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The Meaning of Russia's Transport and Logistics in Expanding Integration Processes

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ABSTRACT

The paper considers the role and tasks of the transport industry in the economic complex of Russia in the economic sanctions imposed. The analysis of the predicted changes in the international transport and logistics complex allowed the staging recommendations for amendments to the basic policy documents for the industry growth. Also, the paper substantiates the need to adjust certain points in the development of logistics projects within Russia and the Eurasian Economic Union (EEU). The authors analyzed the meaning of railway transport, which is the primary carrier of the considered commodity groups (products of the metallurgical, logging, coal industry) in the new economic conditions. The research proposed the calculation of the projected increase in rail freight traffic in the Siberian Federal District and the Far Eastern Federal District. This assessment is based on the analysis of external exports of the Russian Federation and the Republic of Belarus in the logging, metallurgical, and coal industries in 2020 and a valuation of the sanctions' impact on foreign trade activity.

Keywords: transport and logistics complex; integration processes; EEU; international transport corridors; railway transport

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INTRODUCTION

The progressive development of the Eurasian Economic Union's economic complex depends on the expansion of integration ties within it and the growth of the participants' national economies. The following basic documents and programmes have been adopted to implement the economic strategy in the Russian Federation and the EAEU:

“Strategic Directions for the Development of Eurasian Economic Integration until 2025” (approved by the Supreme Eurasian Economic Council on 11 December 2020).¹

“On the National Development Goals of the Russian Federation for the period until 2030” (Presidential Decree of the Russian Federation of 21.07.2020).²

¹ URL: https://eec.eaeunion.org/comission/department/dep_razv_integr/strategicheskie-napravleniya-razvitiya.php

² URL: <http://kremlin.ru/events/president/news/63728>

Achieving these objectives is inextricably linked to the effective development of transport infrastructure. The EAEU is the largest territorial association in the world, and Russia occupies the largest part of its area. Given its unique geographical features, the Union's transport and logistics industry is becoming one of the most important elements of the economic complex and an indicator of its economic condition. Increase of cargo movement speed, decrease of prime cost and cost intensity, increase of throughput capacity, accuracy and safety of delivery, modern logistics services are necessary conditions for competitiveness of the transport industry in international logistics complex. Improvement of the transport and logistics complex of the Russian Federation and other members of the Union and expansion of integration processes in the EAEU depend, among other things, on current global trends. Given the



economic changes and forced transformation of the structure of transport flows in the Russian Federation, there is a need to adjust certain articles of the Transport Strategy of the Russian Federation until 2030 and other basic documents of the industry.

The transport industry belongs to the tertiary sector of the economy, but directly forms the conditions for the functioning of the primary and secondary sector and contributes to the multilateral development of regions, industry, trade, tourism and foreign economic relations. According to the World Bank, in 2018 Russia ranked 75th [Logistics Performance Index (LPI) 2.76 points] in terms of logistics industry efficiency and was behind countries of comparable size: the USA in 14th place, Australia in 18th place, Canada in 20th place, China in 26th place, Brazil in 56th place and Kazakhstan in 71st place.³ The development and modernisation of transport infrastructure affects the final cost of many commodity groups. In the resource industries, logistics costs make up 40–60% of the final price of a product [1]. Changes in the international transport and logistics complex in recent decades have led to evolutionary changes in the industry. The following trends can currently be identified here:

- congestion of classical transport routes caused by a significant increase in international foreign trade turnover (between 2014 and 2018, the increase in foreign trade between the EU and China was 15.2%⁴);
- the modern transport and logistics complex exists in an intensified competition of international logistics projects caused by the growing economic attractiveness of providing transit services and the guaranteed stability of national goods and passenger traffic against the background of the political sanctions

against Belarus, Venezuela, Iran, China, Russia, North Korea, Syria, etc. in recent years;

- the emergence of new transport corridors with a unified transport chain, with a synergistic increase in the potential of each of the participants;
- the introduction of modern logistics solutions and innovative methods (“container revolution”, “freight villages”, high-speed roads and highways, multimodal transport, digitalization, agro-logistics). Geographical expansion in the application of innovative technologies, materials, and advanced equipment. Substitution of classical transport fuels with alternatives — “energy transition” (hydrogen fuel, liquefied petroleum hydrocarbons) as part of the low-carbon climate agenda and the challenge of reducing the cost of transport.⁵

