v-2023-godu/

⁴ GTLC presents an overview of Russia's transportation complex for the first 9 months of 2023 // GTLC. URL: https://www.gtlk.ru/press_room/news/gtlk-predstavlyaet-obzor-transportnogo-kompleksa-rossii-po-itogam-9-mesyatsev-2023-goda/

⁵ Air service abroad turned out to be the highest since pre-pandemic times // Vedomosti. URL: https://www.vedomosti.ru/business/articles/2023/10/05/998874-aviaperevozki-za-rubezh-okazalis-maksimalnimi-s-donandemiinih-vremen

okazalis-maksimalnimi-s-dopandemiinih-vremen
Aeroflot Group will transfer 98 aircraft to a Russian legal entity by the end of 2023 // Interfax. URL: https://tourism.interfax.ru/ru/news/articles/105035/

⁷ Russian airlines bought 64 foreign-made airplanes and will be able to fly abroad on them // Komsomolskaya Pravda. URL: https://www.kp.ru/daily/27598.5/4870257/

⁸ S7 to cut winter schedule due to difficulties with Airbus engines // Kommersant. URL: https://www.kommersant.ru/doc/6267234

attention is paid to the renovation and development of airfield infrastructure in the Far East regions: in 2023, reconstruction was completed at Vilyuysk, Ust-Nera, Chersky, Yakutsk, Pevek, Yelizovo, and Ust-Kamchatsk airports.¹ In the Samara region, the SEZ "Togliatti" launched serial production of domestic drones that will serve the purposes of monitoring and delivery of urgent cargoes, as well as the needs of agriculture.2

Maritime transport

In 2023, maritime transport showed the highest growth among other types of transportation: 19.4% against 2022. The increase in the volume of maritime transport is explained by the growth of loading through Russian seaports. In 2023, the cargo turnover of seaports reached a record high since 2018; 883.8 mn tons, which exceeds the same figure for 2022 by 5% (841.5 mn tons). The main contribution to the growth in port cargo turnover was a 10% increase in dry cargo handling (446.9 mn tons). The volume of liquid cargo transshipment remained unchanged year-on-year and amounted to 436.9 mn tons.³ Renovation of transport infrastructure at the approaches to the ports and dredging of seaport water areas contributed to the growth of indicators.5

The Caspian basin ports showed the largest increase in cargo transshipment: 7.8 mn tons, or 29.7% vs. 2022. In particular, a significant year-on-year increase in cargo transshipment volumes was noted in the port of Astrakhan (up 48.5% to 3.7 mn tons), which is due to the doubling of the port's production capacity over the past two years. 6 Cargo transshipment also increased by 14% to 3.4 mn tons in the port of Makhachkala. In general, the growth in port cargo turnover is due to the fact that the Caspian basin is a transit basin for the North-South ITC.7

Cargo turnover of ports in the Azov-Black Sea basin grew by 10.4% to 291.4 mn tons, which was due to an increase in cargo traffic from the stations of the North Caucasus Railway: in 2023, 22.5 mn tons (7.7% growth vs. 2022) of export cargo, mainly grain, ferrous metals and oil products bound for Eurasia, Africa and South America, were unloaded from the stations of the North Caucasus Railway to seaports. Cargo turnover dynamics were multidirectional by individual ports: cargo handling increased at the ports of Novorossiysk (by 9.4% to 161.4 mn tons),

¹ Large-scale reconstruction of airport infrastructure continues in Russia // Ministry of Transport of the Russian Federation. URL: https://mintrans.gov.ru/press-center/news/11159

² Samara Oblast launches the first stage of drone production // Rossiyskaya Gazeta. URL: https:// rg.ru/ 2023/12/ 25/reg-pfo/ v-samarskoj-oblasti-zapustili-pervuiu-ochered-proizvodstvabespilotnikov.html

³ Freight turnover of Russian sea ports by the end of 2023 increased by 5% to 883.8 mn tons // Federal Agency of Sea and River Transport. URL: https://morflot.gov.ru/novosti/lenta/ gruzooborot-morskikh-portov-rossii-po-itogam-2023-goda-vyros-na-5-do-883-8-mln-t/

