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Spatial development of Russia and international transport corridors

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Abstract. The article analyses the current system of transportation, which is mainly focused on raw material exports. The structure of Russian railways transportation and the volume of raw material supplies to China have been discussed. It is noted that the coming decades will bring a reduction in hydrocarbon power generation and a transition to a green economy, which will inevitably reduce global demand for Russian hydrocarbons. Plans for the development of Russian transport systems and their place in international transport corridors, risks and limitations of major transport flows through the Suez Canal and the Northern Sea Route have been presented. We propose to consider opportunities to optimise freight traffic and reduce the cost of new transport construction, primarily by reducing empty runs and reducing international transport competition.

1. Introduction

The President of the Russian Federation has identified the development of the national economy in its eastern regions as a development priority for the 21st century. However, in today's complicated geopolitical situation, the growth of various sanctions by our opponents, and at the same time the openness of the world economy, the efficiency of the Russian economy is increasingly determined by its international trade relations and, above all, by its connection to trans-continental transport corridors. It should be noted that developments related to green energy, global climate change, the new industrial revolution and creating low-carbon economy are taking place all over the world.

In recent years, the Russian Government has been actively discussing the "United Eurasia" project on the integrated development of the Russian territory through the creation of two transport spatial and logistical corridors between Europe and Asia with the support of a high-speed railway complex and the Northern Sea Route (NSR) [1, p 463]. The goal of the project is to link the economic interests of 23 Russian regions, create several million jobs, and ensure GDP growth of up to 4-5%. Its cost is estimated at 18 trillion roubles, with a payback period of 8 years.

The implementation of such ambitious economic projects requires a systematic analysis of the pros and cons, assessing the real situation in the global, federal and regional transport services market.

2. Results and Discussion

According to most analysts, existing transport networks are overloaded and cannot cope with the needs of commodity exports. This raises questions. How and to what extent are the railways used? What do they transport and who benefits from it? Can the efficiency of these and other transports be improved?



In terms of transport volumes, Russian Railways has in recent years taken the bulk of the traffic in coal (372 million tonnes), oil and petroleum products (232 million tonnes), iron and manganese ore (120 million tonnes).

According to most experts, hydrocarbon consumption will change the energy market in the near future. The Russian Ministry of Energy believes that in 10-15 years the world will pass the peak of oil consumption, followed by an inevitable drop due to the growth of electric vehicle production [2]. According to the International Energy Agency, the transition to green energy has already reduced global coal consumption by 7% relative to 2019, while demand for renewables has increased by 0.9%.

Overall, coal's share of global energy consumption has fallen to 27%, its lowest level in 16 years [3]. Over the past five years, steam coal prices have ranged from \$42 to \$95 per tonne, which is the equivalent to the cost of production and representing a zero-profit margin for Russian coal companies (and that's even without transportation costs, which almost double export costs and can hardly exist without budget subsidies).

At the same time, Russia is implementing plans to expand the capacity of its main transport arteries, the Trans-Siberian Railway (Transsib) and the Baikal-Amur Mainline (BAM), to 180 million tonnes. In 2020, 37 million tonnes of coal were supplied to China, almost a million tonnes more than a year earlier. India plans to increase its purchases by 6-7%. However, the situation in the global coal market is under strong pressure of green energy. Thus, in China, the solution of environmental problems is aimed at limiting carbon emissions, with the peak of carbon emissions planned for 2030, and the achieving of carbon neutrality is planned for 2060. [4, p 37]. Over the past 2 years, gas consumption in China has increased by 33% and in 2024 will amount to 40% of global consumption.

China's coal-fired power generation has been declining in absolute numbers for the second year in a row; while solar-wind power generation continues to grow exponentially, with plans to reduce coal consumption in power generation down to 10% in the coming years. In addition, it is China that is leading the growth in sales of electric vehicles, for which there is the largest raw material base of necessary metals, and a government policy of switching all public transport to electricity. As a result, forecasts of Russian coal, oil and gas consumption (in this sequence) become extremely pessimistic for the next 10 years [5].

