Eurasian Development Bank

The EurAsEC Transport Corridors

Sector Report

March 2009

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Contents

Tables

Figures

Boxes

Executive Summary

1. The geographic and geo-economic location of EurAsEC countries gives them **significant strategic potential for freight transit.** Analysts estimate that the region's total potential transit capacity is about 220 million tonnes at present. This figure is expected to increase to 400 million tonnes by 2020, 290 million tonnes of which will originate in EurAsEC countries for transport on to third countries. EurAsEC has motorway and railway corridors running east-west and north-south, and a number of new corridors are being constructed. However, to handle such huge volumes of cargo, the region's existing transport infrastructure must be modernised.

2. **EurAsEC states are not making the most of their transport potential.** At the moment, these countries are handling only half their potential cargo flow. The main limiting factor is EurAsEC's current inability to become the key cargo transit route between the mainland's two macroregions – the European Union (EU) and the Asian-Pacific Region (APR), principally China. Trade between these two regions will reach $1 trillion within the next few years. Only 1% of the cargo transported between the EU and the APR utilises the EurAsEC international transport corridors (ITC). Meanwhile, sea freight companies are earning billions of dollars. According to available data, of the 17.7 million TEU transported from Europe to Asia in 2008, only 74,551 TEU were transshipped via Dostyk (0.42%), including 0.35% from Europe to Asia.

3. **Sea vs land: 2:1.** Transportation of transit cargo by sea (transoceanic service) has some strong advantages, such as low delivery cost, established relationships with customers and high standards of service. This leads us to conclude that sea transit will prevail in the near future. **Land transit routes offer only one competitive advantage – speed of delivery,** which is two to three times faster compared with the sea routes linking East Asia with Europe. This advantage must be exploited. A considerable proportion of "time-sensitive" transit (some 16 million tonnes annually, according to the most conservative estimate) can be redirected to ITCs operated by EurAsEC.

4. There are a number of physical and non-physical barriers to the realisation of the EurAsEC's transit potential. Physical barriers include the poor state of motorways and railways and their related infrastructure, i.e. obsolete rolling-stock, which prevents any increase in transportation speeds and volumes; existing roads do not meet international standards; border crossing points and logistics centres have a low throughput capacity. Non-physical barriers include cumbersome permit systems, unreasonable delays in crossing borders, various charges and additional taxes imposed by regulatory and local authorities, scheduled and spot-check inspections of cargo weight, etc. **The non-physical barriers are the most significant obstacles to the development of cargo transit in the region** and cause serious delays in cargo delivery. Time lost does not only result in loss of money and customer trust, but also the loss of the main (in fact the only) competitive advantage land transit has over sea transit.

5. There are two complementary ways to reduce physical and non-physical barriers:

a) **integrating national transport systems,** which we consider to be key to overcoming barriers by introducing well-coordinated transport policies and by harmonising and fine-tuning national legislation, etc.; and

b) **well-coordinated investment policy for priority national projects** is required in order to realise transit potential and foster mutual trade between EurAsEC member countries, including projects to construct priority railway and motorway routes, develop logistical and border infrastructure, and renew existing rolling-stock.

Together, the above factors should enable the physical and non-physical barriers to be minimised and encourage joint investment in the renewal of transport infrastructure and construction of service and logistics centres. Ultimately, these will have a positive impact upon economic integration.

6. Projects to construct or modernise transport infrastructure are exceptionally capital-intensive. Therefore, **the region's countries must identify the priorities for their concerted action** in order to develop transit flows and support integration. In order to maximise transit potential, the most important ITCs are the **northern corridor of the Trans-Asian railway (which connects to the Trans-Siberian railway) and the 10,000-km Western Europe – West China motorway corridor.** The transport capacity of the Trans-Asian railway is not fully utilised, whilst the TRACECA (Europe-Caucasus-Asia) international transport corridor, with its numerous transshipments, ferry ports (Turkmenbashi and Baku on the Caspian and Poti, Batumi, Varna and Odessa on the Black

Sea) and high capital intensity is unlikely to be competitive in the Europe-Asia direction. According to preliminary estimates, all other conditions being equal, the freight tariffs charged by Russian railways (RZD) for grain, cotton and containers are 1.7 times lower than those of TRACECA, and for oil and non-ferrous metals this ratio is 1.2. In addition, transportation via Russia is 1.8 times faster.

7. Given their geographic position and national economic interests, Russia, Kazakhstan and their neighbours have a direct interest in the Eurasian integration process that extends beyond the boundaries of the post-Soviet space and involves the region's most important countries. Projects implemented in certain economic sectors provide a reliable basis for regional economic integration. Transportation is undoubtedly among these priority sectors.

Abbreviations

ADB – the Asian Development Bank
APR – the Asian-Pacific Region
CA – Central Asia
CAREC – the Central Asia Regional Economic Co-operation
CIS – the Commonwealth of Independent States
CP – checkpoint
CTP – Council on Transport Policy
CU – Customs Union
EBRD – the European Bank of Reconstruction and Development
EDB – the Eurasian Development Bank
EU – the European Union
EurAsEC – the Eurasian Economic Community
GLONASS – the Global Navigation Satellite System
IDB – the Islamic Development Bank
IT – information technology
ITC – international transport corridor
KTZ – Kazakhstan Temir Zholy ("Kazakhstan railways")
RZD – Russian Railways (Rossiyskie Zheleznie Dorogi)
SEA – Southeast Asia
SEZ – special economic zone
TEU – twenty-foot equivalent unit
TRACECA – Transport Corridor Europe–Caucasus–Asia
TSR – the Trans-Siberian Railway
UN – the United Nations
UNDP – the United Nations Development Programme
UNECE – the Economic Commission for Europe
UNESCAP – the Economic and Social Commission for Asia and the Pacific
UTS – Unified Transport System
WB – the World Bank
XUAR – the Xinjiang Uigur Autonomous Region

1. Scope of this report

Transport is at the heart of an efficiently functioning economy, since it provides an infrastructural basis for sustainable development. In modern times, when individual economies are joining together to form a global production network, access to efficient transportation and communications systems is an essential precondition for integrating into this network (*Lakshmanan*, 2001).

For EurAsEC members – Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan – whose mutual trade turnover and, accordingly, cargo transportation have been rapidly increasing recently (by 2020, their cargo transportation may total 490 million tonnes, a four-fold increase compared with 2000), the development of transport infrastructure is vital in sustaining the rapid expansion of mutual trade and economic integration.

Today, analysts estimate the transit potential of EurAsEC at around 220 million tonnes. By 2020, this may increase to 400 million tonnes, with about 290 million tonnes of cargo potentially being transported from EurAsEC to third countries. In order to be able to handle these enormous volumes of cargo, the region's existing transport infrastructure needs to be modernised.

However, EurAsEC does not fully utilise its transit capacity, handling only half of its potential cargo flow. The main reason for this is its failure to become a key transit route between the two global commodity-producing centres, the EU and the APR. Trade turnover between these regions will reach $1 trillion in the next few years. Only 1% of the cargo generated is being transported via the ITCs of EurAsEC. In this paper, we will attempt to identify measures that need to be taken to make the region's ITCs a realistic source of transit revenue for EurAsEC countries.

The purpose of this review is to provide an insight into the diverse problems associated with transit via EurAsEC. Firstly we examine competition in the transit transportation industry and the structure of competitive advantage in sea and land freight transit. Secondly, we identify specific cargoes which can be transported via the ITCs of EurAsEC. Thirdly, we analyse physical and non-physical barriers to the realisation of the region's transit potential, and propose measures to eliminate these barriers. We also discuss various potential targets for investment and the progress of transport integration in EurAsEC. Finally, we provide detailed information on existing and emerging ITCs in EurAsEC countries, and highlight the most promising and efficient ITCs which are already helping the region to achieve its transit potential and further the integration of EurAsEC countries.

2. The transit and transport potential of EurAsEC

2.1. Review of cargo flows between EurAsEC member countries

The foreign trade turnover of EurAsEC has been increasing steadily in recent years. Between 2005 and 2008, total turnover from trade between EurAsEC countries almost doubled in monetary terms (see Table 1). This is largely attributable to the trends and structure of economic co-operation inherited from the Soviet era, the region's relatively rapid economic growth, the development of industries producing raw materials and semi-finished goods (so-called commodity cargoes), and expansion of internal and foreign trade.

Trade turnover by country pair	2005	2006	2007	2008
Russia–Belarus	15834.0	19944.0	26074.0	34188.9
Russia–Kazakhstan	9 749.0	12807.0	16576.0	19731.7
Russia–Kyrgyzstan	544.0	755.0	1 169.0	1802.9
Russia–Tajikistan	335.0	504.0	772.0	1002.8
Kazakhstan–Belarus	234.5	355.3	525.3	567.0
Kazakhstan–Kyrgyzstan	344.1	406.7	517.0	608.4
Kazakhstan–Tajikistan	167.6	185.1	198.9	295.4
Belarus–Kyrgyzstan	10.8	21.5	25.8	47.8
Belarus–Tajikistan	12.0	18.0	34.0	75.1
Kyrgyzstan–Tajikistan	24.9	26.7	30.4	43.2
Total commodity turnover	27 255.8	35 023.3	45 922	58362.5

Source: The CIS statistical committee

Table 1.
Trade turnover between EurAsEC member countries ($ million)

Source: state statistics agencies of EurAsEC member countries

In tandem with the increase in revenues generated by trade between EurAsEC countries, volumes of cargo transported within EurAsEC have also grown at a rapid pace. According to the EurAsEC Integration Committee, total cargoes will reach 490 million tonnes by 2020, i.e., four times the volume transported in 2000. Even allowing for the expected slowdown, cargo flows between EurAsEC countries will continue to grow by more than 15% annually (see Figure 1).

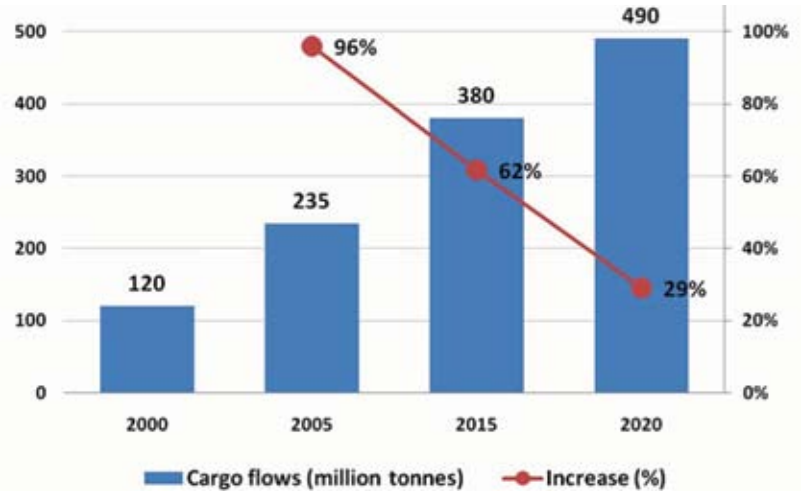


Figure 1.
Potential cargo flows between EurAsEC countries

Source: EurAsEC Integration Committee

Clearly, this rapid growth of cargo flows between EurAsEC member countries will soon necessitate an overhaul of the existing transport infrastructure, and capacity expansion, above all in railways, motorways and logistics centres.

2.2. Cargo transportation potential in the context of the global crisis

The UNECE's Inland Transport Committee defines an international transport corridor as part of a national or international transport system which maintains considerable international cargo and passenger transportation between certain geographic regions and includes the rolling-stock and immovable structures of all modes of transport working on the respective route, and all technological, organisational and legal conditions for such transportation. Using this definition, and in order to understand the urgency with which the EurAsEC must develop its ITCs, it is essential first to evaluate existing levels of cargo[1] transportation in the region and the potential for transit via these countries.

ITCs in this region are uniquely important because of the region's geographic and geo-economic location between two macroregions, the European Union (EU) and the Asian-Pacific Region (APR). Trade between the EU and the APR totalled $700 billion in 2007 and is set to reach $1 trillion by 2010.

Evidently, given the global financial and economic crisis, certain adjustments will have to be made to any estimates of future trade between Europe and Asia. The recession-stricken countries of Western Europe are experiencing a considerable contraction in domestic demand and, as a result, have reduced the volumes they import from Asia, especially of cheap commodities from China. The latter, being an export-orientated economy, responded with a package of anti-crisis measures aimed at stimulating domestic demand and reducing its reliance on exports. However, we believe that exports to richer, developed countries (primarily the US and Europe) will remain a priority for the developing Chinese and APR economies (the traditionally high level of savings in these countries will preclude any significant increase in domestic demand, and during the crisis their governments will focus on subsidising exports as a more immediate and proven policy).

In addition, drawing our conclusions from the fundamental scenario of cyclical crises, by the end of 2009/early 2010, the world will move into a period of economic growth once again, leading to an increase in commodity turnover between the world's main production and consumption centres. Therefore, despite a relatively small contraction in EU-APR trade in 2008-2009, the forecast level of $1 trillion can be achieved, albeit somewhat later – by 2013-2015, we estimate. Thus, in spite of the global crisis, the enormous transit potential of EurAsEC countries is undiminished, especially in the East-West direction.

[1] This report discusses only cargo transportation (leaving aside passenger transportation) based on its importance in realising the region's transit and transport potential.

2.3. Review of Eurasian cargo flows from Asia to Europe

When analysing the cost indicators of Eurasian cargo flows and the load on inland freight transit systems, the three major cargo centres that should be examined are China, South Korea and India. China and South Korea are Europe's main partners in the Far East. India is a source of cargo that could potentially be transported to Europe along North-South routes.