⁴ Export freight transportation to Azov-Black Sea ports from SCR stations rose by 7.7% in 2023 // Portnews.URL: https://portnews.ru/news/358712/

⁵ The Ministry of Transport briefed on the growth of cargo turnover and passenger transportation in 2023 // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/29/v-mintranse-prokommentirovalirost-gruzooborota-i-passazhirskih-perevozok-v-2023-godu.html
6 Stable growth amid sanctions // Transport of Russia. URL: https://transportrussia.ru/razdely/

logistika/10624-stabilnyj-rost-na-fone-sanktsij.html

⁷ The turnover between Russia and Azerbaijan in 2023 moved up by 17.5% due to the growth of cargo transportation via the North-South ITC // Portnews. URL: https://portnews.ru/news/358778/

Tuapse (by 14% to 24.8 mn tons), Kavkaz (by 28% to 21.4 mn tons) and Rostov-On-Don (by 8.9% to 16.3 mn tons), and decreased at the port of Taman (by 5.4% to 40.5 mn tons).

Cargo turnover of Arctic basin seaports dropped by 0.7% to 97.9 mn tons. Almost all ports showed negative dynamics: Arkhangelsk (-18% to 1.9 mn tons), Varandey (-10.6% to 5.2 mn tons), Sabetta (-2% to 27.8 mn tons), except for the port of Murmansk (positive growth of 2.8% to 57.8 mn tons).

Cargo turnover at seaports in the Far Eastern basin went up by 4.5% to 238.1 mn tons. However, the share of Far Eastern ports in container turnover shrank in favor of Baltic and Azov-Black Sea ports: in the structure of seaport cargo turnover across all basins, Far Eastern ports handled 52% of traffic (56% in 2022). The cargo turnover of Vostochny (+5.2% to 86.5 mn tons), Vladivostok (+4% to 33.5 mn tons), Nakhodka (+6.9% to 27.6 mn tons) ports increased, while the cargo turnover of Prigorodnove (-11.6% to 13.6 mn tons) and Vanino (-7% to 35 mn tons) ports decreased.

Cargo turnover at Baltic basin seaports expanded by 1.3% to 248.6 mn tons. Positive growth in cargo transshipment was recorded at the ports of Primorsk (+10.4% to 63.1 mn tons) and Bolshoi Port of St. Petersburg (+28% to 49.6 mn tons). while negative growth was recorded at the ports of Vysotsk (-19.9% to 12.8 mn tons) and Ust-Luga (-9.3% to 112.5 mn tons).

In 2023, 82,364 passenger ships were served, which is 31.7% higher than in 2022. Marine passenger terminals served 33.4% more passengers: 5,175.5 thousand people. The largest increase was recorded in the ports of Sevastopol (+46%) and Sochi (+35%).²

At the end of 2023, maritime operators, domestic carriers and cargo owners faced problems with ships passing through the Suez Canal, which accounts for 25-30% of global container traffic. According to UNCTAD, between December 2023 and January 2024, the number of ships passing through the Suez Canal decreased by 39% and the volume of cargo transportation fell by 45%. The consequence was an increase in freight rates and the lengthening of trade and transportation routes.³ Transportation via the Northern Sea Route (NSR) has developed as an alternative: in October 2023, a vessel from China called at the port of Baltivsk via the NSR.⁴ In 2023, in the context of subsidies for domestic companies engaged in short sea shipping along the NSR between Far Eastern and North-Western ports, the subsidies were expanded.5

Much attention was paid to the development of maritime transport infrastructure. In particular, the "Transport Week – 2023" presented projects for

¹ Far East ports reduced the share of container turnover in favor of the Baltic and Azov-Black Sea basins // RZD-Partner. URL: https://www.rzd-partner.ru/news/porty-dalnego-vostoka-sokratilidolyu-konteyneroborota-v-polzu-baltiyskogo-i-azovo-chernomorskogo-ba/