In China, hydropower generation is another competitor to coal-fired one. Several important projects have been implemented here in recent years, including the most powerful hydroelectric power plants (HPPs) on the planet: the Three Gorges Dam (22.5 GW), and the Jinping-1 Dam with the highest arch dam (305 m). China is currently building large-scale projects, such as Baihetan and Shuangjiangkou HPPs. In 2020, the Chinese authorities have proposed a plan to build an HPP in Tibet on the Yarlung Tsangpo River (Brahmaputra) with a capacity of 60 GW, which is almost three times as powerful as the existing Yangtze HPP. Here, the Brahmaputra River cuts through the eastern edge of the Tibetan Plateau and creates ideal conditions for dam construction: minimal flooding of the river valley and maximum head of the future dam. China could thus cover all of South China's energy needs. However, these plans face serious resistance from its southern neighbours, and first of all from India, which is located in the immediate vicinity of the planned dams and with which there are other conflicting border issues.

According to Analytical Credit Rating Agency' (ACRA) estimates, coal remains the most important energy source in APR countries (up to 47%), and declines sharply in EU countries (up to 13%). Thus, coal generation industry in Asian countries will remain the main consumer of Russian coal in the coming years. Therefore, the Russian government' (best case scenario) plans to increase coal production to 668 million tonnes by 2035. At the same time, Russia, with some delay, begins to implement the "carbon polygons" project with the aim of reaching a zero-carbon balance by 2050. This objective should primarily be achieved by gasification of the Far East, where two-thirds of thermal power plants still run on coal.

In today's energy market, there is a worldwide trend towards a zero-carbon balance. With the return of the US to the Paris climate agreement, energy producers have sought to ban coal-fired generation. The US is taking an active stance on this issue, seeking by all means to displace coal consumption through the sale of liquefied natural gas (LNG) [6].

2.1. On Russia's transport corridors

These processes affect Russia, which occupies a huge transit space between the industrial centres of Western Europe and the APR countries. It is necessary to assess the efficiency of raw material exports of Asian Russia, which is determined by transport costs, focusing not only on the existing world market conditions, but also on long-term development perspectives.

Geographically, the Baikal region is Russia's "Gateway to Asia". Most export cargoes to Mongolia, China, Japan and other East Asian countries pass through the area. Today, the Trans-Siberian Railway transports up to 120 million tonnes of diverse cargo annually; plans call for increasing freight turnover to 180 million tonnes, and laying a second (electrified) track on the eastern section of BAM.

At the same time, growth in coal and other commodity exports leads to an increase in empty wagon mileage, as containerized cargoes from APR countries are exported in the opposite direction from Far Eastern ports. Despite government calls and reports that the share of commodity exports in the Russian economy is declining, statistics show the opposite (Table 1).

Table 1. Share of commodity exports in total Russian mineral production, %.

Product	1993	2000	2005	2011	2015	2017
Oil	22.6	44.7	53.8	47.7	45.9	46.3
Gas	15.5	33.2	32.3	27.9	29.3	30.4
Coal	6.5	17.1	26.8	33.1	41.1	44.1
Iron ore	13.2	21.8	18.9	26.9	21.0	22.1

In recent years, foreign trade activities have been intensified through increased exports of commodities. The main export cargoes are mainly shipped by sea (over 90% are oil and its products; over 75% are coal, ore and ferrous metals; over 50% are mineral fertilisers and LNG) (Table 2).

Table 2. Transportation of the most important commodity exports of the Russian Federation by sea [7, p 6].

Main exports	2016		2018	
	Volume, mln tonnes	Share of exports by sea, %	Volume, mln tonnes	Share of exports by sea, %
Coal	166.1	82.0	199.5	80.9
Mineral fertilizers	31.5	51.4	34.0	52.3
Oil	254.8	89.5	260.2	98.1
Petroleum products	156.0	90.2	150.0	96.7
Natural gas	198.7	—	220.6	—
Ore and ferrous metals	36.9	76.4	37.3	81.5
Liquefied natural gas	24.2	56.2	36.7	63.2

All this volume of commodity exports goes through seaports, increasing railway workload and idle reverse mileage, thus creating "statistical" efficiencies in rail transport. According to Russian Railways, freight turnover in 2019 was 2,601.3 billion tariff tonne-km, and including empty wagon mileage – 3,301 billion tonne-km, accounting for almost a third of all traffic.