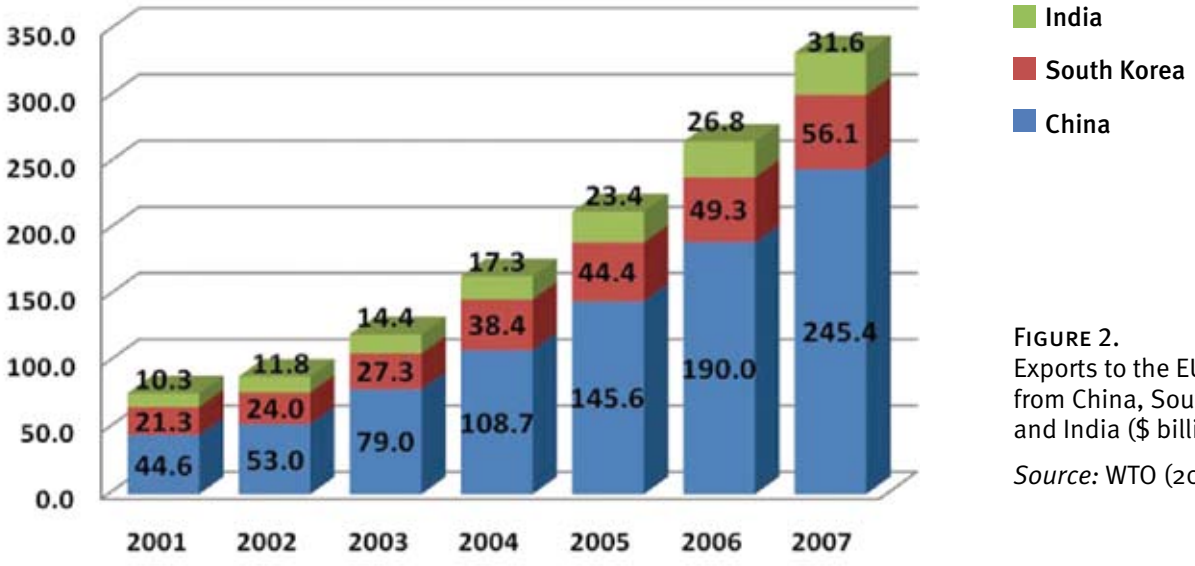


Figure 2.
Exports to the EU from China, South Korea and India ($ billion)

Source: WTO (2008)

In 2007, China was the world's second largest exporter ($1,217.8 billion) and third largest importer ($956 billion) in monetary terms (WTO 2008:39).

The table below shows China's trade with Europe and the CIS by main commodity group.

Commodity	Total trade		Europe		CIS	
	Export	Import	Export	Import	Export	Import
Agricultural produce	38.9	65.4	6.6	5.4	1.6	5.9
Fossil fuel and minerals	41.9	210.6	5.5	9.0	0.7	17.3
Finished goods	1134.8	677.5	251.8	104.9	45.7	4.7
Including:						
Metals	51.5	24.1	10.4	3.8	1.6	1.2
Chemicals	60.3	107.4	11.2	14.7	2.2	3.0
Office equipment	347.8	226.5	84.1	9.7	4.3	0.04
Transport equipment	59.1	41.7	13.6	18.1	3.5	0.1
Textiles	56.0	16.6	8.5	1.2	2.8	0.01
Clothing	115.2	2.0	25.8	0.4	6.9	0
TOTAL:	**1217.8**	**956.0**	**263.9**	**120.0**	**48.0**	**28.0**

Table 2.
China's trade with Europe and the CIS in 2007 ($ billion)

Source: WTO (2008)

China's main exports to Europe are finished goods – accounting for about 95% in monetary terms (see Figure 3). These include office equipment (31%), transport equipment (about 19%), textiles (nearly 10%), chemicals (over 4%) and other items (see Table 2). These commodities are suitable for containerised shipment.

China imports mainly finished goods from Europe. These account for 87% of total imports and fall into two main commodity groups: machinery and equipment – 57.2%; and power and electrical equipment – 34%. These are also containerised cargoes.

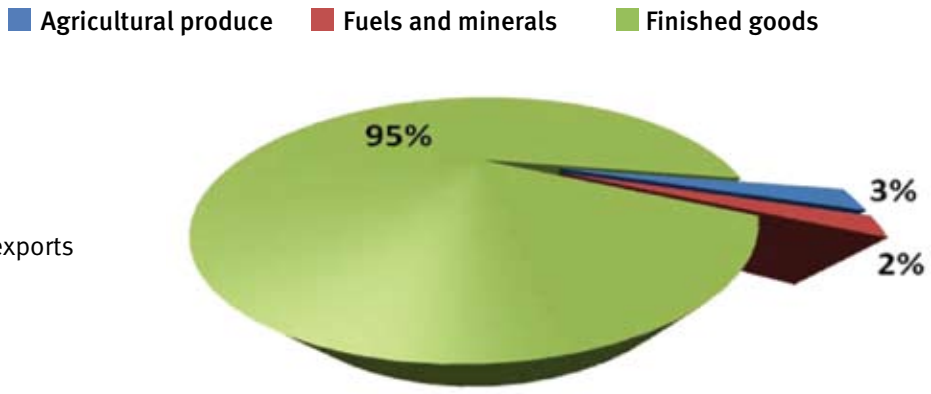


FIGURE 3.
Structure of Chinese exports to Europe, 2007

Source: WTO (2008)

The structure of China's trade with the CIS is somewhat different. China's main exports to the CIS are finished products. Textiles account for 28.5% of total exports, power industry equipment for more than 12%, household items for nearly 10%, office equipment for 9% and cars for 6%.

China's main imports from the CIS are fuel and energy products (over 61%), agricultural raw materials (16%), chemical fertilisers (nearly 11%) and metals (4%). These bulk cargoes have to be shipped in on flat-trailers rather than in containers.

South Korea has a strong export bias. Data on South Korea's foreign trade is summarised in Table 3.

Commodity	Total trade		Europe		CIS	
	Export	Import	Export	Import	Export	Import
Agricultural produce	6.32	22.04	0.36	1.85	0.35	0.76
Fossil fuel and minerals	33.82	126.58	1.39	2.30	0.09	5.46
Finished goods	330.41	206.09	59.60	35.46	10.87	1.72
Including:						
Metals	18.82	21.45	2.53	1.44	0.18	0.99
Chemicals	37.54	32.34	2.69	6.59	1.15	0.37
Office equipment	92.69	45.62	16.79	2.70	1.23	0.02
Transport equipment	78.99	13.68	21.15	4.42	6.46	0.05
Textiles	10.37	4.14	1.13	0.46	0.22	0.02
Cloths	1.91	4.32	0.29	0.48	0.02	0
TOTAL:	**371.48**	**356.84**	**61.57**	**40.70**	**11.31**	**8.01**

TABLE 3.
South Korea's commodity trade with Europe and the CIS in 2007 ($ billion)

Source: WTO (2008)

South Korea's exports and imports may seem modest compared to China's trade with Europe and the CIS; however, the structure of commodities traded must be taken into account.

As shown in the above table, finished goods dominate Korean exports to Europe, accounting for 97% of the total. The main commodity group, machinery and equipment, accounts for 73% of total exports in monetary terms. Breaking this group down further, cars are the main machinery export (over 34%), followed by spare parts and components for overseas assembly of certain car makes (about 15%). Another large commodity group is office equipment (24%). Power industry and electric equipment account for 7% of total exports. This makes it likely that practically all South Korean exports are containerised and shipped to Europe by sea. This is logical, since the country needs to ensure optimal use of the loading capacity of its sea ports. The transshipment statistics of the country's main sea port confirms this conclusion.

In addition, South Korea imports some finished goods. Mechanical engineering goods account for 51% of all imports, mainly comprising European equipment which Korean companies are as yet unable to manufacture, such as printing industry equipment, instrumentation, etc.

Chemicals account for about 16% of Korea's imports. Various goods make up the rest of the total, including fuel and raw materials for Korean industry.

Trade with CIS countries totals $19.3 billion, with Korean exports totalling $11.3 billion. The export structure is basically the same as for Europe: cars and spare parts account for 57.2%, but the share of office equipment is much smaller ($1.2 billion or 11%). Chemicals account for about 10%. Fuel and energy products dominate South Korea's imports from the CIS (68.3%). Another large imports group is metals and iron ore (12.5%); the remaining imports are insignificant.

Analysis of cargo flows between China and South Korea on the one hand and Europe and the CIS on the other has enabled us to identify the following specific features:

- these Far Eastern countries trade with Europe principally in finished goods which can be containerised. This suits both parties, since they each have the capacity to:
  a) employ multimodal technology, including door-to-door delivery;
  b) ship by sea, which enables them to simplify formalities, use uniform waybills, and easily track the movement of cargoes; and
  c) apply transparent tariffs which can be announced in advance and remain stable. This is discussed in more detail below.
- It is important not to overlook other Southeast Asian countries[2] that supply commodities to Europe. However, for technical reasons, **Eurasian land transport corridors can potentially be used only by China and South Korea.** Japan uses Russian ports in the Far East for trade with Russia, otherwise all Japanese exports to Europe are shipped by sea. In recent years, the transit of Japanese cargoes via Russia has been almost totally abandoned, for reasons which we discuss below.

India's foreign trade has expanded considerably over the last few years with an annual increase in exports of around 19% each year since 2000. In 2007, India earned $145 billion from the export of various commodities, including $34 billion from sales to Europe, and $2 billion from the CIS. Indian shippers may be persuaded to use India–Iran–Russia–Europe routes. Traditionally, shipments from India and Iran to Europe have been transited via Russia. Volumes carried via Belarus are insignificant.

Currently there is no Indian freight transit via the Caspian along the North-South ITC. All cargo flow is through the Suez Canal. The port of Mumbai is expanding rapidly. Indian, European and Asian shipping companies are successfully transporting cargo to Eurasia by sea using established systems. Notwithstanding the North-South ITC Agreement of September 2000, freight forwarders are showing little interest in the proposed new routes. In 2007 the Caspian Sea port of Olya, which

[2] Southeast Asian countries also include Brunei, East Timor, Vietnam, Indonesia, Cambodia, Laos, Malaysia, Myanmar, Singapore, Thailand, Taiwan and the Philippines.

is assigned a key role in servicing the North-South ITC's cargo flow, transshipped only 435,000 tonnes at its terminals. When the ITC Agreement was signed in 2000, Olya was expected to be handling 3 million tonnes annually within five years.

2.4. Review of potential cargo flows along China-Western Europe overland routes via CIS countries

Practically all the goods traded between the EU and the APR are being shipped by sea. Therefore it is important to assess the potential volume of cargo flows along the CIS overland routes.

In 2007, 17.7 million TEU were transported from Asia to Europe, and 10 million TEU from Europe to Asia. The difference of 7.7 million TEU represents empty containers returning to their point of origin. However, container shipment via the Suez Canal is limited. According to UN ESCAP (2007:39), by 2015 containerised transportation from Asia to Europe and from Europe to Asia will reach 26.1 million TEU and 17.7 million TEU respectively, and the Suez Canal is expected soon to reach its maximum capacity for container vessels. Using the alternative sea route via the Cape of Good Hope is more expensive. In 2005, Kazakhstan received 142,000 TEU of import and transit cargoes and shipped 25,000 TEU of exports. In 2015, these figures will increase to 126,000 and 138,000 TEU respectively (UN ESCAP 2007:40).

Containerised shipments from China to EurAsEC or Kazakhstan are essentially transit cargoes. They enter via the Dostyk-Alashankou border crossing point. According to the Kazakh press, in 2008, the daily throughput at Dostyk-Alashankou was 520-550 rail cars, although a high of 620 rail cars has been recorded recently. Some 70% of this freight is containerised. Most trains consist of 48-50 rail cars, including container wagons. We estimate that Dostyk can transship about 306,000 TEU annually. However, this figure has not yet been achieved. According to Kaztransservice, the official container operator owned by Kazakhstan Temir Zholy (KTZ), Dostyk transshipped 109,677 TEU in 2007, including 74,551 TEU from China and 35,126 TEU to China. Compared with 2006, these figures were up by 37%, 40% and 31% respectively (SPECA 2007).

Kaztransservice forecasts that by 2015 the transshipment of containers at Dostyk's railway terminal alone will reach 730,000 TEU, i.e. 2.5 times the current throughput (see Figure 4). The Kaztransservice forecast is, however, much more optimistic about the future of container transportation than UN ESCAP. Nevertheless, there is a consensus that transshipment volumes will grow considerably in the medium term, which justifies the development of overland transport systems.

The port of Lyanyungang (the destination point of the railway line via Dostyk) transshipped 2 million TEU in 2007 and 3 million TEU in 2008. Therefore, it is safe to assume that cargo flows from China will merit investment to increase capacity at Dostyk and construct a new border crossing point at Khorgos.

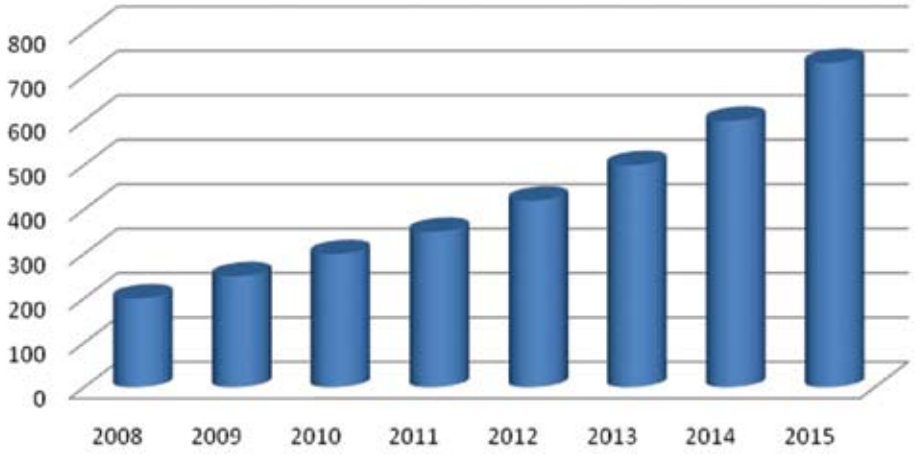


Figure 4.
Transshipment of containers at Dostyk (thousand TEU*)

Source: *forecast by Kaztransservice

Box 1. Main commodity groups that can be transported by Eurasian routes (China–West Europe)

Export and import shipments between China, Russia and Western Europe are largely transported by sea. China's export-orientated industries are concentrated in coastal areas. For example, nearly all industrial output from Guangdong, Fujian and other provinces around Shanghai is transported by sea, with export logistics designed accordingly. Most home electronics brands are manufactured in Hong Kong, and members of the Russian Association of trading companies and manufacturers of consumer electronic and computer equipment, such as Skarlett, Binatone and Vitek, transport these products from Hong Kong only by sea. These goods are then distributed throughout the CIS.

China's main shipping centres are in the south of the country, the Pearl river delta, and the Shanghai region. None of these regions has a particular specialisation, although there are differences between them. For example, South China produces more shoes and electronics, whilst Shanghai produces more clothes and toys. Northern provinces are historically home to many heavy industrial facilities, and local railways there mainly serve this sector. Therefore, opportunities to increase container transportation from these regions to EurAsEC are extremely limited. This problem applies even for backhaul loading: CIS exports to China are such that there is simply nothing that can go by container. Metal goods are no longer an option, since China itself has started to export them.

Commodities which can be transported by road and rail from China (including the XUAR) to Kazakhstan and Russia include:

- chemicals, including hazardous loads;
- foodstuffs (perishable) and other restricted cargoes;
- instrumentation;
- stereo, video and audio systems;
- mobile communications equipment;
- TV sets;
- electrical goods;
- electric cables;
- furniture;
- clothes and shoes;
- cosmetics.