Major transport corridors link the world’s leading producers, commodity centres and consumers of goods [2]. With the increasing volume of international traffic, the role of transit logistics entities is increasing. Between 2011 and 2020, rail freight turnover (in billion ton-kilometers) in Russia increased by 26.6%, in China by 9.9%, and in the period from 2011 to 2019 it increased in India by 17.6%, in Germany by 19.7%, in the Netherlands by 12.6% and in Turkey by 30%. Passenger transport by rail (in billion ton-kilometers) between 2011 and 2019 increased in China by 67.9%, in India by 13%, in Germany by 11.4%, in the Netherlands by 18.6% and in Turkey by 101.8%.⁶

The creation of modern transport infrastructure and the application of logistics management methods provide an opportunity to reduce costs, reduce the cost of production of goods, increase transportation volumes, and diversify sales and transit markets. According

³ URL: <https://lpi.worldbank.org/international/global/2018>

⁴ URL: https://index1520.com/upload/medialibrary/049/_-_3.pdf?ysclid=12r4tei7zv%20или%20Евростат

⁵ Transport innovations. A scientific and technical journal. URL: https://inno-trans.ru/data/documents/IT-43_inet.pdf

⁶ Federal State Statistics Service, The Rosstat, <https://rosstat.gov.ru/statistics/incomparisons>

to the “Transport Innovations” journal of the Ministry of Transport of the Russian Federation, the introduction of innovative digital technologies (operational and technological communication systems — OTC, decentralized communication systems based on VOIP technologies, blockchain technologies) will give tangible results: GDP growth of up to 10%, reduction of transport costs up to 30%, increase in railway transportation volumes by 40% [3, p. 6]. Both major world states and associations (EU, India, China, Russia) and regional leaders (Azerbaijan, Iran, Pakistan, Turkey) are interested in localization and optimization of transport in the Eurasian region. In the Eurasian space, countries simultaneously implement alternative logistics projects [4] at different stages of implementation:

- China — “One Belt, One Road”.
- Turkey — “the Istanbul Canal”.
- Russia — “the Northern Sea Route”, the modernisation of the Trans-Siberian Railway and the Baikal-Amur Mainline.
- India — “the Industrial Corridor”.
- Turkey, Georgia, Azerbaijan, Kazakhstan, China — “the Iron Silk Road / the Middle Way”.
- Azerbaijan, India, Iran, Russia — “North-South”.

With the transformation of the world transport system, in addition to establishing new requirements for its quality [5], it is important to offer an innovative logistics product in a timely manner with the possibility of integration into parallel projects [6], with minimization of economic conflicts with competitive routes.

STRATEGIC POLICY DOCUMENTS OF THE TRANSPORT AND LOGISTICS COMPLEX IN RUSSIA AND THE EAEU

As part of the long-term modelling of the economic and integration policy of the Russian Federation and the EAEU, the following sectoral programmes have been adopted for implementation:

- Transport Strategy of the Russian Federation until 2030 with a forecast for the period until 2035 (approved by the Decree of the Government of the Russian Federation No. 3363-d of 27.11.2021).⁷

- Decision of the Supreme Eurasian Economic Council of 26.12.2016 No. 19 “On the Main Directions and Stages of Implementation, coordinated (agreed upon) by the Transport Policy of the EAEU Member States” and the EAEU Roadmap for 2020–2023 (approved by EFSF (European Financial Stability Facility) Decision of 20.08.2021 No. 15).⁸

- Decree of the Government of the Russian Federation of 10.03.2022 No. 471-d “On Federal Budget for 2022 and for the Planning Period 2023 and 2024”.⁹

- National Project “International Cooperation and Export” (Presidium of the Presidential Council for Strategic Development and National Projects of the Russian Federation. Minutes of 24.12.2018).¹⁰

The programmes have planned organisational measures with a timetable for implementation; funding sources and executors have been identified. The geopolitical events of early 2022 (“Special Military Operation in Ukraine”) have led to global changes in the foreign trade relations of Russia, Belarus and, consequently, the EAEU. Russia and Belarus, united by integration ties within the union state, are subject to extensive economic, financial, and political restrictions. The implementation of the declared policy documents from 2022 onwards takes place in a new economic environment. Since February 2022, the West has been tightening the restrictions imposed on various sectors of the