Plans for the development of Russian transport systems should be considered in connection with cargo flows in international transport corridors and, above all, connecting Europe with the Asia-Pacific region. Today, the main traffic flow in this direction goes through the Suez Canal, which provides more than 90% of the EU's needs for Asian goods.

As a rule, shipments are made by giant dry-cargo vessels – containers and tankers, which are much cheaper than overland transport due to the volume of cargo. Among the cons of shipping are the delivery time, the threat of pirate attacks and possible jams in the Suez Canal (such as the recent case, which shut down shipping for almost two weeks with huge losses).

The main cargo terminals for shipments through the Suez Canal are in China's eastern ports, Hong Kong, Singapore and the coastal cities of Southeast Asia. Some cargo can be transported through the Panama Canal, through Russian Far East ports and even around South Africa. In fact, containers from East Asian countries are the only import cargo for the Trans-Siberian Railway and BAM towards European countries. The bulk of this traffic comes from the wagon fleet after exports of coal, timber and other bulky cargoes.

At the same time, the growth in traffic along the NSR constitutes real competition for transit cargoes going through Far Eastern ports. It is logical to assume that maritime cargoes going to Europe by the NSR from East Asia, when transshipped in Russian ports, are not profitable due to additional customs and rail transit costs. Therefore, with the Arctic Ocean free of Arctic ice, the NSR could become a real competitor to transit via Suez, and most of all to transport via Russian railways.

These plans are to increase export shipments of coal from deposits in Kuzbass, Khakassia, Buryatia and South Yakutia, as well as transporting containers from East Asian countries. Today, the Russian railway transportation capacity to the east via Transsib is approaching its maximum value. Therefore, the government's plans should contribute to the development of the Asian Russian economy and meet the benchmarks laid out in the "Strategy for the Development of the Russian Far East".

However, the plans for the development of Russian railway transport and the related prospects for the development of the FEFD involve numerous risks that reduce their possible efficiency and have serious long-term implications for the Russian economy.

The Far East Development Strategy focuses on developing the existing transport network to meet today's economic challenges, separately from the realities of the current system of international transport corridors and their development. The comprehensive plan to modernise Russia's east transport infrastructure includes 685 billion roubles for the construction of 518 facilities in the West Siberian, East Siberian, Transbaikal and Far Eastern railway systems. In the Europe-Western China transport corridor from Moscow to Kazakhstan, 10 major facilities are to be constructed at a total cost of 705.1 billion roubles, and along the NSR – another 27 facilities at a cost of 268.7 billion roubles.

2.2. On the specifics of Russian freight transportation

Plans for the development of Russia's export-import transport system imply a further increase in the length of railways, their freight turnover, the volume of cargo transshipment in seaports and other indicators; without due regard to the situation on the global commodity and logistics market, and the efficiency of the entire transportation system.

At the end of 2019, cargo turnover at Russian seaports was 840.27 in million tonnes, which was distributed as follows (in million tonnes): the Azov-Black Sea basin – 258; the Baltic basin – 256; the Far East basin – 213, and Arctic basin – 104. Among standalone ports (in million tonnes), Novorossiysk handled 156.8 (5th place in Europe); Ust-Luga – 103.8; Vostochny – 73.5; Murmansk – 61.9.

Dry cargo transshipment totalled (in million tonnes) 376.08, including coal – 176; containers – 56.5; grain – 38.6; ferrous metals – 26.7; mineral fertilisers – 18.9; ore – 8.9; timber cargo – 5.1.

Liquid cargo totalled (in million tonnes) 464.24, including crude oil – 276.1; oil products – 149.9; and LNG – 32.8.

In the end, 654 million tonnes of freight were exported and 37.2 million tonnes imported; 67.2 million tonnes went in transit and a further 81.8 million tonnes was used for coastal purposes.