The following commodities can be considered as possible backhaul road transport cargoes moving from Europe to China,

- industrial and agricultural equipment;
- metals (high-value non-ferrous metal goods, higher-purity metals and other high-value goods which are usually purchased in small quantities);
- integrated circuits;
- various fine chemical products and polymers;
- consumer goods;
- foodstuffs (e.g., meat).

Certain cargoes, such as bearings, are not suitable for sea transportation without expensive specialised and costly packaging to protect them from the sea air.

Analysts estimate that revenue from freight transit between Europe and Asia exceeded $50 billion in 2007 and could reach $80 billion in 2015 if current increases in cargo turnover continue. However, sea-shipping companies earned nearly all this revenue, since 98% of transit cargo is transported between the EU and the APR by sea through the Suez Canal.

In other words, transit potential is not being utilised. In this paper we will attempt to identify the measures that must be taken in order to make the region's ITCs a viable source of transit revenue for EurAsEC countries. This problem has become even more pressing since the startup of China's Go West The Xinjiang Uigur Autonomous Region (XUAR) development programme, which is designed to increase the manufacture of goods for export to Europe, potentially using EurAsEC overland routes (see Box 2).

Box 2. The XUAR and transit to Western Europe

The XUAR is one of China's largest regions; it borders eight countries. Its population exceeds 19 million. Economic growth averaged 11.2% per annum in the last decade. The XUAR produces gas, oil, coal, cotton, fruit, vegetables and fertiliser. Over 60 large facilities are now under construction costing more than $100 billion. 91,000km of new roads and 4,070km of new railways have been built. The administrative centre, Urumqi (population 2 million), has become a major transshipment centre, receiving consumer goods from all over China and shipping them to Central Asia, Russia and Europe. Over 90% of these goods are manufactured in inland China.

The XUAR exports textiles, shoes, mechanical engineering products and electronics (industrial goods account for 67% of all exports), and imports oil, iron ore and copper ore. According to Chinese statistics, the XUAR's own production accounts for less than 10% of its exports, and the region consumes around 20% of its imports. Trading with the XUAR means trading with the whole of China through its western gate.

The People's Government of the XUAR and the ADB have signed an agreement under which the bank will extend a $100-million loan to fund the development of transport infrastructure in Altay, Kuitun, Changji, Turfan and Hami. Prior to this, in April 2006, the ADB had loaned the XUAR government $150 million to develop transport in the cities of Tacheng and Yining and around the Alashankou border crossing point.

Special economic zones (SEZ) are being established to encourage trade; these zones offer advantageous terms to businesses. The construction of roads is an important part of the creation of SEZs. To date, the XUAR has 16 border motorways with a total length of 1,676 km. Border SEZs are all connected to railway networks such as Dostyk, the only Sino-Kazakh railway border crossing point. Motorways and road transport are used increasingly.

It is estimated that, by 2025, the Urumqi–Yining–Sary-Ozek railway will have an annual freight capacity of 25 million tonnes.

In the first quarter of 2008, the foreign trade transactions of the XUAR totalled $13.7 billion – an increase of 90.4% compared with the previous year.

Trade with Western Europe accounts for 7.3% (about $1 billion) of the total commodity turnover. According to our estimates, XUAR's share of foreign trade between China and Western Europe will increase by 1-2% annually. The pace of growth is slow because it is exceeded by demand for XUAR products from its neighbouring countries. The dollar-denominated monetary value of trade with XUAR's immediate neighbours will grow faster (about 15-17% annually) and reach $2.1 billion within five years and $4.4 billion in ten years, according to Chinese estimates.

A few years ago the Chinese Government adopted a resolution on the industrial development of the XUAR. Its intention was to strengthen the region's economic position by bringing in plentiful and cheaper labour, reducing political tensions and relocating low-cost production facilities from other successful industrial regions to this relatively poor region.

Beijing believes that many consumer goods intended for Europe can be manufactured in the XUAR, which is geographically closer to Europe. However, only a part of this vast volume of exports will be manufactured by the XUAR itself, and it is understood that the lion's share of goods will have to be shipped to Europe by sea from other more established zones of production. Nevertheless, a certain proportion will be shipped directly from the XUAR. The Chinese Government hopes to bolster XUAR's industries and enhance trade with Central and Eastern Europe and the Russian Federation.

China's *Leap Forward* unified transport strategy and Go West programme to develop its western provinces will have the effect of increasing cargo flows to Europe via Kazakhstan and Russia.

The *Go West* programme may lead to an increase in freight transit via the region's ITCs, as is discussed below.

A new network of logistics centres is being planned for the XUAR, which will simplify cargo transportation to Central Asian countries. By 2015, 21 logistics centres, with a total area of 2.12 million m^2, will have been built in the XUAR, including in the cities of Urumqi, Hami, Korla, Kashgar, Kuitun and Yining and the Khorgos border crossing point. In addition, by 2015 the XUAR will have around 280,000 lorries of its own.

Some commodities manufactured in the XUAR will be shipped via Kazakhstan. Delivery from China to western parts of Russia will take about ten days – one fifth of the journey time by sea. It is expected that an international border co-operation centre will be opened in 2009.

We believe that the volume of land trade between the XUAR and Western Europe will be dictated by the technical capacity of border crossing points. Based on the optimistic forecast by Kaztransservice that transshipment will reach 730,000 TEU in 2015, and assuming that shipments to Europe will remain at the current level of 70% of the total volume, we expect that about 500,000 TEU will be transited to Europe annually.

There can be no doubt that the vast transit potential of EurAsEC is, at present, very much underused. The current and potential transit cargo flows of non-CIS countries are negligible compared with transit from and through EurAsEC countries to third countries, in quantitative terms (see Figure 5). This is explained principally by the geographic locations of the main trading countries within EurAsEC. For example, Russia, a major trading partner of the EU, mainly uses the territory of Belarus for export to, and import from, the EU.

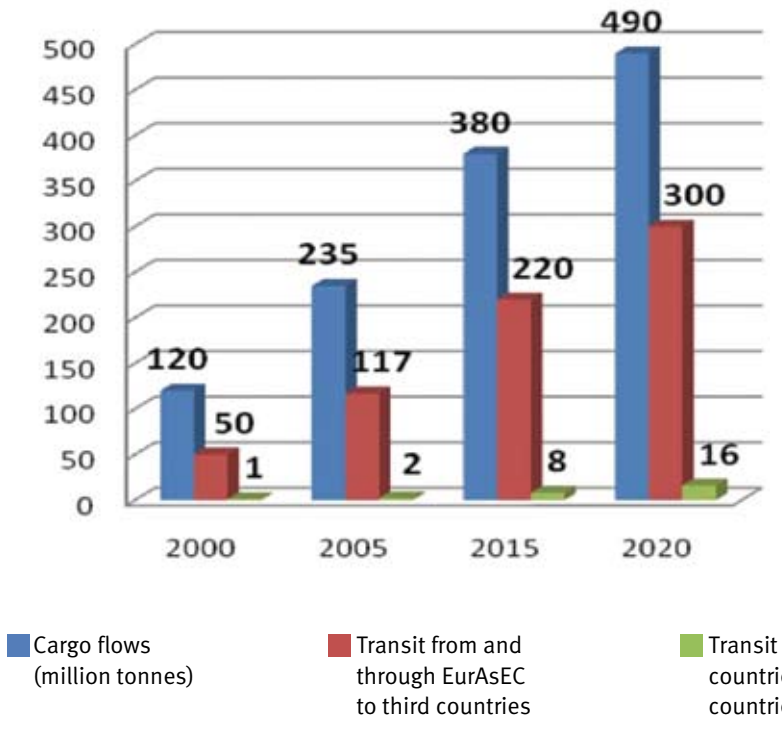


FIGURE 5.
Existing and potential cargo flows via EurAsEC (million tonnes).

Source: EurAsEC Integration Committee estimates

We believe that, although the current volume of transit originating outside EurAsEC is insignificant, fulfilling the transit potential of EurAsEC in this regard is an urgent priority. As the figures in Figure 5 show, the EurAsEC Integration Committee forecasts that in 2020, transit from and through EurAsEC countries to third countries and back will total 300 million tonnes, i.e., six times more than in the year 2000. In parallel with this, transit from third countries via EurAsEC will increase by 16 times compared with 2000 to 16 million tonnes. Not only is the rate of growth of external cargo flows expected to be much more rapid, it should also be remembered that the main purpose of EurAsEC as a regional organisation is to create a customs union, which will mean a reduction in and, in the longer term, abolition of the customs duties on imports to member countries. Transit of external cargo flow, however, could become a stable source of revenue for them.

3. The existing and emerging international transport corridors in the region

3.1. The role of international transport corridors in EurAsEC

Any study of the role of transport corridors in transport systems (especially those which span more than one country) should take into account the following:

- transport corridors are trunk routes which, because of their comprehensive infrastructure and communication links, permit the use of multi-modal technology, multiple modes of transport and multi-function terminals and transshipment facilities in a particularly advantageous location;
- the operations of the transport corridor must be protected by a continually evolving legal framework and by international agreements (e.g., those pertaining to the use of standardised waybills which allow equal access to terminals and other infrastructure);
- parties to the various conventions on ITCs agree to adopt modern customs technology to expedite cargo and passenger transportation procedures; and
- parties to conventions agree to develop transport infrastructure in their respective territories and support the provision of services to users which meet international standards.

Experience from elsewhere in the world should also inform policy. For example, the EU is currently working towards ensuring interoperability and interconnectivity of different modes of transport along its transport corridors.

Interoperability is dependent on the use of standard and compatible infrastructures, technology, utilities, equipment and vehicle dimensions. This ensures technical and operational uniformity which can be vital to the provision of door-to-door delivery services. This uniformity, just as importantly, can help to eliminate the various barriers (institutional, legal, financial, physical, technical, cultural or political) between transport systems.

Interconnectivity is the horizontal co-ordination of various modes of transport in order to provide integrated door-to-door delivery services. An essential prerequisite for such co-ordination is the provision of transshipment/cargo transfer technology and equipment, complex surveillance and management systems, and well-trained personnel.

There are several Eurasian trunk routes in EurAsEC member countries, but few of them actually correspond to the definition of a "transport corridor". In many documents, all Eurasian routes are referred to as "corridors"; by contrast, in the EU, where plans to create and develop transport corridors have all been finalised, this term is used more carefully. Thus, the EU adheres to the definition of transport corridors adopted at the First and Second Pan-European Conferences on Transport (in Prague in 1993 and in Crete in 1994): an international transport corridor consists of main transport communications (existing or under construction) with related equipment and infrastructure which connect large traffic junctions, and employ various modes of transport for international transportation of cargoes and passengers at the points of their maximum concentration.

Cargo transportation along the region's inland waterways is technically difficult to implement on a viable scale. For example, in accordance with the 2003 Russian inland waterways code, any such transportation under the flag of a foreign state is subject to permits granted by the Russian Ministry of Transport. In addition, many hydraulic works on Russian rivers do not meet safety standards because of channel silting, which makes the cost-effective transportation of cargo unfeasible.

Therefore, only **railways** and **roads** have decisive importance for transit in Eurasia. We discuss below the main Eurasian overland transport corridors.

3.2. Pan-European corridors

In this study we focus on the Pan-European corridors, since these routes, which extend to the Urals, are an easy way for Asian (primarily Chinese) commodities to reach Western Europe via regional transport networks.

The origins of these international transport corridors can be traced back to the 1980–1990s, when Western European countries identified an urgent need to improve the EU's internal and external links in response to a rapid growth in traffic. In 1994, following the First and Second Pan-European Conferences on Transport, ten major transport routes, "the Pan-European corridors", were created; these corridors provide optimum transport links between Western European countries, the Baltic, the European part of the CIS (Moscow, St. Petersburg, Minsk, Lviv, Kiev), the Black Sea ports (Odessa, Constanta, Varna) and Turkey (Istanbul):

I. Helsinki – Tallinn – Riga – Kaunas – Warsaw;
II. Berlin – Warsaw – Minsk – Moscow – Nizhny Novgorod;
III. Berlin – Dresden – Wrocław – Lviv – Kiev;
IV. Berlin / Nuremberg – Prague – Budapest – Constanta / Thessaloniki / Istanbul;
V. Venice – Trieste / Koper – Ljubljana – Budapest – Uzhgorod – Lviv;
VI. Gdańsk – Warsaw – Katowice – Žilina;
VII. the Danube;
VIII. Durres – Tirana – Skopje – Sofia – Varna;
IX. Helsinki – St. Petersburg – Moscow – Pskov – Kiev – Chişinău – Bucharest – Dimitrovgrad – Alexandroupolis;
X. Salzburg – Ljubljana – Zagreb – Beograd – Niš – Skopje – Veles – Thessaloniki.

Three Pan-European corridors extend into Russia and one into Belarus. These corridors can therefore be linked with other EurAsEC countries. In 1997, they were all extended through Russian territory linking the following destinations:

- Baltic (St. Petersburg) – Centre (Moscow) – Black Sea (Rostov-on-Don, Novorossiysk);
- Moscow – Astrakhan;
- West (Berlin–Warsaw–Minsk) – Centre (Moscow) – Nizhny Novgorod – the Urals (Yekaterinburg–Chelyabinsk);
- Northern Sea Route (St. Petersburg–Murmansk and further eastwards by sea);
- Waterway from the Black Sea–Azov region through the Volga-Don Canal to the Caspian.

Of special interest in the EurAsEC context is the II Pan-European Transport Corridor which extends 1,830 km from Berlin to Nizhny Novgorod via Warsaw, Minsk and Moscow. It will be fully operational by 2010. Presently, the *East Wind* container service links Berlin with Moscow.

The II Pan-European Corridor is important not only to Russia and Belarus, but also to other EurAsEC countries involved in cargo transit between the APR and Western Europe. Using this corridor, Kazakhstan and Russia can offer transport services in the China–West Europe direction (these services can be used by Japan, South Korea, Malaysia, Indonesia, Singapore, Thailand and others as well as China). For many years, shipments in that direction have been made along the Moscow – Yekaterinburg – Omsk – Novosibirsk – Irkutsk transport corridor which provides access to the ports of Nakhodka and Vanino and to China via Zabaikalsk, Grodekovo and Naushki. With the opening of the Druzhba-Alashankou Sino-Kazakh railway border crossing point in 1992, journeys in this direction were shortened dramatically: for example, the journey from Moscow to the port of Lianyungang (China) is now 670 km shorter, and from Moscow to Hong Kong 860 km shorter than the previous route via Naushki. In addition, this route can be used for shipments from Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan to Moscow and beyond through the II Pan-European corridor to Europe. Cargoes include cotton, the staple export commodity of these countries, and oil from Kazakhstan, Uzbekistan and Turkmenistan.