⁷ URL: <http://static.government.ru/media/files/7enYF2uL5kFZl00pQhLl0nUT91RjCbeR.pdf>

⁸ URL: http://www.eurasiancommission.org/ru/act/energetikaiinfr/transport/transportnaya_politika/Pages/default.aspx

⁹ URL: <http://government.ru/docs/all/139718/>

¹⁰ URL: <http://government.ru/docs/all/139718/>

economic complex of the two countries, which directly affects the transport sector as well. The most significant restrictions have been closed airspace for Russian and Belarusian airlines and aviation in the EU, the United Kingdom, Canada, the United States, etc., a ban on Russian-flagged vessels entering the seaports and inland waters of these countries and on Russian and Belarusian road carriers operating in the territory of the European Union.

The activities and development of the transport sector were indirectly affected by sanctions on Russian exports of certain commodity groups, equipment and technology, restrictions imposed on the financial sector and investments in the Russian and Belarusian economies:

- a ban on coal imports from Russia to the EU (from August 2022), the US, Japan;
- EU, Canada and Japan's refusal to supply Russian timber;
- U, UK and Swiss bans on imports of Russian steel products;
- imposing import quotas on Russian fertilizers and raising the tariff to 35%;
- Import bans from Russia imposed by: Switzerland (goods and technologies used in the military, defence, oil, aviation and space sectors), Singapore (military goods, electronics, computers), the UK (space and aviation technologies, oil refining equipment, catalysts, quantum technologies), Japan (semiconductors, communications equipment and innovative materials, oil refining equipment and technologies), South Korea (semiconductors, chips, microchips, computers), the US (96 Russian companies from the defence, space and maritime sectors have introduced complex licensing procedures to sell goods and technology), the EU (high-tech semiconductors, transport components, quantum computers), Taiwan (57 goods from the high-tech group).¹¹

¹¹ World Trade Organisation. URL: <http://government.ru/docs/all/139718/>

Strategic planning for the industry until 2030 was designed on the basis of models existing until 2021. Changes in Russia's economic and geopolitical international position from February 2022 are a prime example of a "black swan".¹² The programme "Transport Strategy of the Russian Federation to 2030 with a forecast for the period up to 2035" pays much attention to the development of the West-East transport corridor, increasing transit from the Far East, China, India towards Europe through Russia, and Belarus. The planning and proposed budgeting of the roadmap was designed to take into account the significant increase in freight deliveries to the EU. The roadmap did not anticipate a possible significant reduction in Russia's foreign trade with the European Union in 2022 or a significant increase in trade with China, India, and Belarus.

The program "On the Main Directions and Stages of the Coordinated (agreed upon) Transport Policy of the EAEU Member States"¹³ stated the step-by-step liberalization of the EAEU logistics services and the development of a coordinated position on the integration of its transport complex into the global transport system as one of the directions. Given the restrictions on road, air, rail and sea transport for Russia and Belarus, and the growing risks for consumers of transit services in the territory of the states, changes in the EAEU industry development model with a shift of the "centre of gravity" to the Asian part is required. Given the expected increase in economic ties with South-West and South Asia, it is necessary to accelerate the processes of expanding integration relations within the EAEU to more widely use and develop the transport and logistics potential of Kazakhstan, Kyrgyzstan, Armenia.

¹² Term introduced by Taleb N. in 2007 in relation to a hard-to-predict and rare event with significant consequences.

¹³ URL: http://www.eurasiancommission.org/ru/act/energetikaiinfr/transport/transportnaya_politika/Pages/default.aspx

Federal Law No. 390-FL of 06.12.2021 “On the Federal Budget for 2022 and the Planning Period of 2023 and 2024”¹⁴ provides for budget appropriations in the sub-section “Road Facilities (Road Funds)” for the implementation of the project “Development of the Federal Highway Network” in the 2022–2024 period to the sum of RUB 46,902,573.00; and RUB 5,845,006.00 (12.46%) for construction, installation and design and survey works in the Northern Federal District and the Far Eastern Federal District of the Russian Federation. In the current situation, it is possible to minimize economic losses by increasing foreign economic relations with East Asian partners. In order to realise this objective, it is necessary to shift budgetary priorities for financing and modernising the transport industry’s infrastructure to the eastern federal districts of the Russian Federation.