Container cargo turnover is as follows: Baltic – 2.6 million TEU; Far East – 1.8 million TEU; Azov-Black Sea basin – 779 thousand TEU; and Arctic – 159 thousand TEU.

Against this background, cargo turnover at Chinese ports was 13.95 billion TEU, and 35 million TEU passed through the Port of Shanghai.

Given the importance of increasing the volume of transit traffic, the Russian government has decided to subsidise container traffic by rail in the amount of 25 to 77 thousand roubles per container, which could increase its volume to 7,500 TEU.

To a certain extent all transport routes compete with each other in transporting transit cargo from Europe to East Asian countries. Strategic economic development of Asian Russia can come from the synergy of freight specialisation and efficiency gains.

The main freight traffic on Transsib – is export shipments of coal, timber, grain products, metal, fertilizers oil products and other bulky goods transported mainly in specialised wagons and platforms. Meanwhile, coal accounted for 44% of the railway monopoly's freight turnover in 2019, and export revenues from the sale of Russian coal accounted for about 4% of all exports. In volume units, this is 173 million tonnes of steam coal and 19 million tonnes of coke-coal [3]. For this purpose, up to 70 coal trains are reloaded daily at coal terminals in the Far East.

In the opinion of M Blinkin, Director of the Institute of Transport Economics and Transport Policy Studies at the Higher School of Economics, the development of Transsib and BAM is necessary for the coal mining industry. BAM provides coal miners with jobs. And indeed, the freight load on Transsib has already reached a record that was unprecedented even in the USSR, when the interval between trains is only five minutes and has almost tripled in the last 15 years [8].

In light of this, it is necessary to optimise existing transport flows, looking at the prospects and challenges in the context of economic development in Russia's eastern territories. First of all, it is necessary to assess the efficiency of the coal sector of the economy and its contribution to the export of Russian raw materials. According to preliminary data, the contribution to the Russian budget from coal sales does not exceed 4%. The main costs of coal transportation come from budget subsidies. At the same time, the main costs of expanding transport capacity for coal exports also come at the expense of the budget.

Russian export projects still rely on stable demand for coal products, with little regard for the prospects of the global world economy. Therefore, towards the coal echelons, westbound container cargoes go to Europe; which are then filled with imports for East Asian countries with a high degree of transit efficiency. After unloading coal, timber, grain and metal in ports in the Far East, Russian wagons go back empty. Thus, the commodity economy presupposes a priori a visible high degree of railway loading with very low efficiency.

A striking example is that Russia is the world's number one exporter of grain and only the twentieth-largest producer of flour. Russia supplies oil to Belarus and imports back high-octane petrol. The timber even goes to Finland to get back products with a high degree of processing.

This export policy of increasing the volume of rail freight transit is largely based on the mentality of Russian officials, who, when exporting raw materials, have less concern for the establishment of processing facilities. Consequently, there is no responsibility to increase the financial performance of the industry, and the possibility of kickbacks on the foreign market increases considerably. These phenomena also reflect the instability of the personnel policy in the government: for example, three ministers have already been replaced in the short existence of the Ministry of the Far East and the Arctic.

2.3. The Northern Sea Route: in theory and in practice

The Northern Sea Route (NSR) represents a new shorter transit route between Europe and the Asia-Pacific region. Its development is favoured by melting Arctic ice, the development of the shelf deposits in the Russian Arctic, and the risks of transporting cargo through the Suez Canal. The Russian government plans to spend up to 270 billion roubles to build infrastructure for the by 2030 for the construction of 27 facilities for offshore vessels, for the expansion of LNG production from the Greater Yamal Peninsula. In 2018, the total volume of cargo traffic on the NSR was 17 million tonnes, and in 2019 – already 31.5 million tonnes. There are other ambitious projects to increase the volume of freight in 2014 to 80 million tons, and by 2035 – to 180 million tons. At the same time, the main share is coal, LNG, oil and gas condensate, as well as field development and infrastructure equipment [9].