² Freight turnover of Russian seaports in January-December 2023 // Association of Commercial Seaports of Russia. URL: https://www.morport.com/rus/news/gruzooborot-morskih-portovrossii-za-yanvar-dekabr-2023-g

³ UNCTAD: The weekly transits going through the Suez Canal decreased by 42% over the past two months // Portnews. URL: https://portnews.ru/news/358934/
4 For the first time, a vessel that traveled the Northern Sea Route has called at Baltiysk (Kaliningrad

Oblast) // Portnews. URL: https://portnews.ru/news/354536/

⁵ The government expanded subsidies for transportation along the Northern Sea Route // Vedomosti. URL: https://www.vedomosti.ru/business/articles/2023/07/28/987519-rasshirilosubsidirovanie-sevmorputi.

the construction of a gas fleet in the Arctic and year-round navigation along the NSR, as well as a project to expand the throughput capacity of the Vostochnaya Stevedore Company marine container terminal.¹

Inland water transport

The length of inland waterways in Russia is 102,000 km. In 2023, cargo transportation and cargo turnover fell due to the current international sanctions (in particular, restrictions on export supplies of timber and construction cargo) and reorientation of cargo to land types of transportation. In addition, the drop in the volume of transportation was caused by low-water inland waterways. The decline in cargo transportation was mainly observed in the basins of inland waterways of the European part of the country: in the Dvinsko-Pechorsky basin – by 21.5%, in the Lena basin – by 11.4, in the Belomorsko-Onezhsky basin – by 10.5, in the Volga-Baltic basin – by 10.1, in the Moscow basin – by 9, in the Yenisei basin – by 2.7%. The volume of cargo delivered to the Far North also decreased: by 8.4% to 16.2 mn tons. In the southern and eastern basins there was an increase in cargo transportation: in particular, in the Amur basin – by 13.1%, in the Kamsky basin – by 9.3, in the Baikal-Angar basin – by 4.9, in the Volga basin – by 4.6, in the Ob-Irtysh basin – by 2.9, in the Azov-Don basin – by 1.8, in the Volga-Don basin – by 0.5%.²

In contrast to cargo transportation, passenger turnover and passenger transportation by inland water transport rose due to increased demand for cruise travel and the launch of regular water routes, as well as the development of high-speed navigation (e.g., in Nizhny Novgorod Oblast). In 2023, the two year-round routes of electric river vessels were launched in Moscow,³ the navigation of the first recreational electric vessel opened in Krasnoyarsk, and regular passenger transportation by water was resumed in the Rostov Oblast.⁴ Some private companies, such as Vodokhod, note that passenger traffic on cruise ships in 2023 exceeded pre-pandemic levels.⁵ Despite the growth in demand for cruises, ship utilization dropped by 10% due to a 25-27% increase in supply and an expansion in the number of ships in navigation.⁶

In 2023, inland waterways were dredged⁷ and 18 inland water transport infrastructure facilities were reconstructed, in particular, hydraulic structures

¹ From autonomous boat to new security systems on transport: Gostiny Dvor hosts the exhibition "Transport of Russia" // Transport Week — 2023. URL: https://2023.transweek.digital/ru/media/ot-avtonomnogo-katera-do-novykh-sistem-bezopasnosti-na-transporte-v-gostinom-dvore-prokhodit-vystavk/.

² In 2023, cargo transportation by GDP declined by 6.4% to 108.8 m tons // Portnews. URL: https://portnews.ru/news/357853/ .