FIGURE 6. Pan-European corridors. Sourse: European Union

3.3. Railway corridors

Thanks to the extensive railway network spanning the territory of the former Soviet Union, railway transport corridors have always played a key role in plans to maximise the transit potential of EurAsEC. International shipments account for 90% of Russia's total railway cargo revenues and 72% of those revenues in Kazakhstan.

The general opinion today, reflected in the declarations of the 1998, 2000 and 2003 St. Petersburg Eurasian Conferences on Transport which were attended by ministers of transport from many European and Asian states, is that, technically, the following railway routes are suitable for cargo transportation in Eurasia:

- The Trans-Siberian Railway (Brest – Minsk – Finnish border – Ukrainian border – Moscow – Yekaterinburg – Novosibirsk – Vladivostok – Ulan-Bator – Beijing);
- The Northern Trans-Asian Corridor (Chop – Kiev – Moscow – Chelyabinsk – Dostyk – Alashankou – Lianyungang);
- The Central Trans-Asian Corridor (Kiev – Volgograd – Almaty – Aktogai – Dostyk – Alashankou – Lianyungang);
- The Southern Trans-Asian Corridor (Istanbul – Ankara – Tabriz – Tehran – Mashad – Seraks – Tashkent – Almaty – Aktogai – Dostyk – Alashankou – Lianyungang); and
- TRACECA (Constanta – Varna – Ilyichevsk – Poti – Batumi – Baku – Tashkent – Almaty – Aktogai – Dostyk – Alashankou – Lianyungang).

The multi-modal North-South ITC which links northwest Europe and Scandinavia with Central Asia and the Persian Gulf has also become much more important as a result of the rapidly expanding trade between Europe and India. This route relies on the extensive transport networks of Russia, Iran, Kazakhstan and other countries.

The corridor running from the port of Bombay to St. Petersburg is 7,200 km long. In the Caspian region, several routes are open to cargo transit: the trans-Caspian sea route, the inland Caspian-Volga-Baltic waterways which extend to the Volga-Don Canal and the Black Sea, and a number of

railways and motorways. The Russian Ministry of Transport estimates that, in the long term, up to 10 million tonnes of cargo could be transported via these routes annually, excluding oil products (Russian Ministry of Transport, 2002).

Below we discuss cargo traffic along these ITCs in more detail.

1. For decades, THE TRANS-SIBERIAN RAILWAY has been the principal railway link between European Russia and its industrial regions to the east (Siberia, the Urals, etc.). The TSR is 9,288 km long; it was completed in 1903 and fully electrified by 2002. It has a number of branch lines in its far eastern section which link to Chinese, North Korean and Mongolian railways, central Eurasia (i.e., to Central Asian railways via Kazakhstan) and Europe (to Western European railways via Belarus). Currently, the TSR is technically capable of carrying 250,000-300,000 TEU of international transit cargoes per annum. Once the modernisation of the TSR is complete, and if the Baikal-Amur Mainline (BAM) railway is used, this figure may increase to 1 million TEU per annum. RZD has pledged to invest about 50 billion roubles ($1.5 billion[3]) in the modernisation of the TSR up to 2015, primarily to allow it to handle special container traffic.

The TSR has the technical capacity to carry up to 100 million tonnes annually, which would include about 200,000 TEU of international container transit from the APR to Europe and Central Asia. Currently, the TSR is used by fifteen container services (see Figure 7).

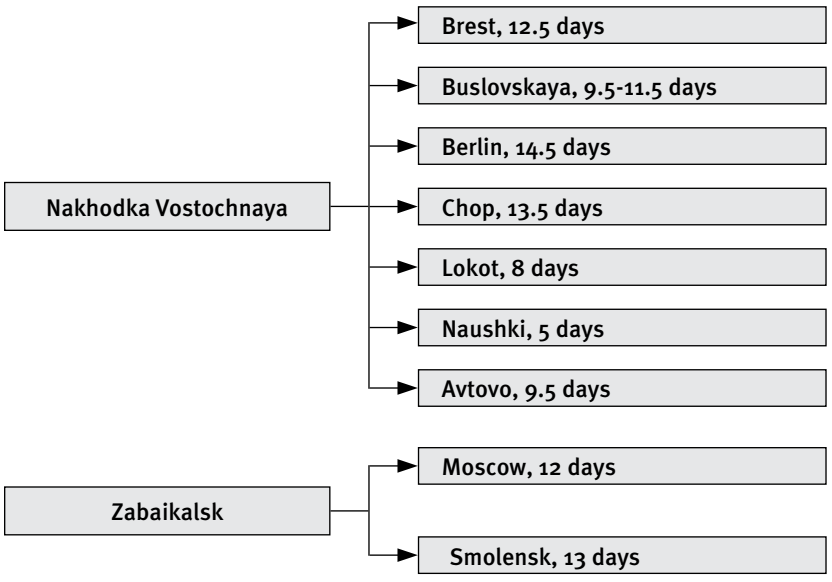


FIGURE 7.
Journey times
of Trans-Siberian Railway
services

Container freight trains can travel about 1,200 km per day on the TSR. As a result of the simplification of customs procedures at ports and border posts, transit containers wait just a few hours for clearing compared to 3-5 days in the past. The TSR's simplified customs and checking procedures for containerised commodities also apply to all containers shipped to third countries, regardless of destination.

2. THE NORTHERN TRANS-ASIAN CORRIDOR is viewed as the second most developed corridor after the TSR. In some UN ESCAP documents, this corridor is referred to as "the second Eurasian overland bridge". It runs from Lianyungang through central and northwest China, Kazakhstan and Russia to Western Europe. The distance from Lianyungang to Rotterdam is 10,900 km. The corridor is being developed on an ongoing basis. It is 2,500 km shorter than the TSR and 10,500 km shorter than the sea route.

After 1992 the Chinese section of this railway (some 4,150 km) was partially modernised. To date, 89% of its total length is double track, and 29% of the line is electrified. It is expected that, with

[3] Hereinafter, at the exchange rate of 01.01.2009.

the industrial development of northwest China, this route will be made double track along its entire length, and electrification will be extended.

China and Kazakhstan use different gauges – 1,435 mm and 1,520 mm, respectively. This poses a major problem for the development of freight transportation, since containerised cargoes have to be reloaded by crane.

At present, the Dostyk rail freight terminal in Kazakhstan, at the Sino-Kazakh border, is capable of handling a maximum of 620 rail cars per day. Until recently, maximum capacity barely exceeded 500-550 rail cars per day. The depot's current throughput is 12 train pairs per day on the Chinese narrow-gauge line. According to preliminary estimates, the depot handled a total 14 million tonnes scheduled cargo in 2008. Now, new handling terminals are being constructed and eight of them are already complete. Each of these terminals is designed to handle certain cargoes: heavy machinery and equipment and packaged, bulk or containerised cargoes. Dostyk services container shipments, which constitute about 70% of all cargo traffic. It has been calculated that this border crossing point must be capable of handling over 300,000 TEU annually. Compared with 2007, container traffic in 2008 was up by 30%. Typically, containerised cargoes are shipped to the Baltic, CIS and European countries.

3. **The central trans-Asian corridor** runs from the Sino-Kazakh border via Dostyk to Almaty and on to Ukraine. This is the shortest route from Asia to Central Europe. It is double-track and electrified within the former Soviet Union and it provides access to Poland via Jagodin and Mostiska and to Slovakia and Hungary via Chop.

4. **The southern trans-Asian corridor** incorporates only one EurAsEC member country – Kazakhstan. However, this railway is enlisted here as a potential competitive route. It also starts from Lianyungang, and passes through Dostyk, Almaty, Tashkent, Iran and Turkey before reaching the Mediterranean and Black Sea ports. But this railway also has the problem of different gauges. Transshipment is required at two points, which increases delivery costs and slows down traffic; hence the key advantage of overland trans-Eurasian routes over sea shipment, i.e., speed of delivery, is lost. The Iranian part (2,010 km) is single track and not electrified. In Turkey, trains have to cross lake Van by ferry. Along the branch lines to Istanbul (i.e., the Mediterranean) and Samsun (Black Sea), only 46% of the railway is electrified, and only 10% is double track.

5. **TRACECA**. This project includes the Dostyk – Tashkent – Ashgabad – Turkmenbashi – Baku – Tbilisi – Poti section and ferry lines to Odessa, Varna, Constanta and Istanbul. Despite the EU's enthusiasm for this project at an early stage, TRACECA failed to achieve its design capacity during the fourteen years after relevant documents were signed. We discuss the reasons for this below.

Parties to TRACECA signed a number of documents relating to certain benefits and reduced tariffs, e.g. a 50% discount on rail freight and ferry transportation of empty wagons. In addition, taxes and fees on transit cargoes were abolished, and measures were taken at national level to enhance the safety of passengers, cargoes, carriers and vehicles.

However, despite all these measures, the economic efficiency of this route is in doubt. According to preliminary figures, all other conditions being equal, the tariffs charged by RZD for transporting grain, cotton and containers are 1.7 times lower than those of TRACECA, and 1.2 times lower for oil and non-ferrous metals. In addition, transportation via Russia gives 1.8-fold journey time advantage. Cargo is shipped mainly from west to east, with mostly empty wagons travelling in the opposite direction. This has a negative effect on the efficiency of Caspian and Black Sea ferry lines.

At the moment, some sections of TRACECA are used to transport oil and oil products from Turkmenistan, cotton and grain from Uzbekistan, etc. At the port of Poti, a grain terminal with an annual capacity of 1.5 million tonnes, a container terminal with an annual capacity of 200,000 TEU, and large storage facilities are all under construction.

According to experts, the potential capacity of the Batumi – Poti – Ilyichevsk ferry line is 15-20 million tonnes per annum. However, its annual throughput at the moment is no higher than 0.9 million tonnes (using two ferries). The Baku – Turkmenbashi ferry line handles up to 2 million tonnes annually (five ferries).

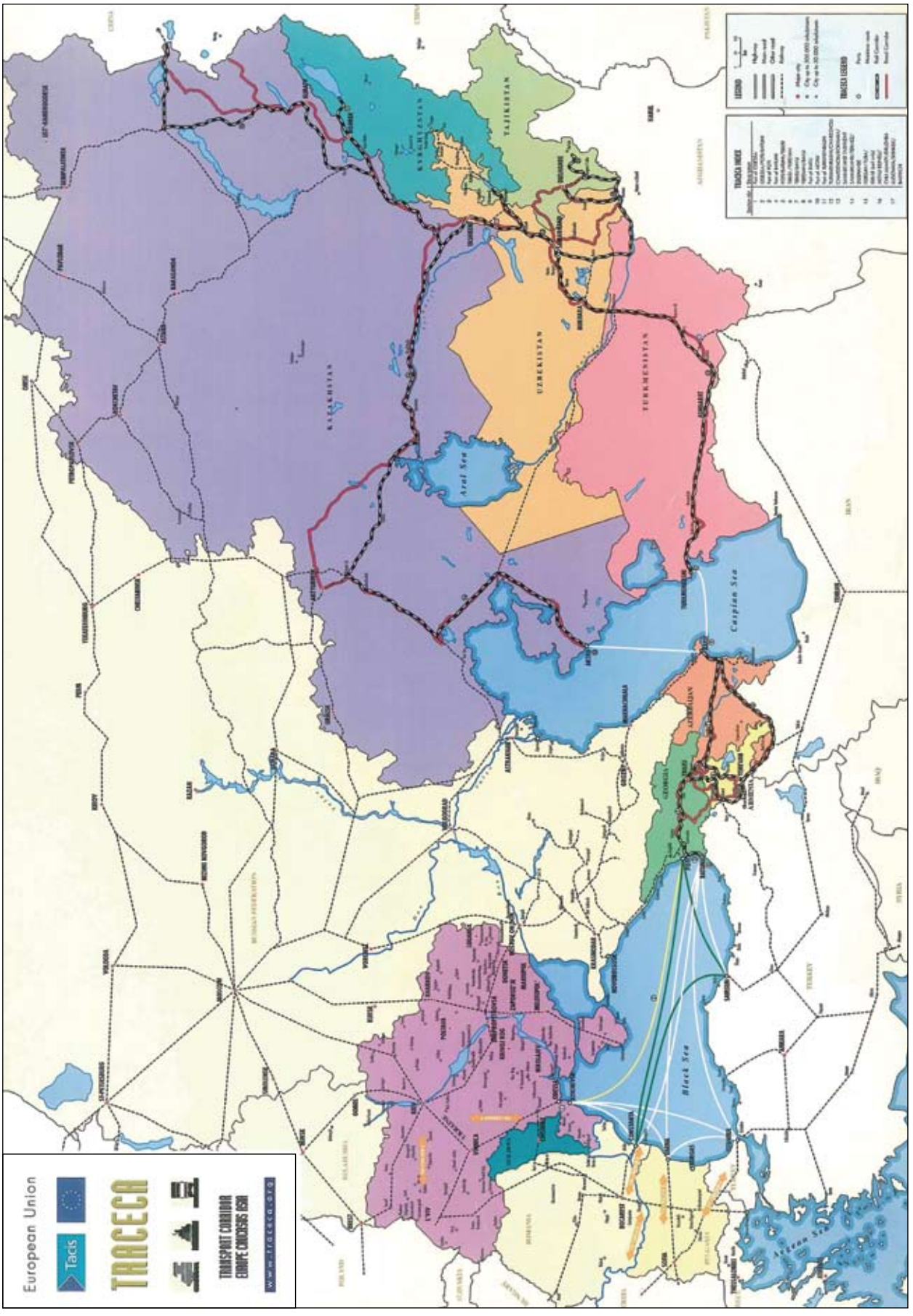


FIGURE 8. TRACECA. *Source:* European Union

Box 3. The TRACECA Programme

This Programme was adopted at a conference held by the EU in Brussels in May 1993, which was attended by representatives from Georgia, Azerbaijan, Armenia, Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan and Tajikistan (Ukraine and Mongolia joined later). This Programme aims to develop a transport corridor from Europe to Central Asia through the Black Sea, the Caucasus and the Caspian. It incorporates the Poti (Georgia) – Varna (Bulgaria), Poti – Burgas (Bulgaria), Poti – Odessa (Ukraine) and Baku (Azerbaijan) – Turkmenbashi (Turkmenistan) ferry lines. In addition, the new ferry routes of Poti – Constanta (Romania) and Batumi (Georgia) – Novorossiysk (Russia) will be opened and a new Kars (Turkey) – Tbilisi (Georgia) railway section is to be built. Nine railway ferry complexes will be operated in the Black Sea region. The design capacity of TRACECA is up to 40 million tonnes per annum.