As the Arctic ice melts, transit ships are moving further away from the Russian economic zone, thus depriving Russia of the benefits of passage by foreign ships. Russia cannot introduce tariffs for passage through the NSR, because according to the UN Convention on the Law of the Sea, “a foreign vessel crossing the territorial sea can only be charged a fee for specific services rendered to that vessel” [10]. Under this wording may fall, for example, the costs of the new icebreaker fleet of the “Leader” class, each of which costs 127 billion roubles. At the same time, the stagnation of traffic on the NSR increases the need for transit traffic from Asia to Europe using Transsib and BAM.

2.4. The Steppe Route, or Mongolian transport corridor

Against the backdrop of the variety of international transport corridors between the APR and Europe, it is particularly important for Russia to cooperate with Mongolia in the context of establishing trade routes to China. To assess the current economic situation, there is some interest in the recent history of the Great Tea Route trade relationship linking Russia, Mongolia and China. In the current geopolitical situation and Western sanctions against Russia, Mongolia is so far the only state that has traditionally maintained friendly relations with Russia on its eastern borders. In addition, Mongolia is the shortest rail route from Moscow to Beijing at 8,016 km. By comparison, the same distance via Kazakhstan (Dostyk Station) is 8,555 km, and via Zabaikalsk – 8,766 km.

For Russia, in addition to its geopolitical interests, the routes to China represent an important transit route for trade with its northern and central districts, which has no direct access to the sea or to its western borders. China's main trade volumes with Europe have in recent years been increasingly differentiated along two main routes. The eastern seaboard provinces are most oriented towards maritime traffic through the Suez Canal, which carries more than 90% of Chinese goods, and to the west through Kazakhstan. In both cases, the transport flows are outside Russian interests.

For Russia, the main factor in the socio-economic development of Siberia and the Far East is the priority development of the regions adjacent to Transsib. From this perspective, transit traffic from Mongolia is of strategic importance to Russia.

The Ulan-Ude – Naushki – Ulaanbaatar – Erlian railway has a single gauge with diesel traction, which significantly constrains its transit capacity. Nevertheless, the number of container trains travelling from China via Mongolia has increased significantly in recent years. While in 2015 only 73 trains passed through, in 2019 the number increased to 1,454, which is already approaching the limit of the Ulaanbaatar railway's technical capacity. In terms of modernising the Mongolian railway, there is the important issue of standardising its gauge, which was built according to Soviet standards (1,520 mm), from the Russian borders to Chinese territory. Meanwhile, there are proposals from southern neighbours to build a new railway to Chinese standards (1,420mm), which would mean Mongolia's complete economic dependence on China, and consequently the loss of Russian influence.

The Mongolian transport corridor envisages the modernisation of the railway with the construction of the Yamal – Irkutsk Region – Baikal – Buryatia – Mongolia – China gas pipeline with a transit volume of up to 40 billion m³.

The construction of such a pipeline should become the basis for gasification of South Siberia and Trans-Baikal regions, as well as for solving environmental problems of the Baikal natural territory. Gasification of Mongolia's industrial centres and Ulaanbaatar is no less important. Besides, according to the Mongolian calculations, the transit of Russian gas to China (at a cost of \$2.5 per 1,000 m³ of gas per 100 km) could bring in approximately \$1 billion a year.

2.5. The West China Transport Corridor

China's economic development is largely determined by its advantageous geographical location with maritime access to the Pacific and Southeast Asian countries. Therefore, China's main trade with Europe is through the Suez Canal. For Western China, it is becoming increasingly advantageous to use Kazakhstan's transport corridors with direct access to European markets, bypassing Transsib. Chinese railway statistics show that of the 65 operational container routes between China and Europe, 35 go through Sino-Kazakh customs points and only 17 through the Russian border.

The Russian southern neighbours are promoting the idea of an international transport corridor “Europe-Asia-Caucasus” (TRACECA project), which also bypasses Russian territory and runs from China to Europe and back. Cargoes along this corridor go through the Black Sea ports of Ukraine and Bulgaria with transshipment in the ports of Batumi and Poti and further through Georgia and Azerbaijan, the Caspian Sea and Kazakhstan, in the direction of China. The participating countries have already spent more than \$110 billion on its implementation. With further development the TRACECA project aims to reach the ports of the Mediterranean Sea and the Indian Ocean. Thus, there is real competition for the transit of Chinese cargo through Russian territory, bypassing its southern borders.