In accordance with the integrated implementation measures of the “International Trade Logistics” Project, eight roads and two sea border crossing points were planned to be commissioned in the Far Eastern, Northwestern and Siberian Federal Districts in 2022–2023, as well as the introduction of electronic document interchange along international transport corridors. As part of the “International Trade Logistics” Project, the “Transport Services” category (road, rail, water, and air transport) is expected to achieve export figures of USD 25.03 billion in 2024.¹⁵ With significant restrictions on road, air and maritime transport and a possible reduction in transit traffic, it is difficult to achieve the declared foreign trade targets.

¹⁴ URL: http://www.consultant.ru/document/cons_doc_LAW_402647/

¹⁵ Decree No. 471-d of 10.03.22 of the Government of the Russian Federation. URL: <http://static.government.ru/media/files/QWc9D20cV0oeXAWPvLNPIA2QDXexouEI.pdf>

ANALYSIS OF THE ECONOMIC AND FOREIGN TRADE PARAMETERS OF THE RUSSIAN FEDERATION UNTIL 2022

Russia’s exports in 2021 stood at \$ 447.54 billion, imports at \$ 271.63 billion. For the Russian economy, the leading foreign trade partners in recent years have been the countries listed in *Table 1*.

Of the twelve largest consumers of Russian exports, seven have taken part in economic restrictions, while the six most significant importers have imposed sanctions on the Russian Federation. China’s share in Russia’s foreign trade turnover has increased due to China’s growing demand for mineral resources and the expansion of bilateral economic cooperation between the two countries. Given the change in the vector of supplies from Europe to the Asia-Pacific region, an important task for the transport and logistics complex is to ensure smooth domestic and foreign freight transportation with restructuring the industry’s infrastructure in the shortest possible time to increase the capacity of transport routes. In terms of financial and mass-volume indicators, the products of the natural resources sector occupy an important place in the structure of Russian exports (*Table 2*). Despite the decline in indicators, until February 2022 the European Union held a significant share in Russia’s foreign trade.

EXPORT STRUCTURAL CHANGES IN THE RUSSIAN FEDERATION IN 2022

Due to the decline in the supply of Russian natural resources to Western countries, a commodity reorientation to Asian, Latin American, and African international markets has become a challenge. When the terms of supply are agreed, the largest strategic consumers of mineral and other commodity groups could be China, Vietnam, India, Indonesia, and Brazil. With a shift in the



Table 1

The principal foreign trade partners of the Russian Federation in 2021

| No. | Export | | Import | |
|-----|-----------------------------------------------------------------------|-------------|-----------------------------------------------------------------------------|-------------|
| | Entity. billion USD | billion USD | Entity. billion USD. | billion USD |
| 1 | the EU – 28 (the Netherlands – 37.89. Germany – 26.66. Italy – 16.64) | 166.10 | the EU – 28 (Germany – 24.79. France – 11.08. Italy – 10.88. Poland – 5.28) | 85.13 |
| 2 | China | 61.64 | China | 64.46 |
| 3 | EAEU (Belarus – 23.28. Kyrgyzstan – 18.48) | 48.81 | EAEU (Belarus – 16.22. Kyrgyzstan – 7.14) | 24.41 |
| 4 | Turkey | 22.99 | The United Kingdom | 15.32 |
| 5 | The United Kingdom | 20.21 | The Republic of Korea | 11.92 |
| 6 | UNITED STATES | 15.88 | Japan | 8.29 |
| 7 | The Republic of Korea | 14.57 | Turkey | 5.87 |
| 8 | CIS (excluding EAEU countries and Ukraine) | 9.68 | Vietnam | 4.50 |
| 9 | Japan | 9.44 | India | 4.00 |
| 10 | India | 7.91 | UNITED STATES | 3.93 |
| 11 | Ukraine | 7.04 | Ukraine | 3.68 |
| 12 | Switzerland | 3.04 | CIS (excluding EAEU countries and Ukraine) | 3.00 |

Source: compiled by the authors based on URL: <https://eurasiancommission.org>

freight turnover of natural resources from the west to the east, the pressure on rail, pipeline and port infrastructure on the Pacific coast is increasing. Pipelines carry 84% of Russia's oil exports across the country, while rail transport – only 13%.¹⁶ Most oil fields are located within the boundaries of the West Siberian Urals Federal District (Khanty-Mansiysk Autonomous District –