Currently, TRACECA is used to transport oil and oil products from Turkmenistan and cotton and grain from Uzbekistan. It is expected that Chinese freight transport will also access this route from the Trans-Asian mainline.

TRACECA distances (sections in use):
Tashkent – Brest – 4,200 km;
Tashkent – St. Petersburg – 4,000 km;
Tashkent – Bandar Abbas – 3,900 km;
Tashkent – Odessa – 4,230 km;
Tashkent – Batumi – 2,900 km.

The main advantage of this corridor is that it begins at the Black Sea ports where several of the Pan-European corridors end. The countries through which it runs were keen to be used for freight transit. To implement the TRACECA Programme, the countries involved signed the Multilateral Agreement on the Development of TRACECA on 8 September 1998 in Baku. The reasons that the Programme failed to achieve target capacities are discussed above.

Box 4. Outlook for the development of container traffic

Belarus has two major railway links with Europe: Minsk to Brest, and Minsk to Vilnius, Kaunas and Klaipeda. The Smolensk – Vitebsk – Daugavpils – Riga – Ventspils railway also runs through Belarus. From Ukraine, this railway follows the Bakhmach – Gomel – Bobruysk – Minsk route before entering Lithuania.

Belarus' railways have a total length of 5,500 km. The following east-west-east, high-speed services operate there:

- *East Wind* (Berlin – Minsk – Moscow); In 2007, the railway carried 7,580 TEU freight, and was 1.9-times faster than in 2006;
- *Mongolian Vector* (Brest – Naushki – Mongolia – China); 657 TEU handled in 2007 (1.4 times faster than in 2006); and
- *Kazakhstani Vector* (Brest – Iletsk – Arys), 9,320 TEU carried in 2007 (1.2 times faster). In the near future this service will be extended to Dostyk and China.

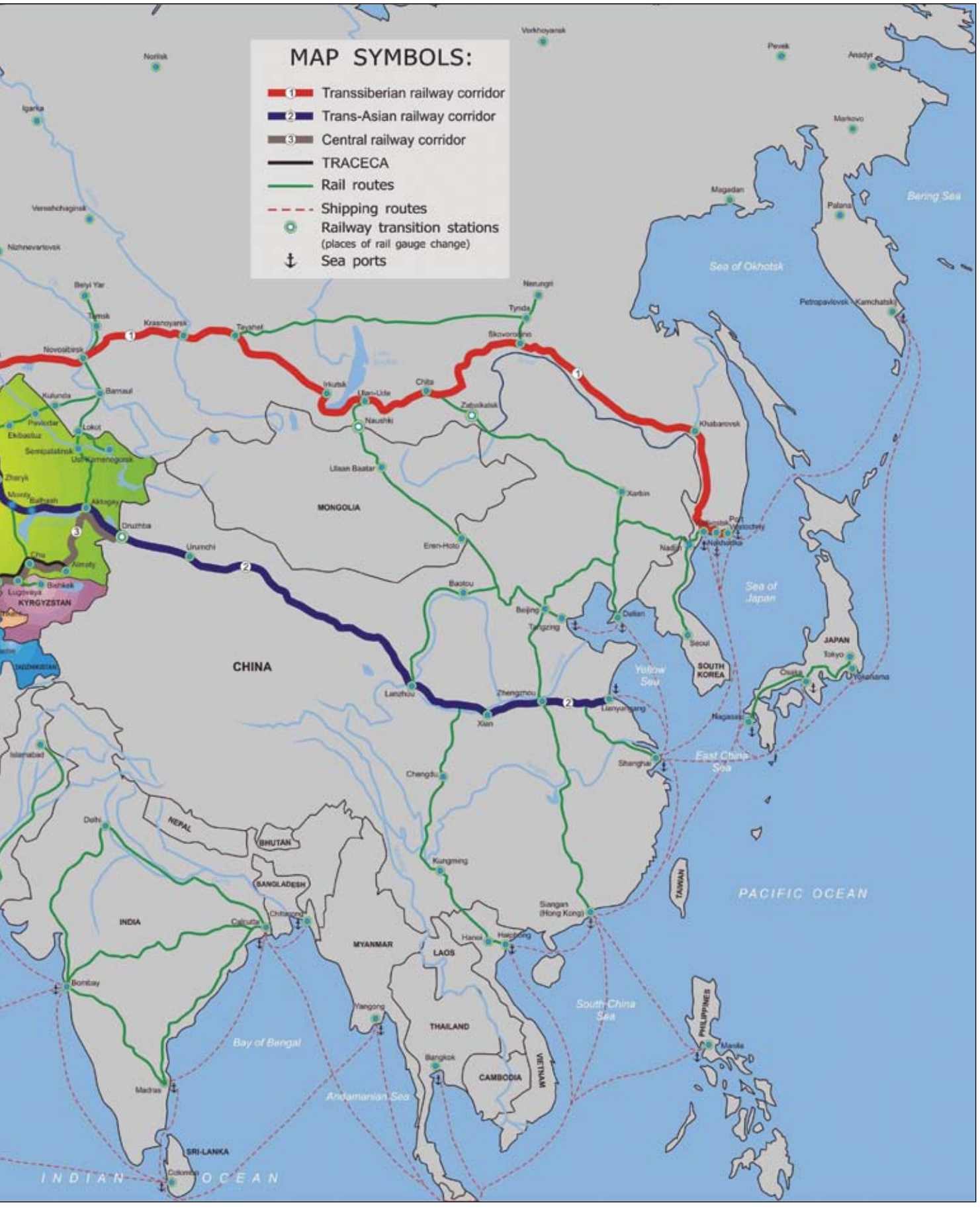
In 2007 the Belarusian railway carried 2,179 containers from east to west (100.6% of the 2006 figure) and 16,782 containers from west to east (133.8% of the 2006 figure).

However, these statistics alone do not give the complete picture. Although container traffic undoubtedly increased, it remains insignificant compared with the "traditional" raw material cargo traffic, which still predominates in this region.

Railway transportation between Russia and Kazakhstan (the key players in the proposed EurAsEC transit project) is growing steadily: in the first nine months of 2008, export and import shipments totaled 77.2 million tonnes, an increase of 17% (11.1 million tonnes) compared with the same period of 2007. This figure includes exports to Kazakhstan (18.3%), imports from Kazakhstan (53.5%), goods in transit to Kazakhstan (4.1%) and goods in transit from Kazakhstan (17.5%). Container traffic between Russia and Kazakhstan during the first nine months of 2008 totaled 137,400 TEU (a 6% increase compared with the previous year).

By extrapolating these figures to the end of 2008, we estimate that in 2008 container traffic in both directions totalled about 180,000 TEU. According to preliminary estimates, about 39,000 TEU will be transited in both directions. About 31,000 TEU will be transited from Kazakhstan to Russia. Since this is cargo coming in from Dostyk, containerised Chinese cargo is expected to account for around 20% of total freight transit via Kazakhstan to Russia (Kaztransservice is expected to handle 200,000 TEU at Dostyk in 2008, i.e., twice the 2007 total).

FIGURE 9. Main railways. *Source:* Kazakhstan transport and communications research institute (NII TK), International freight forwarding company Transsystem.


MAP SYMBOLS:
1 Transsiberian railway corridor
2 Trans-Asian railway corridor
3 Central railway corridor
TRACECA
Rail routes
Shipping routes
Railway transition stations
(places of rail gauge change)
Sea ports
Norilsk
Verkhoyansk
Pevek
Anadyr
Igarka
Markovo
Magadan
Bering Sea
Palana
Sea of Okhotsk
Nizhnevartovsk
Beiyi Yar
Nerungri
Tynda
Tomsk
Krasnoyarsk
Taishet
Skovorodino
Petropavlovsk-Kamchatski
Novosibirsk
Irkutsk
Ulan-Ude
Chita
Kulunda
Barnaul
Zabaikalsk
Naushki
Khabarovsk
Pavlodar
Lokot
Ekibastuz
Semipalatinsk
Ust-Kamenogorsk
Ulaan Baatar
MONGOLIA
Zharyk
Balhash
Aktogay
Druzhba
Xarbin
Urumchi
Eren-Hoto
Nakhodka
Chu
Almaty
Baotou
Bishkek
KYRGYZSTAN
Sea of Japan
Beijing
Dalian
Tangcing
Seoul
JAPAN
Tokyo
Osaka
Yokohama
SOUTH KOREA
Yellow Sea
CHINA
Lanzhou
Zhengzhou
Lianyungang
Nagasaki
Xian
Islamabad
Shanghai
East China Sea
Chengdu
Delhi
NEPAL
BHUTAN
Kunming
BANGLADESH
TAIWAN
PACIFIC OCEAN
INDIA
Calcutta
Chittagong
Guangzhou (Hong Kong)
MYANMAR
Hanoi
Haiphong
LAOS
Bombay
Yangong
South China Sea
THAILAND
PHILIPPINES
Manila
Bay of Bengal
Bangkok
CAMBODIA
VIETNAM
Madras
Andamanian Sea
SRI-LANKA
Colombo
INDIAN OCEAN

3.4. Motorway corridors

Public and private road transport services carry between 59% and 80% of all freight shipments in EurAsEC countries. The following intercontinental motorway routes are particularly important for this traffic:

1. Asian Highways are international routes which pass through more than one sub-region, e.g., East and Northeast Asia, South and Southwest Asia, Southeast Asia, and North and Central Asia. Internal sub-regional routes link neighbouring sub-regions. Internal roads in each country provide access to capital cities, major industrial and agricultural centres, airports, sea ports and river ports, major container terminals or depots and tourist attractions.

Russia's economic and transport links with Kazakhstan and other EurAsEC countries, and transit links from Europe to Asia, rely principally on the following motorways which, according to UN ESCAP classification, are parts of the Asian Highway network:

- AH7 (Yekaterinburg – Chelyabinsk – Troitsk – Kostanai – Astana – Karaganda – Burubaital – Merke – Chaldovar – Kara-Balta – Osh – Andizhan – Tashkent – Syrdarya – Khavast – Khudzhand – Dushanbe – Lower Pyandzh – Shirhan – Polekhumri – Jebul – Sarej – Kabul – Kandahar – Spinboldak – Chaman – Quetta – Kalat – Karachi);
- AH60 (Omsk – Cherlak – Priirtyshskoye – Pavlodar – Semipalatinsk – Taskesken – Ucharal – Almaty – Kaskelen – Burubaital);
- AH61 (Kazakh border – Ozinki – Saratov – Borisoglebsk – Voronezh – Kursk – Krupets – Ukrainian border);
- AH63 (Samara – Kurlin – Pogodayevo – Uralsk – Atyrau – Beineu – Oasis – Nukus – Bukhara – Guzar);
- AH64 (Barnaul – Veseloyarsky – Krasny Aul – Semipalatinsk – Pavlodar – Shiderty – Astana – Kokchetav – Petropavlovsk);
- AH70 (Ukrainian border – Donetsk – Volgograd – Astrakhan – Kotyayevka – Atyrau – Beineu – Zhatybai (– Aktau) – Bekdash – Turkmenbashi – Serdar – Gudurolum – Inche-Boroun – Gorgan – Sari – Semnan – Damghan – Yazd – Anar – Bandar Abbas).

The following roads link China with the borders of EurAsEC countries

- AH5 (Shanghai – Nanjin – Sinyuan – Siang – Urumqi – Kuitun – Jinghe – Khorgos). This two-lane motorway is 4,815 km long.

It has two branches:

- AH67 (Kuitun – Baketu), a 390 km long, two-lane motorway
- AH68 (Jinghe – Alashankou), 94 km long.

2. The Western Europe–West China project (a proposal involving EBRD, ADB, WB, IDB, UNDP and others) is 8,455 km long. About one quarter of the highway will be laid in Kazakhstan, and will allow transit not only to Russia and China, but also to South Asian countries via Uzbekistan and Kyrgyzstan. The project is expected to cost around $2.3 billion.

3. NELTI (New Eurasian Land Transport Initiative) will facilitate the movement of cargo to the CIS, the EU and the United States along the Beijing – Urumqi – Bakhty – Astana – Moscow – Riga – Vilnius – Warsaw – Berlin – Brussels route. This project is expected to increase cargo transit along the international motorways of Kazakhstan and Russia to 5.2 million tonnes per annum.

The NELTI is receiving wide media coverage. We believe, however, that its significance may be overestimated, and explain our reasons below.

In Russia, international road transport is increasing steadily and now accounts for up to 26% of all foreign trade shipments (transportation of high-value cargo). Russia's international road transport market is estimated to be worth roughly $3-3.2 billion.

Analysis of the international road transport market by direction of travel reveals some interesting statistics. Taking the EurAsEC member countries of Belarus and Kazakhstan, the ratio by direction

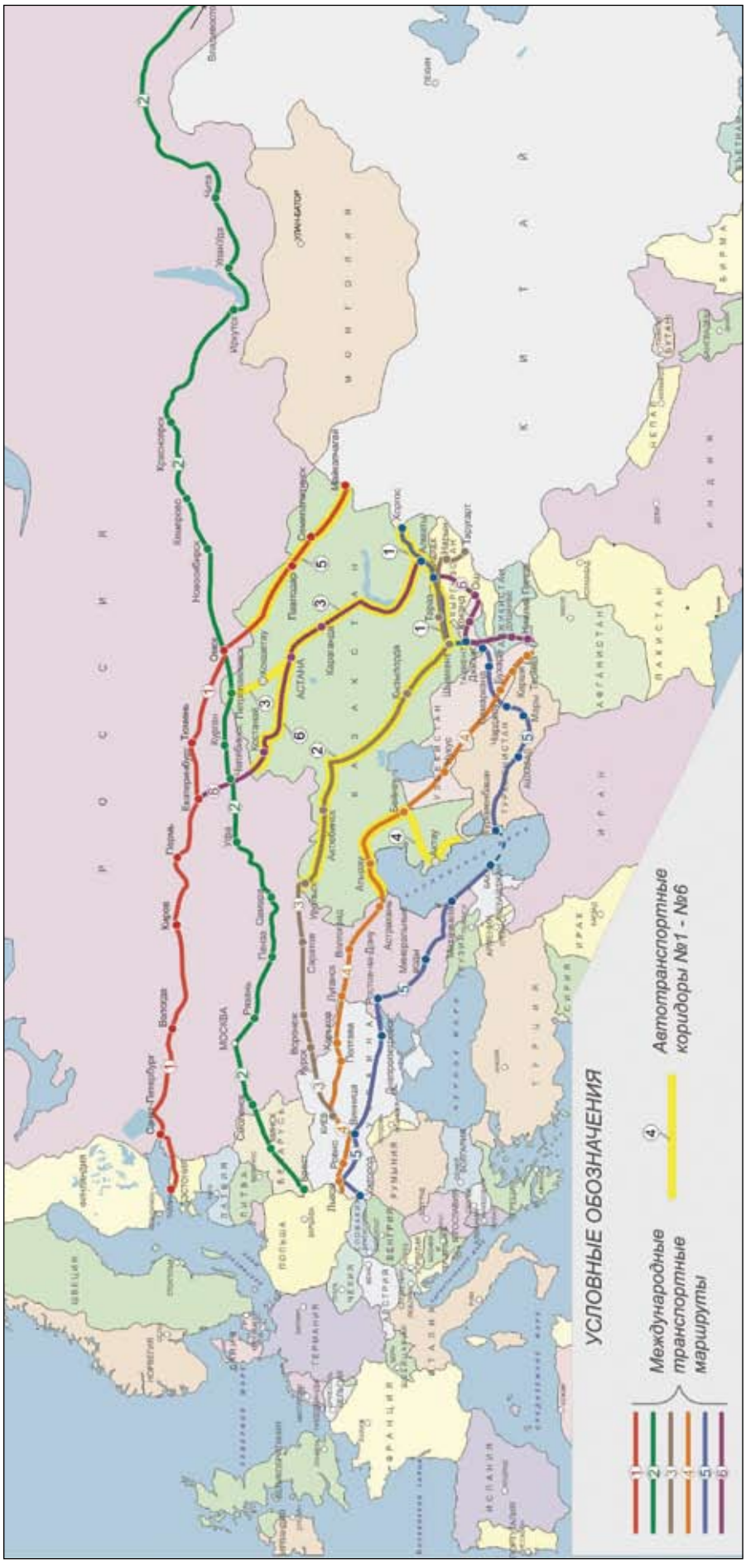


FIGURE 10. Motorway corridors. *Source:* Kazakhstan transport and communications research institute (NII TK).