Further along Kazakhstan, the Silk Road routes are divided into at least three directions. The first route through northern Kazakhstan goes on through Russian territory and through Belarus to Europe. Another route, with a crossing of the Caspian Sea, heads to Azerbaijan. And the third would go through Turkmenistan to Iran, with direct access to Indian Ocean ports. The new route will shorten the distance between the Persian Gulf, Central Asia and Europe by 600 km.

In addition to the China – Kyrgyzstan – Uzbekistan road, China starts the construction of a new China – Kyrgyzstan – Tajikistan – Afghanistan – Iran railway, which goes to South Asia, bypassing the territory of Kazakhstan. This transport scheme greatly strengthens the geopolitical and economic influence of China, and makes possible interethnic conflicts in Central Asia, including allowing Tashkent to reach the Fergana Valley bypassing the territory of Tajikistan [12, p 79].

China has already started building its own icebreakers for rapid delivery of goods along the NSR. Increased freedom of navigation in northern latitudes will inevitably lead to a shift of sea routes to the North Pole. Nevertheless Russia, China and other countries of the “Arctic Club” keep building the icebreaker fleet at a cost of one “Leader”-class icebreaker of 127 billion roubles. In addition, the increase in traffic along the NSR, or as the Chinese call it, the Ice Silk Road, is dramatically reducing the prospects for freight traffic along Transsib. With direct sea routes from East Asia and the NSR, there is no need to enter Russian Pacific ports. At the same time the volume of cargoes that used to come from East Asian countries transiting through Transsib will be considerably reduced.

Thus, a new factor of isolation of Russia’s eastern territories is added to Western sanctions. Given these trends, one can assume the risk for the only latitudinal railway, linking the European and Asian parts of Russia, to turn from a transit route into a dead-end domestic mainline, which could once again turn the Far East into Russia’s periphery.

Under the One Belt, One Road project, China’s foreign economic relations are increasingly differentiated in two opposite directions, bypassing Russia. For eastern China, the main cargoes to Europe go through its seaports; while for western China, rail transport via the Xinjiang Uyghur Autonomous Region and on to Kazakhstan. Such vectors of Chinese transit trade significantly narrow the opportunities for Russian transit traffic using Transsib, for which only the transportation of products from the North and Central Chinese areas remains.

This negative trend at Russian borders can be explained by at least two circumstances. First, customs procedures at the Dostyk border crossing are significantly less time-consuming; and second – the speed of cargo movement on Kazakhstan’s railways is increasing every year. Meanwhile, congestion on Russian railways has traditionally been exacerbated by bureaucracy in cargo clearance and the resulting corruption, rudeness of officials, that is particularly typical of Russian customs officers for passenger crossings of the Russian-Mongolian border.

In addition, there is an absolute transport asymmetry between Russian exports and imports, with containers from our major trading partners’ goods going mainly on open platforms. And the boxcars and special wagons in which raw materials were exported return mostly empty. At the same time, official government documents claim that less than 5% of the country’s transit potential is used in transport, and that transit through Russia accounts for less than 1% of trade between Europe and Asia.