³ The second river route of electric vessels was launched on the Moscow River // Portnews. URL: https://portnews.ru/news/354200/

⁴ Rostov Oblast presents projects worth over Rb240 bn at the "Transport Week – 2023" // Official Portal of the Rostov Oblast Government // Official Portal of the Rostov Oblast Government. URL: https://www.donland.ru/news/24562/

⁵ Passenger transportation: a new impetus for development // Marine News of Russia. URL: https://morvesti.ru/analitika/1692/107257/

⁶ Stable growth amid sanctions // Transport of Russia. URL: https://transportrussia.ru/razdely/logistika/10624-stabilnyj-rost-na-fone-sanktsij.html

⁷ The Ministry of Transport briefed on the growth of cargo turnover and passenger transportation in 2023 // Rossiyskaya Gazeta. URL: https://rg.ru/2023/11/29/v-mintranse-prokommentirovalirost-gruzooborota-i-passazhirskih-perevozok-v-2023-godu.html

in the Yenisei, Volga, Kamsky, Azov-Don, Baikal-Angarsk, Belomorsko-Baltiysky, Volga-Don and Moscow basins.1

Projects of an autonomous (crewless) vessel based on the "Volzhanka Voyager 800 Cabin" for operation on inland waterways were presented at "Transport Week – 2023". Domestic developments were also presented: a Russian vessel traffic control system, as well as an electronic chart navigation and information system ECDIS "Bering",3

Pipelines

Cargo turnover and cargo transportation by pipeline transportation decreased in 2023. At the same time, gas production declined by 5.5% to 636.9 bcm. Gas exports by pipeline transport fell by 29.9% to 99.6 bcm, while exports of liquefied natural gas were down by 1.9% to 45.4 bcm.4

The decrease in transportation was caused by damage to the pipeline infrastructure, falling prices on the world market, and the loss of a large part of the European market: the EU countries reduced their use of Russian gas by 18%, a number of them (Poland, Romania, Bulgaria, Finland, the Netherlands and Denmark) – completely refused to supply gas from Russia.⁵ Direct sanctions in 2023 were imposed against oil and oil products supplies: a ban was imposed on oil transportation through the northern branch of the Druzhba oil pipeline.6

In the context of restrictive measures and reduced consumption of Russian gas by the EU countries, there was an increase in gas supplies to China via the Power of Siberia pipeline: Gazprom's supplies in 2023 exceeded the previous year's figures by 1.5 times and reached 22.7 bcm. ⁷ The construction of a major infrastructure project, the Sovuz Vostok gas pipeline from Russia to China via Mongolia, which will continue the route of the Power of Siberia-2 gas pipeline, is under discussion.

The main risks for the pipeline industry in 2024 include the possible complete refusal of EU countries to supply Russian gas through Ukraine.8

¹ In 2023, the volume of cargo transportation by water transport will reach 118.8 million tons // RZD-Partner.ru. URL: https://www.rzd-partner.ru/wate-transport/news/v-2023-godu-obem-

perevozok-gruzov-vodnym-transportom-sostavit-118-8-mln-t
2 From autonomous boats to new transportation security systems: Gostiny Dvor hosts the Transport of Russia exhibition // Transport Week – 2023. URL: https://2023.transweek.digital/ru/media/ ot-avtonomnogo-katera-do-novykh-sistem-bezopasnosti-na-transporte-v-gostinom-dvore-

prokhodit-vystavk/
President of Sitronics Group took part in the forum "Transport Week – 2023" // Vedomosti. URL: https://www.vedomosti.ru/press_releases/2023/11/17/prezident-sitronics-group-prinyal-uchastie-v-forume-transportnaya-nedelya-2023

⁴ Russian pipeline gas exports down by almost 30% in 2023 // Kommersant. URL: https://www. kommersant.ru/doc/6494313

 ⁵ Why 2023 was the year of the failure of anti-Russian sanctions // Forbes. URL: https://www.forbes.ru/biznes/502974-pocemu-2023-j-stal-godom-provala-antirossijskih-sankcij
 6 The Hungarian government clarified the content of the 11th package of EU sanctions // RIA

Novosti. URL: https://ria.ru/20230622/druzhba-1879762637.html

Gazprom to increase gas supplies to China 1.5 times in 2023 // TASS. URL: https://tass.ru/ ekonomika/19670859

The European Commission is working on a complete rejection of gas supplies from Russia via Ukraine // Kommersant. URL: https://www.kommersant.ru/doc/6535034