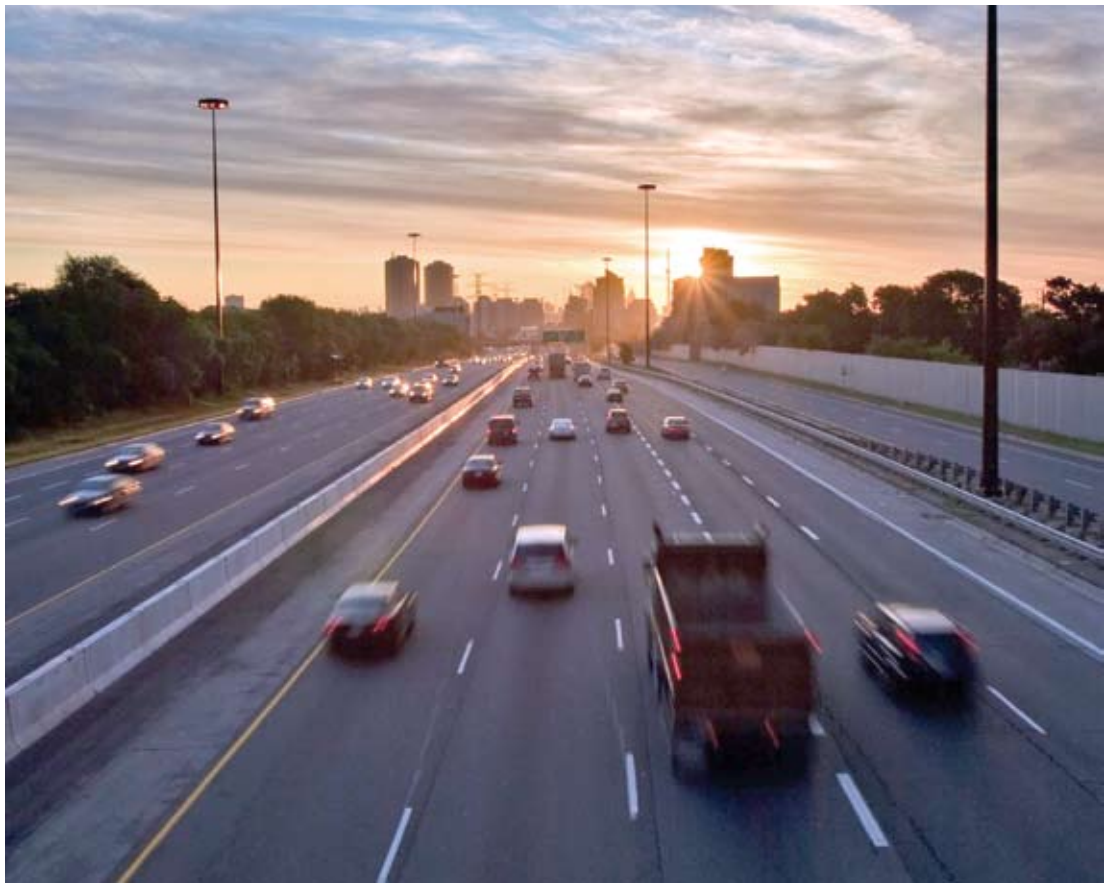
will be 3.5 to 1. This is unsurprising, since most trucks arriving in Belarus head for Western Europe and the Baltic countries. Freight moving from Russia to Kazakhstan by road does not exceed 1.3 million tonnes.

Foreign haulage firms operating in Russia account for a substantial percentage of Russia's road transport market, as follows: Belarus – 15%, Finland – 8% (mainly timber), Ukraine – 7%, Poland – 7%, Lithuania – 6%, Latvia – 4%, Germany – 0.2%, Italy – 0.03%.

In our view, there are significant obstacles to the development of road transit through EurAsEC to Western Europe. Firstly, it is very expensive for vehicle owners to operate in EurAsEC countries. For a journey to be profitable, a truck must be able to cover up to 1,000 km during daylight hours. This requirement applies in Europe, therefore if a European carrier is contracted to undertake a transit shipment, special tracking systems will not allow it to travel at night for safety reasons. This is because of the poor state of road surfaces and the road network in general.

The high cost of operating in EurAsEC countries is also due to the following:

- road transport is extremely inefficient in these countries. According to experts, its average efficiency is four times lower than in developed countries;
- the road transport fleet consists mainly of old and obsolete vehicles, which do meet specific requirements for cargo or other operations;
- logistics systems are not sophisticated enough to co-ordinate multi-modal shipments efficiently; and
- cargo handling centres on long-distance routes lack the technology to handle large vehicles, and there has been a disproportionate increase in the operation of smaller vehicles in this sector. In addition, there is no spot freight system in place which could ensure that empty vehicles do have loads to transport



4. Key issues affecting cargo transit on EurAsEC ITCs

Despite the transit potential of EurAsEC member countries (primarily, Russia, Kazakhstan and Belarus), and the existence of a system of international transport corridors (including railways and motorways), the fact remains that transit is not taking off: in the context of annual traffic from Northeast and Southeast Asia to Europe of over 17 million TEU, the several tens of thousands containers being shipped via the ITCs of EurAsEC are insignificant.

	2006	Использование в 2006	2020
Belarus	100	50 (50%)	150
Kazakhstan	36	10 (28%)	100
Kyrgyzstan	3.8	1.9 (50%)	6.5
Russia	80	54 (68%)	150
Tajikistan	0.2	0.18 (90%)	0.5
Aggregate potential of EurAsEC	220	115.8 (51%)	470

Table 4.
Aggregate transit potential of EurAsEC member countries (million tonnes)

Source: EurAsEC Integration Committee estimates

The EurAsEC Integration Committee's estimate of aggregate[4] potential transit capacity (see Table 4) shows that EurAsEC countries are, in some cases, a long way from utilising this capacity to the full. Since total potential capacity in 2006 is expected to double by 2020, the most urgent question is whether or not EurAsEC will be able to exploit this opportunity properly. What are the real causes of the huge gap between current usage and full capacity?

4.1. Sea vs land: 2:1

The competitiveness of any freight route is commonly calculated using the "trio" of commercial indicators: "time–service–tariff". The key reason for the failure to attract transit business to overland EurAsEC corridors is the undeniable commercial benefits of using sea freight from the eastern and southern provinces of China and other Southeast Asian countries.

The main competitive advantages that sea transit routes have over overland routes are:

- **Cheaper tariffs**: international shipping companies with an extensive and cost-efficient fleet at their disposal can keep their port charges and freight rates low (over the past decade, sea freight volumes have increased by half). In many cases, shipping cost is the main consideration for consignors as they strive to minimise the transportation component of the price of commodities in order to keep them competitive in the destination country. Following the recent 90% drop in the Baltic Dry Index, which is used in pricing raw material ocean freight rates (oil, metals, grains, etc.), the tariffs charged by shipping companies, at least in the near future, will be much more competitive than other modes of transport.

[4] Aggregate transit potential means the aggregate potential of the railway, motor, sea, inland water and air transport

Box 5. Sea and rail container freight tariffs in Eurasia (ATC AIR Service data)

Loading port: Shanghai

Destination port	USD/container			Delivery time, days
	20'DC	40'DC	40'HC	
Hamburg	1475	2500	2650	26
Kotka	1620	2700	2800	32
Tallinn	1925	3240	3415	32
Riga	1925	3300	3475	32
Klaipeda	1925	3300	3475	32
Novorossiysk	2025	3750	3875	32
St. Petersburg	1980	3170	3270	32
Vladivostok	1350	1950	1950	10

These ocean freight rates can be compared with the rail freight rates offered to the same company. Transportation is by TSR; destination Moscow:

Destination	USD/container			Delivery time, days
	20'DC	40'DC	40'HC	
Moscow	3585	6510	6510	15

The insurance surcharge is $300-550 per container (depending on the customs code of the commodity).
These tables show that sea shipping costs are around 50% lower than rail freight.

However, the above appears to be true only for east–west transit. For north-south traffic, which is the other main direction for transit through EurAsEC countries, analysts believe that overland transportation costs can compete with sea freight. According to estimates, it costs $3,500 to deliver one tonne of cargo from Germany to India through the Suez Canal, and takes 40 days. Container freight along the North-South ITC will cost $2,500 and take 15-20 days (Eurasian Transport Union, 2003).

- **Customer service and compliance with international quality standards:** in addition to their competitive rates, sea shipping companies offer a high standard of service, including cargo tracking, sophisticated logistics networks and guarantees of on-time and secure delivery. They use state-of-the-art technology, offer discounts to regular customers, etc.

However, overland transit has an important competitive advantage – it reduces delivery times. The shortest cargo delivery time from eastern China and other Southeast Asian countries to Western Europe by railway or motorway via EurAsEC countries is 2 to 2.5 times shorter than sea shipment via the Suez Canal. This advantage is less apparent, however, where delivery time is calculated on a cumulative basis for large shipments. For example, the average container capacity of vessels working on Asia-Europe routes increased by 30% to 7,100 TEU between 2004 and 2007. According to KTZ, in 2007, an average container train was able to carry up to 270 TEU.

However, simple calculations alone are not sufficient in demonstrating the advantages of overland transit. Shorter delivery time is a critical factor for certain cargoes (perishable goods or urgent door-to-door shipments). In addition, faster delivery means quicker receipt of cash from the bank, shortening transaction times. In certain cases, each day that payment is delayed is critical,

and consignors prefer shorter delivery time to lower shipping cost. Expediting delivery releases considerable financial resources, which are effectively frozen throughout the cargo's journey time. Therefore, **we view the time factor as an unquestionable competitive advantage that overland routes can offer for certain commodities, customers and even regions (e.g., China's rapidly developing XUAR, which has no viable alternative to rail and road transit)**.

4.2. Barriers to fulfilling the region's transit potential

Given their geographic location and national economic interests, Russia, Kazakhstan and their neighbours have a direct interest in the Eurasian integration process extending beyond the boundaries of the post-Soviet space and involving the most important countries in the region. Projects being implemented in certain economic sectors provide solid foundations for regional economic integration, which begins in key sectors and eventually extends outwards to the institutional level. For this reason, the electricity and transport industries must be considered as economic priorities (Vinokurov, 2008).

Increasing the volume of freight transit using EurAsEC ITCs is made difficult in a number of ways. However, the issues are different for each mode of transport used in transit operations.

Below we discuss the main impediments to the full-scale integration of road and rail transport in EurAsEC member countries which are relevant to this report.

These problems are either physical or non-physical, with the following identified as the most acute:

Non-physical barriers are those non-technical barriers to trade, which, to a large degree, are "man-made"; these are:

- protracted customs procedures at border crossing points, which significantly increase waiting times for vehicles and rolling stock;
- random inspections, often requiring sealed transit containers to be opened;
- non-harmonised transit tariffs across the CIS – despite the signing of international agreements, transit tariffs still vary from country to country[5];
- migration rules – the time drivers are allowed to stay in EurAsEC differs from country to country

Physical barriers include:

- obsolescence and shortages of rail cars, containers and locomotives;
- non-compliance of existing infrastructure and technology with international quality standards (route handling capacities, etc.);
- inadequate processing capacity at border crossing points;
- poorly developed logistic and communications networks and motorway service facilities;
- different rail gauges – throughout the CIS, the 1,520-mm gauge is used, whereas in Europe and Asia (China, Iran, Southeast Asia, etc.) the gauge is 1,435 mm. This poses additional problems which compound the shortage of transshipment centres and insufficient handling capacity at border crossing points (see Table 5);
- insufficient capacity for cargo handling, consolidation and deconsolidation.

Shipping point	Route	Distance, km	Number of border crossing points	Number of bogie change points
Lianyungang (China)	Via Kazakhstan and Russia	9200	4	2
Shenzhen (China)	Via Mongolia and Russia	11040	4	2
	Via Kazakhstan and Russia	10300	4	2
The Tumannaya river	Via China, Mongolia and Russia	8900	4	2
	Via China, Kazakhstan and Russia	9900	4	2
	Via China (Manchuria) and Russia	9000	3	2
	Via Russia	10300	2	1
Nakhodka (Russia)	Via Russia	10300	2	1
Rajin (North Korea)	Via China (Manchuria) and Russia	8900	4	2
	Via Russia	10300	3	1
Pusan (South Korea)	Via North Korea and Russia	11600	4	2
	Via North Korea, China, Mongolia and Russia	10780	6	2

Table 5.
Physical and non-physical barriers to trade

Source: Trans-Asian Railway Route Requirements: Feasibility Study on Connecting the Rail Networks of China, Kazakhstan, Mongolia, the Russian Federation and the Korean Peninsula. UN ESCAP 1996.

[5] Expert opinions on the importance of this barrier differ. For example, the Commission on Transport Tariffs and the Transport Policy Council of the EurAsEC Integration Committee did not include the "tariff" problem in the List of Non-Physical Barriers in EurAsEC.