3. Conclusion

1. The development of Siberia and the Far East depends crucially on the economic development of transport routes linking Europe with Asia-Pacific countries, primarily the Trans-Siberian Railway and the Baikal-Amur Mainline. Given Russia's increasing global isolation from international transport corridors, the Baikal region appears to be a strategic hub for transport, opening up a "Gateway to Asia";
2. The draft Spatial Development Strategy of the Russian Federation, prepared by the Russian Ministry of Economic Development, states that less than 5% of the country's transit potential is used in freight transport, and that transit through Russia accounts for less than 1% of trade between Europe and Asia. To match this, the transit capacity of Transsib and BAM are being expanded, primarily for exports of coal, timber, metal, grain, fertilisers and other low conversion commodities. At the same time, the growth of coal export shipments to Asia-Pacific countries is taking place against the background of the global trend to reduce greenhouse gas emissions and the inevitable step-by-step reduction in steam coal consumption;
3. Hydrocarbons are exported through Far Eastern ports mainly from the regions of the Siberian Federal District and Yakutia, where transportation costs are close to its self-cost. This inevitably increases the volume of empty shipments and other transportation costs, which are covered by budget subsidies. At the same time, the profits of coal companies do not affect the living standards of the population of Asian Russia;
4. There is a real risk that with China's increased trade with Europe through eastern seaports and western Kazakhstan, there will be a reduction in traffic via Transsib and BAM;
5. With the development of the NSR, another part of the transit cargo from China to Europe, could bypass Far East ports and Russian mainlines, due to unprofitable double transshipment and lengthy Russian customs procedures;
6. A significant volume of transit cargo traffic to Western China will bypass Transsib and will go through Kazakhstan when the Moscow – Kazan – Yekaterinburg – Astana – Dostyk – Urumqi high-speed road is put into operation, which is of interest to China;
7. Another competitor to the Transsib is the increasing traffic under the TRACECA programme through Kazakhstan, South Transcaucasia and Turkey, which completely excludes the use of the transit capacity of Russian territory;
8. As a consequence of the inevitable decline in Russian coal and other raw material exports to the Asia-Pacific region, the volume of transit traffic through Transsib will also consistently decline;
9. In these circumstances, the efficiency of the Russian economy can only be improved by maximising the processing of raw materials close to their sources and by exporting products with increased conversion, which will reduce the volume of transport costs, primarily due to the reduction of empty shipments;
10. The critical issue of transport efficiency is to focus not on rail and road infrastructure growth, but on reducing raw material exports and empty runs while increasing exports of coal and other bulky commodities in reverse container transit of goods from Europe to APR countries.
11. With the inevitable decline in export cargo traffic through Far Eastern ports, it is becoming increasingly advantageous for Siberian regions to use the Mongolian transport corridor (the shortest distance between Moscow and Beijing). Therefore, it is fundamentally important for Russia to participate in the modernisation of the Ulaanbaatar railway to Russian standards, which will further promote the development of a strategic partnership with Mongolia;
12. The expansion of Transsib and BAM capacities, the construction and electrification of the second gauge – are only in the interests of coal mining companies and a short-term increase in steam coal exports. At the same time, its value on the world market is almost equivalent to the cost of mining and transporting it to sea terminals, accounting for budget subsidies. As a result, huge budgetary resources are allocated to the development of the coal industry, while the treasury is replenished by only 4%, with little impact on the living standards of the population of Asian Russia;

13. There is no need to build a new icebreaker fleet, including the implementation of the costly “Leader” project, given the lack of effective technologies for hydrocarbon production in the Arctic and on the shelf in the context of Western sanctions, reduced export volumes of Yamal LNG, and melting Arctic sea ice in the Arctic Ocean. From this point of view, the NSR has no prospects for entering the system of international transport corridors, does not represent any significant competition for shipments through the Suez Canal, and can only be used for coastal shipping along Russia’s Arctic coast. Moreover, its development could create real competition for transport via Transsib and BAM;

14. Analysis of international transport from Asia to Europe using the transit position of Russian territory shows that there are contradictions in the development plans of the Russian transport system in terms of sectoral and regional approach, which do not take into account the state interests in the globalised world economy. The end result of such a policy could be Russia’s increasing isolation from international transport corridors, which, combined with political isolation, would inevitably affect its economic development plans and its credibility worldwide;

15. Plans to expand the Northern Sea Route, the construction of a high-speed highway to Western China via Kazakhstan, plans to create the North-South transport corridor via Iran to India, and the implementation of the TRACECA programme create real competition for transportation via Transsib and BAM, thereby reducing the pace of socio-economic development in Siberia and the Far East;

16. Effective development of the Russian transport system, and entry into global economic corridors, is possible with the creation of a state coordination body that aligns the needs of the extractive and transport sectors of the economy in the interests of the state;

17. Existing transport practices are implemented in the interests of individual regions, private companies and individual regions to the detriment of state interests.

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