Yugra and Yamal-Nenets Autonomous District) and are linked by pipeline to the European part of Russia, as well as to the southwest of the Siberian Federal District (Krasnoyarsk Territory, Novosibirsk, Omsk, Tomsk Regions).¹⁷ The main trunk oil pipeline in the Siberian Federal District, the “East Siberia – Pacific Pipeline System” that transports oil from Siberia to its eastern borders, including for export to Asia-Pacific

¹⁶ Pipeline transport: Russia's oil pipelines. URL: <https://energосmi.ru/archives/33437>

¹⁷ Oil and gas industry news. URL: <https://pronpz.ru>

Table 2

Exports of certain commodity groups of the Russian Federation in 2021

| No. | Commodity group | Total exports. weight. mln tonnes / value. in mln USD | Share of exports to “source of sanctions” countries. in % / EU share |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------|
| 1 | Crude oil. including gas condensate | 219.47 / 68 952 | 64.27 / 53.64 |
| | China's share – 34.31%. Turkey's share – 1.17% (Russia's total share of global production in 2019–11. 5%) | | |
| 2 | Petroleum products/ Oil derivatives | 139.21 / 44 299 | 79.78 / 59.27 |
| | China's share – 4.97%. Turkey's share – 4.97% | | |
| 3 | Hard coal and lignite | 212 713.33 / 12 711 | 61.49 / 27.01 |
| | China's share – 16.91%. India's share – 4.19%. Vietnam's share – 3.73%. Morocco's share – 2.65% | | |
| 4 | Unfinished raw timber and longitudinally sawn timber | 33.49 / 51 | 29.06 / 26.87 |
| | China's share – 56.88% | | |
| 5 | Metals and products made from them | 47.65 / 34 900 | 41.23 / 36.04 |
| | Turkey's share – 10.4%. China's share – 8.5% | | |
| Share of the Russian Federation's exports with third countries in 2021: mineral products – 57.8% (fuel and energy products – 56.1%). metals and metal products – 7.9%. timber – 3.7% | | | |

Source: compiled by the authors.

Region countries, with a maximum capacity of 80 million tonnes for 2019.¹⁸ There are 32 oil refineries (refineries) in Russia, with the three in the Siberian Federal District and Far Eastern Federal District: Achinsk, Angarsk and Komsomolsk. In the absence of sufficient capacity, there is no technical possibility to transport most of the oil and oil products previously oriented towards Europe by pipeline infrastructure towards China and far-eastern ports. Large volumes can be transported by rail through the Baikal-Amur Mainline (BAM) and the Trans-Siberian railway, by tanker fleet from the European part of Russia and by rail through Kazakhstan.

Russian rail deliveries to the European Union in 2020 included: raw timber and longitudinally sawn timber — 9.73 million tons, coal, and lignite — 56.54 million tons, crude oil including gas condensate — 117.73

million tons, oil products — 82.50 million tons,¹⁹ ferrous metallurgy and iron and steel products — 9.60 million tons. Belarus' exports to the EU, Canada, and the USA in 2020 were: raw timber, longitudinally sawn timber, fuelwood — 5.66 million tonnes, crude oil, and oil products — 3.25 million tonnes. The Belarusian steel plant JSC "BMZ" shipped 0.925 million tonnes of products to the EU in 2020 which is — 51.40% of total exports.²⁰ The reorientation of Belarus' export shipments to the east with the help of the Russian transport infrastructure is now inevitable.

The main consumers of coal (China, India, Korea, Taiwan, Japan) have not imposed restrictions on its purchase — in 2020, total imports amounted to 59.47 million tonnes. According to the Eurasian Economic Commission, exports are expected to fall

¹⁹ URL: <https://eurasiancommission.org>

²⁰ JSC BMZ Sustainable Development Report. URL: https://belsteel.com/doc/social_otchet/sotsialnyiy_otchet_2020.pdf

¹⁸ Transneft. URL: <https://vostok.transneft.ru/about/map/>

Table 3

Forecast structural changes in the coal's export industry

| No. | Redirected volumes to Asian trading partners. million tonnes (X_1) | | Exports: South Korea. Taiwan. Japan. million tonnes (X_3) | | Additional traffic on the BAM and Trans-Siberian railway. million tonnes (X) |
|-----|---------------------------------------------------------------------------|--------|------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------|
| | % | Weight | % | Weight | Weight |
| 2 | 100 (2020) | 56.54 | 100 | 59.47 | 56.54 |
| | | | 60 | 35.68 | 32.75 |
| | | | 40 | 23.79 | 20.86 |
| 3 | 60 | 33.92 | 100 | 59.47 | 33.92 |
| | | | 60 | 35.68 | 10.14 |
| | | | 40 | 23.79 | -1.76 |
| 4 | 40 | 22.62 | 100 | 59.47 | 22.62 |
| | | | 60 | 35.68 | -1.17 |
| | | | 40 | 23.79 | -13.07 |