In our discussion of the most significant physical and non-physical barriers to the use of EurAsEC's transit potential, we examine road and rail transport separately.

Initially, we focus on the legal and administrative problems that persist in relations between Belarus, Russia and Kazakhstan. The problems are even more acute for those engaged in freight transit in other EurAsEC countries. According to an agreement between Russia and Kazakhstan on road haulage, Chinese hauliers are practically banned from transiting cargo through Russia, and Russian trucks can travel no further than 50 km into China.

After the disintegration of the Soviet Union, all former republics inherited the same legal framework that had existed in Soviet times. As national institutions developed, each country adopted laws to protect and assist its own transport services market. There was, of course, nothing unexpected in this process. However, certain national laws started to conflict with similar laws in other CIS countries. For example, after independence, freight carriers in Russia and Belarus had no legal problems working together, but by 2000 these two countries (which had been the first to declare the creation of a Unified Transport System) had adopted 28 incompatible laws pertaining to international road transport shipments alone, and in just three years there were 31 such laws.

It is also important to highlight developments that have had a positive impact in creating a unified transport system and encouraging transit:

- the full-scale commercialisation of the road transport sector, which is now dominated by private owners;
- equal access to domestic freight services markets for private and public carriers;
- unrestricted (or almost unrestricted) access to foreign cargo facilities (notably, however, each member country bans foreign operators from engaging in coastal freight transport);
- the freedom to select a carrier for the purposes of export and import contracts;
- the absence of legal restrictions on foreign ownership of road transport companies; and
- the abolition of permits for return journeys between certain member countries.

The most significant differences in the development of national road transport sectors are:

- the varying potential of each country's road transport sectors: for example, Belarus is a net exporter of road transport services, and Russia is a net importer. The road transport capacities of other EurAsEC countries (Kazakhstan, Kyrgyzstan and Tajikistan) prevents them from fully satisfying demand for external transport services;
- the unequal pace of modernisation of the vehicle fleet to current European standards;
- variation between countries in the legislation governing the road transport sector[6];
- differing tax regimes and currency regulation for carriers and forwarding agents;
- unresolved incompatibility in customs procedures for cargo transported by road, especially in the time taken to clear customs and undergo transit cargo inspection;
- differences in the regulations governing transit in different countries (including those which have signed up to bilateral agreements on international road traffic); and
- incompatible road tax and road pricing systems[7]; differing regulations governing access to the road transport market and shipping services (including licensing, professional permit systems and other methods of state regulation).

[6] The most comprehensive legal framework covering relations between road transport operators is in Belarus. By contrast, there are still notable omissions in Russian transport law. Legislation that had existed under the Soviet Union (charters, regulations and rules) were retained practically intact as the basis for governing road transport operations until the summer of 2008, despite all documents being no longer in force. Progress in developing a new legal framework is slow.

[7] At present, there is no consensus on charges for the use of infrastructure. Most parties to the Agreement have no laws on toll roads. Belarus is the only country which has laws governing the operation of toll roads and a road-pricing mechanism.

In order to improve the physical functioning of the transport system, a number of issues must be addressed:

- a joint agreement on multi-modal shipments should be drafted to improve the co-ordination of river, road and railway carriers, reduce waiting time and increase the utilisation of vehicles by introducing modern technology to organise and service cargo flows;
- transport logistics must be improved, information on the location and status of cargoes being transported via different ITC sections must be made transparent, and an up-to-date network of logistics centres must be built;
- a GLONASS-based cargo-monitoring system must be introduced;
- a unified, automated system must be created to regulate transportation and transit processes in the different ITC sections in EurAsEC. This should be integrated into nation- and industry-wide automated transport regulation systems;
- a uniform, inter-governmental electronic document management system must be introduced as part of the international standards system. Electronic documentation must be granted appropriate legal status;
- a universal glossary and package of supporting documents must be introduced;
- information on and commercial security of carriers operating on ITCs must be enhanced; and
- fuel compatible with Euro 3 and Euro 4 emissions standards must be made available in Russia, Kazakhstan and Belarus, along with the building of necessary infrastructure; in addition, countries must introduce a fuel quality control system and impose stricter penalties for selling low-quality fuel. Vehicle weight is also an important issue in international transport law.

The above list includes realistic measures that EurAsEC countries could take to encourage transit by road along its ITCs. However, as discussed earlier, these countries account for only a very small part of transit shipments. Many of the problems listed are critical and must be eliminated in those ITC that provide access the western parts of EurAsEC countries.

We discuss below the problems that are preventing the development of rail transport along ITCs.

Firstly, there have been positive achievements: EurAsEC member countries benefit from an extensive railway infrastructure; regular traffic is properly administered; modern IT systems are being employed to a satisfactory level; freight technology is continually improving; and the railways are achieving significant time gains.

On the other hand, according to analysts, container traffic in EurAsEC member countries is not increasing as it should. Despite the unified tariff policy being applied across the CIS, variations in the funding of railways and the different methods used to calculate freight tariffs have resulted in significant fluctuations in transport costs. Moreover, container transport operators resent the manipulation of their profit margins. The reduction in transport tariffs, notably the cut in Russian railway tariffs in January 2007, did not have the anticipated effect of stimulating transit operations. In fact, in 2007 the volume of railway transit dropped by two times compared with 2006 levels, and was 17 times lower compared with 2004. This decrease is attributed to the growth of other freight transport services handling transit cargo.

Achieving stability in the journey times and cost of freight transit is another problem for the industry. Some analysts suggest that non-discriminatory conditions (compared with those of foreign competitors) should be introduced in documenting transit shipments. Up to now, the relatively poor standards and high cost of services provided by other operators in the transit chain (shipping companies, port services, railway administration in transit countries) have resulted in a continual increase in transit tariffs.

Deficiencies in container freight infrastructure also serve to alienate transit operators. There are few terminals capable of handling large containers; specialist transshipping equipment is in short supply; vehicle access to terminals located within cities is problematic; and the network of container depots has become smaller in recent years. Transshipment of containers between

different modes of transport causes significant time delays, and there is a permanent shortage of flat container trailers and vehicles and of large containers themselves. Protracted customs procedures at border crossings, inconsistent investment in different sectors of the transport chain and the sometimes poor state of major roads conspire to prevent this sector offering an integrated and high-quality logistics service to its potential customers.

The combination of all these factors explains the general reluctance among operators to use these routes for transporting freight.

In August 2008, the Russian Ministry of Transport introduced a special transit tariff for 40-foot containers being transported from Europe to China. The transit of each container from Europe via Brest (Belarus), Chop (Ukraine), Naushki and Zabaikalsk to China, would cost $400. This tariff applied from 10 August to 31 December 2008, and was then extended into 2009. The ministry thereby virtually equalised the tariffs for loaded and empty containers being transported from Europe to China. Previously it had announced that the 2007 tariffs for loaded and empty 40-feet containers would be $900 and $400, respectively. We have no information on the effects of this measure so far.

Independent analysts and shipping agents have also identified issues which they see as disincentives to transit operators: cumbersome licensing procedures; the need to obtain numerous permits for each shipment; the long wait for permits and other documents to arrive from state agencies; lengthy procedures at EU border crossing points; the extensive paperwork required by customs authorities; lack of co-ordinated inspection procedures at vehicle border crossing points; extortion by inspection officials; compulsory escorting of loads, which must be paid for; local charges (related to vehicle weight, dimensions, deviation from a route, passing through certain cities or areas, etc.); extortion on motorways and in cities; robbery; poor maintenance of roads and of vehicles; absent or incorrect signposting on roads and in cities, etc.

In our opinion, non-physical barriers are the greatest impediment to the expansion of transit operations in the region, since they result in long delivery delays. Delays not only cost the operators money, and the trust of their customers, they also erode the main competitive advantage land transit has over sea transit.

There are two complementary ways to eliminate physical and non-physical barriers. Firstly, state transport policies (in the form of strategy documents) should focus on the most pressing problems affecting the country's transport sector, which in many cases can be resolved by investing government money in transport infrastructure, reforming institutions and eliminating institutional "bottlenecks". Secondly, integration groups can address shared problems in a concerted way by prioritising mutually beneficial co-operation and employing common strategies.

In the next section we analyse these possibilities in more detail.

5. Transport strategies and targets for investment

5.1. National transport strategies and ITCs

One of the primary objectives of any government is to create the conditions in which the nation's economy can function effectively. Therefore, development of the national transport system, which is a key component of production infrastructure, is an essential prerequisite for sustainable economic growth. To eliminate the physical and non-physical barriers impeding freight transit in EurAsEC, member country governments have adopted national transport development programmes aimed at addressing the most urgent problems facing the transport sector.

Russia has adopted two national transport strategies in recent years. On 12 May 2005, the Russian Ministry of Transport adopted the Transport Strategy of the Russian Federation to 2020 (Ministry of Transport of the Russian Federation, 2005). Three years later, on 22 November 2008, the Russian Government adopted a similar strategy which extends until 2030 (Government of the Russian Federation, 2008). The amendment of the original document became necessary mainly because of the rapid change in the global economic situation. The importance of developing the national transport system was seen in a new light. Whereas in the original strategy the state merely intended to promote economic growth and prosperity by developing transport, in the 2008 strategy, the government's ambition for the transport sector is to "create the conditions that will make the national economy more competitive and improve the quality of life of the population" (Government of the Russian Federation, 2008). In other words, the state has assumed a more active role in the development of this critical sector.

The main objectives outlined by the government in its national transport sector development initiative are:

- to create a unified transport system in Russia based on developed and balanced infrastructure;
- to integrate the country into the global transport system and utilise spare transit capacity;
- to ensure that the provision and competitiveness of transport services reflect the country's commitment to innovative economic development.

Various studies are planned into the speed of cargo flows along trunk routes, delivery times, commodity structure, the development of transport logistics centres, etc. Russia will participate in international projects and programmes aimed at extending inter-regional transport links (e.g. in Eurasia), enhancing international corridors and increasing cargo transit.

The export of transport services is an important component of Russia's GDP. The government anticipates that between 2007 and 2030, the measures included in the transport strategy will increase the export of transport services by 6.8 times in revenue terms to $80 billion. Cargo weight transported is expected to increase from 28 to 100 million tonnes over the same period (see Table 6).

Mode of transport	2000	2005	2007	2010	2015	2020	2030
Total	21.8	18	27.9	34.2	42.7	60	100
Railways	20	17.4	27.2	33.1	40.3	53	76
Motor transport	0.5	0.5	0.6	1	2	2.5	3
Inland water transport	1.3	0.1	0.1	0.1	0.4	4.5	21

Table 6.
Forecast of cargo transit via Russia, mln. tonnes.

Source: Transport Strategy of the Russian Federation to 2030

Given the remit of this report, the integration component of the Russian Transport Strategy to 2030 is particularly interesting. The main objective of regional transport integration is to create a fully-functioning transport union and a unified transport system in EurAsEC. The strategy focuses upon:

- harmonising the legal framework of the transport sector and ensuring that technical and technological standards for transport are uniform across EurAsEC. These should also be in line with international standards, multilateral agreements and treaties on transport;
- eliminating discrimination in the provision of transport services and in the licensing, certification and registration of freight companies (and their representative offices or joint ventures) throughout EurAsEC, i.e., treating all companies within EurAsEC in the same way;
- removing restrictions to freight and passenger transit and utilizing the transit and transport capacity of EurAsEC efficiently;
- applying best practice identified in the CIS to the integration of transport systems, especially in the railway sector, civil aviation and the use of air space; and
- applying uniform guidelines in the formulation of tariff policies.

Kazakhstan's Transport Strategy to 2015 was adopted in April 2006. The basic objective of this strategy is to "advance the development of the transport and communications sectors in line with the economic strategy of the state". The Kazakh Government identified the following objectives:

- to integrate the Kazakh transport system into the global transport system;
- to create a modern national transport infrastructure;
- to enhance and realise transport potential; and
- to create a favourable investment climate in the transport sector.

The Kazakh government anticipates that its strategy will allow the country's transport sector to integrate easily and fully into the global transport system. The sector's assets will be modernized, and, it believes, the transport element of the price of goods can be reduced to 6.9%. Cargo transit will triple (compared with 2005) to 32.2 million tonnes. The speed of cargo traffic will increase by 15-20% on average, and by 20-30% on the main international transport corridors.

These ambitious plans will be implemented in two phases. During phase one (2006–2010), the state will invest public money and encourage private investment in transport infrastructure, tighten the legal framework, apply international standards, and further the integration of the national transport sector into the global transport system. During phase two (2011–2015), efforts will focus on "consolidating the successful implementation of the Strategy": the development programmes and institutional reforms introduced during phase one will be reviewed, and recommendations made in order to eliminate any remaining or emerging systemic problems. Following this, "the creation of an efficient transport system will be completed".

Belarus, Kyrgyzstan and Tajikistan do not have comprehensive strategies similar to those of Russia or Kazakhstan. However, these countries have addressed transport in their national development strategies, identifying goals for this sector and the means to achieve them.

The Belarusian government has formulated a transport policy to 2010, which aims to "create a competitive transport system and to develop transport and communication services and related infrastructure" (Government of the Republic of Belarus, 2005). In accordance with the Programme of Development in Belarus to 2010, adopted in 2005, and a number of other initiatives approved by the Cabinet of Ministers, the following measures will be implemented:

- the legal framework of the transport sector will be refined;
- all social groups and regions will have access to transport services;
- basic transport infrastructure will meet the needs of industry;
- management structures will be reformed and enhanced;

- competition in transport services markets will be encouraged (including passenger and freight transportation and rolling-stock repair);
- the government will create a favourable environment for investment in transport, replacement of rolling-stock, reconstruction and modernisation of transport infrastructure; and
- the government will encourage international transportation and the export of transport services.

The Kyrgyz Republic has adopted a Development Strategy for Kyrgyzstan to 2010 (Government of the Kyrgyz Republic, 2007). Its chief objective in terms of the development of transport infrastructure is to "ensure that the motorway network operates to higher standards, enabling suppliers of goods and services to minimise their transport costs, ensuring that they have access to regional and local markets, and that local markets in labour and social services can be sustained". The Government places great emphasis on the improvement of motorways, since road transport accounts for more than 95% of all cargo and passenger transportation. To this end, the Strategy to 2010 aims to:

- identify priority sections of road and set up schemes to finance the improvement of selected roads jointly with local, self-governing bodies;
- preserve the existing network of surfaced roads and gradually repair damaged roads; and
- review existing road taxes and charges which pay into the Road Fund, and establish a second-generation Road Fund by introducing a tariff for accessing and using roads.