Source: calculated by the authors based on URL: http://www.eurasiancommission.org/ru/act/integr_i_makroec/dep_stat/tradestat/tables/Pages/default.aspx

by 56.54 million tonnes in the event of a consolidated practical implementation of the EU countries' ban on Russian coal imports. If cargo deliveries (previously sent to European states) to China, India, Vietnam, Indonesia are coordinated and further exports to Korea, Taiwan and Japan continue, the total volume of cargo transported by BAM (Baikal-Amur Mainline) and the Trans-Siberian Railway will increase.

Judging from the mentioned above, it is necessary to estimate the increase in freight traffic by rail (million tons) in the direction of the Far East regions in 2023–2024. To calculate the projected increase in freight traffic, we will use the formula

$$X = X_1 - (X_2 - X_3), \quad (1)$$

where X — is the additional increment (million tonnes) on the eastern railways;

X_1 — redirected exports (million tonnes) to the east, previously supplied to the EU by Russia and Belarus;

X_2 — exports in 2020 (million tonnes) to Asia, Oceania and North America, which have joined the sanctions against Russia and Belarus;

X_3 — projected exports in 2023–2024 (million tonnes) to Asia, Oceania, North America, countries that have joined the sanctions against Russia and Belarus;

$(X_2 - X_3)$ — projected decrease in the load on the Far East railways due to the reduction of imports of the commodity groups in question, by Asia, Oceania, North America, countries that have joined the sanctions against Russia and Belarus.

In *Tables 3–5* the additional transport-rail load is calculated with the assumption that X_1 and X_3 will amount to 100, 60 and 40% of the 2020 level.

The leading importing countries of timber products that do not participate in the sanctions policy against Russia are China, India, Egypt, South Africa (the share of China in the world import of roundwood is 45%, lumber — 25%). *Table 4* uses formula (1) to

Table 4

**Forecast structural changes in the export of the logging industry
of the Russian Federation and the Republic of Belarus**

| Redirected volumes to Asian trading partners (X_1) | | Exports: South Korea. Taiwan. Japan (X_3) | | Additional traffic through the BAM and Trans-Siberian railway (X) |
|--------------------------------------------------------|----------------|--------------------------------------------------|----------------|-----------------------------------------------------------------------|
| % | Million tonnes | % | Million tonnes | Million tonnes |
| 100 (2020) | 14.94 | 100 | 0.58 | 14.94 |
| | | 60 | 0.35 | 14.71 |
| | | 40 | 0.23 | 14.59 |
| 60 | 8.97 | 100 | 0.58 | 8.97 |
| | | 60 | 0.35 | 8.73 |
| | | 40 | 0.23 | 8.61 |
| 40 | 5.98 | 100 | 0.58 | 5.98 |
| | | 60 | 0.35 | 5.74 |
| | | 40 | 0.23 | 5.63 |

Source: calculated by the authors based on URL: http://www.eurasiancommission.org/ru/act/integr_i_makroec/dep_stat/tradestat/tables/Pages/default.aspx

calculate the predicted structural changes in logging industry exports in Russia and Belarus if exports are redirected to China, India, Egypt, South Africa, South Korea, Taiwan, which have not announced import restrictions on the logging industry, and Japan (which has restricted imports of only unprocessed timber).

Table 5 shows additional exports of ferrous metals by rail to friendly countries in the Far East: China (11.46% of the global total in USD), Vietnam (3.08%), Thailand, Mexico, India, Indonesia, and Malaysia (total share 11.67%). Taiwan, South Korea, and Japan did not join the ban on imports of Russian and Belarusian steel products.

The impact of the economic sanctions imposed on Russia in 2022 on the volume of freight transported via BAM and the Trans-Siberian Railway has been estimated, taking into account the logistical capabilities of the eastern transport routes, in the programme “Modernisation of the Baikal-Amur and Trans-Siberian Railways’ Railway Infrastructure

and the Development of Traffic and Carrying Capacity (second stage)”.²¹ The project document stipulates a target of ensuring the carrying capacity of this railway route: 158 million tonnes in 2022, 173 million tonnes in 2023 and 180 million tonnes in 2024.²² In 2020, the carrying capacity of the BAM and Trans-Siberian Railways reached 144 million tonnes, with 110.40 million tonnes transported to Far East ports; coal exports totalled 100.90 million tonnes (China, India, Vietnam — 53.80 million tonnes; Australia, Korea Republic, USA, Japan — 59.72 million tonnes).²³

Due to the fact that the main suppliers of timber and coal are the Siberian Federal District and Far Eastern Federal District, (closer geographically to China and the Far East ports) which produce 95.66% of total

²¹ Decree of the Government of the Russian Federation of 28.04.2021 No. 1100-d.

²² URL: <http://government.ru/docs/42120/>

²³ Russian Railroads. URL: <https://company.rzd.ru/ru/9397/page/104069?id=260190>



Table 5

**Forecast structural changes in the export of ferrous metallurgy goods
of the Russian Federation and the Republic of Belarus**

| Redirected Russian and Belarusian volumes previously supplied to the EU (X_1) | | Exports: South Korea. Taiwan. Japan (X_2) | | Additional traffic on the BAM and Trans-Siberian railway (X) |
|--------------------------------------------------------------------------------------|----------------|--------------------------------------------------|----------------|---------------------------------------------------------------------|
| % | Million tonnes | % | Million tonnes | Million tonnes |
| 100 | 9.99 | 100 | 6.64 | 9.99 |
| | | 60 | 3.98 | 7.33 |
| | | 40 | 2.66 | 6.00 |
| 60 | 8.97 | 100 | 6.64 | 8.97 |
| | | 60 | 3.98 | 6.31 |
| | | 40 | 2.66 | 4.98 |
| 40 | 5.98 | 100 | 6.64 | 5.98 |
| | | 60 | 3.98 | 3.32 |
| | | 40 | 2.66 | 1.99 |

Source: calculated by the authors based on URL: http://www.eurasiancommission.org/ru/act/integr_i_makroec/dep_stat/tradestat/tables/Pages/default.aspx, https://belsteel.com/doc/social_otchet/sotsialnyiy_otchet_2020.pdf

coal (hardwood and lignite) and 38.71%²⁴ of total unprocessed timber, “European volume” export to the Asia-Pacific region is expected to be redirected, keeping exports at 60% of 2020 levels (timber: unprocessed, longitudinally sawn timber, fuel wood, hard coal, and lignite) to South Korea, the Republic of Taiwan, Japan. Such an assumption can be made because of the “redirection” of at least 60% of “European volume exports” of steel products to the Asia-Pacific region and keeping imports by South Korea, the US, the Republic of Taiwan, and Japan at 60% of 2020 levels.

Under the described possible forecast scenario of a change in the direction of Russian and Belarusian exports, the task arises of transporting an additional 53.77 million tonnes of freight by the BAM and Trans-Siberian Mainlines (an additional 34% of the planned throughput capacity in 2022). In order to significantly increase the capacity

of the railways within a limited time period of 2–3 years, it is necessary to accelerate the implementation of the declared projects with an increase in funding sources and accelerate the mutual logistical integration within the EAEU.

CONCLUSIONS

The growth of the national economy and foreign trade activities of the Russian Federation depends on the state of the transport and logistics complex. The importance of rail transport, which is the main carrier of the commodity groups in question (products of the metals, timber, oil, and coal industries), is increasing in the new economic environment. Analysis of exports of these commodity groups in 2020 and the sanctions imposed by Western countries on Russia and Belarus helped justify the need to modernise the industry, primarily the trunk lines in the SFD (Siberian Federal District) and FEFD (Far Eastern Federal District) as districts bordering

²⁴ Federal State Statistics Service, rosstat.gov.ru

the Asia-Pacific region. The proposed calculation of the projected increase in freight traffic of the logging, metallurgical and coal industries in 2023–2024 with changes in the

geographical and freight load on the transport network can serve as the basis for revising certain articles of the Transport Strategy of the Russian Federation until 2030.

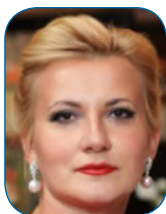
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