The Republic of Tajikistan's transport system development programme is incorporated into the national Strategy for Economic Development to 2015 (Government of the Republic of Tajikistan, 2004). The Tajik Government's main objectives for this programme are to create the conditions to accelerate the socioeconomic development of the Republic of Tajikistan by increasing cargo revenues; to ensure that the demand for transport services from different economic sectors and the population is met; and to improve the quality of transport services and reduce transport costs. The government therefore intends to:

- create a common transport space in the country which will support a unified domestic market;
- co-ordinate efforts to develop transport infrastructure, design and implement construction projects (building roads, communications infrastructure, airports, etc.), and purchase new vehicles;
- integrate the national transport sector into the global transport system and create competitive international corridors in the country taking full advantage of its geographic location and transit potential;
- introduce flexible transport tariffs responding to the needs of the users of transport services and the need to renew transport sector assets.

Tajikistan's emphasis on the improvement of motorways, as in Kyrgyzstan, is a response to the country's geographic location. It is interesting to note that the government intends to play a particularly active role in TRACECA.

5.2 Targets for investment

Any country aiming to realise its transit potential must have a comprehensive investment policy which addresses all the elements required to ensure the effective functioning of its transport corridors. These elements are discussed below.

1. Railways and motorways

The construction and modernisation of railways and motorways is an obvious focus for investment in the context of transport sector development. Modern road infrastructure is an essential prerequisite for increasing the speed of cargo and passenger flows, improving traffic safety, etc.

However, transport sector priorities differ between EurAsEC countries. For example, the transport development strategies of Kyrgyzstan and Tajikistan outlined above focus on the improvement of motorways – a reaction, no doubt, to the geographic location and landscape of these countries. In contrast, the transportation of transit and other cargoes in Belarus, Kazakhstan and Russia relies principally on railways, and this necessitates continual modernisation of railway infrastructure, electrification, and the construction of "straightening" sections in order to shorten distances.

Nevertheless, Belarus, Kazakhstan and Russia also have plans to improve their motorway networks. Given the increase in cargo flows, it is clear that the railways will soon be stretched to capacity. Moreover, provision of motorways is fully in line with the principles of interoperability and interconnectivity which ultimately determine how an entire transport corridor functions. Motorway transit requires that the high quality of roads, which facilitates high-speed travel, are reflected in standards of road infrastructure (gas stations, restaurants, motels, etc.).

2. Border crossing points and border infrastructure

Failure to consider transit endpoints – which, as a rule, are border crossing points – and ensure that border infrastructure is adequately maintained, can cause serious problems. In the case of Burachki in Latvia, for example, truck queues can stretch for 50 km. The roadsides are heavily littered and local residents are unable to sell their land and houses.

Experience in China, Finland, Romania and other countries, suggests that investment in border infrastructure (motels, restaurants, loading terminals, etc.) pays for itself quickly and can generate a significant profit.

In order for an ITC to operate efficiently, which first and foremost depends on the ability to transship cargoes to other routes, the corridor must have loading terminals, power transshipment complexes, an extensive network of access roads, and the ability to transfer cargoes between different modes of transport and manage the entire process with minimal documentation. Analysis of national transport systems in EurAsEC suggests that they lack these key infrastructural elements. Such infrastructure – which is highly valued by freight operators and which therefore pays for itself quickly – includes multi-modal loading terminals which serve both transit and non-transit shipments.

3. Building railcars and renewing rolling-stock

A critical target for investment is the renewal of EurAsEC's rolling stock, since most of the rail cars currently operating in these countries are several decades old. According to Russia's Ministry of Transport and the Kazakh Ministry of Transport and Communications, depreciation of the rolling stock in these countries is between 50% and 80%. The situation is even worse in other EurAsEC countries. However, this is only part of the problem: the Integration Committee of the EurAsEC's analysis of the dynamics of rail freight transportation indicates that, given the current growth in cargo flows, availability of (obsolete) rail cars will not be sufficient to meet demand (see Figure 11). The serious shortage of containers and flat container wagons may also prevent EurAsEC countries fulfilling their transit potential. The shortage of rolling stock is already causing difficulties. Around 95% of all containers are made in China. Since it is not economically viable to maintain a domestic container manufacturing industry (Chinese supplies are very cheap), other countries rarely produce them. China's supply is practically unlimited; many containers are hired out or used elsewhere under other schemes. European companies, therefore, have to return large numbers of empty containers to China, Korea and other countries, and the United States and Europe are keen to do business with anyone willing to take empty containers from them.

Depreciation of Russia's railway sector assets is estimated at 40-60%. The country also has a shortage of flat rail wagons suitable for carrying large containers. The demand for flat rail cars is estimated at 2,000-5,000 units per annum. Although a boom in demand is unlikely, it is expected to grow steadily in the coming years. The other EurAsEC countries have no facilities to manufacture flat rail cars. There are several agreements between CIS railway companies under which the use of rail wagons is shared, and this has become common practice.

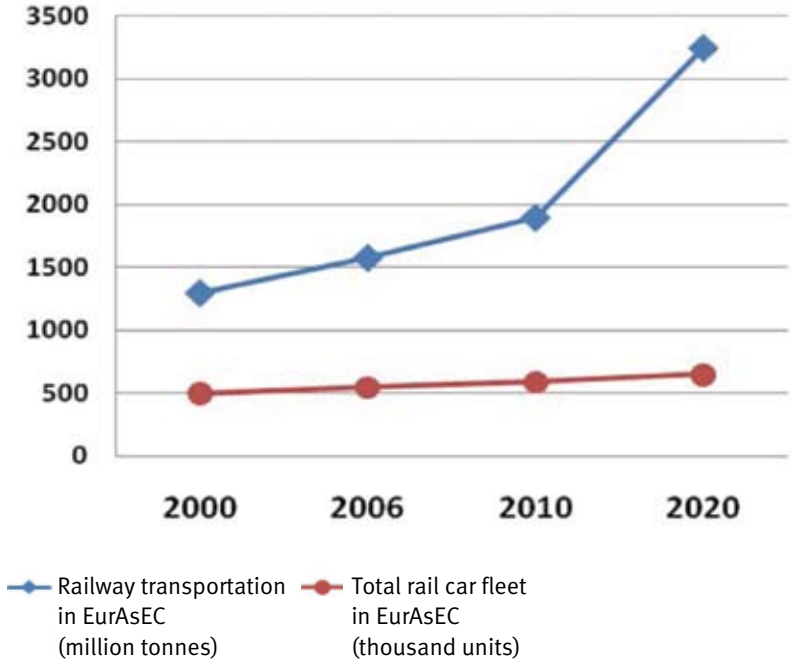


Figure 11.
Railway freight transportation and the freight rail car fleet in EurAsEC.

Source: EurAsEC Integration Committee

Transport corridor projects require thorough pre-investment studies to plot the potential location of facilities, to predict cargo flows and identify customers. This generates a great deal of documentation requiring approval by the relevant bodies. The IT and communications industries have successfully implemented many efficient investment projects. Investment in electronic document management, database administration and other equipment at border crossing points would, as a rule, generate a steady revenue stream from the start.

6. The integration of the Eurasian transport system

We believe that the integration of national transport systems is key to the elimination of most of the obstacles that restrict EurAsEC's attempts to encourage greater use of its international transport corridors for transit. The post-Soviet space has a number of integration groups whose main aim is to overcome these physical and non-physical barriers.

6.1. EurAsEC initiatives

To address the above problems, the EurAsEC Integration Committee set up the Council on Transport Policy (CTP), to bring together the ministers of transport of all the EurAsEC countries (Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan).

EurAsEC countries are committed to jointly pursuing the following goals:

1) co-ordination of activities aimed at developing the international transport corridors linking European and Asian countries;
2) the development of transport infrastructure and standardisation of technical and technological parameters across all EurAsEC transport corridors;
3) a co-ordinated policy to attract foreign investment in transport corridors;
4) refining the legal framework regulating the crossing of borders in EurAsEC;
5) a policy of harmonised tariffs and charges for freight and passenger transport, crossing borders, use of infrastructure, etc.;
6) encouraging the establishment of joint ventures engaged in international freight and passenger transportation and forwarding services;
7) co-ordinating activities to enhance traffic and cargo safety and protect the environment;
8) identifying opportunities to improve multi-modal shipments; and
9) finding the optimal location for and building new international logistics centres.

EurAsEC's purpose is to develop a Unified Transport System (UTS) and a Transport Union of its member countries. As work towards these goals has progressed, the need for extensive transport-related research has become apparent. On 25 January 2008, the Inter-state Council of EurAsEC (i.e., heads of government) adopted the UTS Development Concept. On 2 December 2008, to ensure that proposals relating to the UTS could be implemented, the 15th session of the Council approved the Measures for Developing the Unified Transport Space in EurAsEC 2008-2010, which include:

1) Developing a common transport services market

Between 2008 and 2010, in order to eliminate non-physical barriers in transport markets, national regulations within the EurAsEC pertaining to cargo and passenger transportation, and agreements between EurAsEC and third countries, will be fully harmonised. In addition, a shared information system for the transport services market will be created, and measures will be taken to ensure that the movement of passengers, luggage, freight and vehicles, including international transit, is unrestricted.

2) Joint development of transport infrastructure and a system of logistics centres in EurAsEC

In order to eliminate the physical barriers which are restricting transit and transport potential of EurAsEC, authorities will address deficiencies in the region's transport infrastructure (mentioned above) in a consistent and effective manner. They will focus on joint priorities, including plans to reconstruct national transport route sections and to assess the condition of EurAsEC's motorways by organising car trips along them.

3) Developing the transit potential of EurAsEC. The importance to the region of commercial freight transit has prompted ongoing efforts by the CTP to refine and harmonise the laws and regulations governing transit operations and insurance for transport operators.

In May 2006, to streamline the procedure of setting tariffs for rail freight within EurAsEC countries, member country heads of state approved the *General Principles for Setting and Applying Railway Tariffs for the Transportation of Cargo between Railway Stations in EurAsEC Member Countries and the Procedure for Setting Decreasing Coefficients and Tariffs for Transportation of Cargo between Railway Stations*. All member countries have completed the internal procedures required to put these documents into effect – Kazakhstan was the last to do so on 3 December 2008.

Since 1 January 2007, the international vehicle weight certification system has been used throughout EurAsEC; this reduces delays by removing the need for trucks to be weighed at every border.

On 18 April 2007, the Inter-State Council of EurAsEC agreed that member state governments would recommend to their national customs and transportation authorities the introduction of a universal (AIGTR) waybill. This would act as a customs document for the purposes of transit through EurAsEC.

The introduction of this form is a provision of the Convention on International Customs Transit Procedures for the Carriage of Goods by Rail. The Convention applies in Belarus and Russia. Kazakhstan has begun the process of signing up to it.

In December 2006, the CTP drafted a list of international agreements and conventions on transport and communications, which EurAsEC member countries were recommended to join in 2007-2008 as part of the process of integrating their national transport sectors into European and global transport systems and fulfilling the transit potential of EurAsEC.

The 14th CTP session on 22 May 2008 in Minsk reviewed the progress in implementing these measures. It asked the Commission for Harmonising the Transport Laws of EurAsEC Member Countries to prepare a progress report as at 1 January 2009 and submit it to the 16th CTP session in May 2009.

In accordance with the Agreement on Implementing a Joint Policy on the Development of Transport Corridors in EurAsEC, an assessment has begun of the condition of motorways and railways included in the list of EurAsEC trunk routes, and measures are being taken to eliminate restrictions on international road transport.

On 24 January 2008, the Integration Committee of the EurAsEC requested that the CTP and the Council of customs authority leaders redouble their efforts to ease restrictions on international road transport and present their results annually to the Integration Committee of the EurAsEC.

Following this request, the working group co-ordinating the customs and transport authorities of EurAsEC member countries met on 2-5 September 2008 to discuss the results of monitoring carried out during the first half of 2008. The group decided to present their findings on the easing of transport restrictions to the next session of the CTP and the Council of customs authority leaders.

6.2. CIS INTEGRATION INITIATIVES

The CIS Executive Committee is co-ordinating the integration of the transit and transport sectors of EurAsEC member countries. The CIS' transport policy identifies the following priorities:

- in accordance with the need to promote liberalisation and economic reform, all CIS governments adopt the agreed transport policy. The policy aims to create a common market to which all operators have equal access; to implement an agreed tariff and tax policy; to preserve and extend unified technical and technological standards for the transport sector; and to maintain a unified approach to co-operation with third countries and international organisations;
- the extension and harmonisation of transport laws by the legislature of the CIS (creating a legal basis for international relations in the transport sector; encouraging the exchange of views on laws and regulations governing the transport sector; conducting a comparative analysis of the transport laws adopted and the unification of such laws; and creating a unified legal framework for transport).

On 15 September 2004, the Council of the Heads of Government meeting in Astana adopted the Concept of Joint Transport Policy of CIS Member Countries to 2010, which outlines the following priorities:

- harmonisation of the transport laws of CIS countries based on international standards;
- co-operation on international transportation between various modes of transport;
- refinement of the tariff policy;
- development of transport logistics;
- efficient use of transit potential;
- the drafting and implementation of proposals for joint investment in key infrastructure facilities situated along international transport corridors; and
- the implementation of an agreed policy on transport safety and environmental protection (CIS Executive Committee, 2004).

Clearly the integration initiatives of the CIS differ little from those of EurAsEC. Both wish to integrate national transport systems, eliminate restrictions to transit and improve the utilization of their transport capacity. These priorities were incorporated into the Concept of Future Development of the CIS adopted by CIS government heads in October 2007 in Dushanbe. The joint action plan formulated in Dushanbe states that every CIS country will strive to:

- create a network of international transport corridors;
- draft more effective tariff policies, reducing the fiscal and administrative burden on international freight traffic;
- enhance co-operation between modes of transport engaged in freight transit.

In section 6.4, we examine the potential efficacy of these integration initiatives in the CIS and EurAsEC.

6.3. Initiative 1520

Figure 12. Major 1,520-mm gauge railways.

Source: Official website of the International Railway Business Forum 1520 Strategic Partnership: www.forum1520.ru

In May 2006, the first international 1520 Strategic Partnership rail industry forum was held in Sochi. An initiative of RZD, the forum was created to discuss transport integration in the seventeen

countries which use the 1,520-mm railway gauge (i.e., all the former Soviet republics, together with Finland and Mongolia). In these countries there is a total of more than 230,000 km of 1,520mm rail track, with 70% of all lines owned by RZD. By the end of 2008, three such forums had been held in Russia. They are recognised as a unique opportunity for discussion, attracting hundreds of rail industry players, including public officials and major companies.

The forums include round-table and panel discussions on a wide range of administrative and technical issues, analysts' reports and potential solutions. Various commercial agreements have been struck at these events between companies from the participating countries. The forums attract delegates not only from the "1520 Area", but also from Western Europe and the APR, who recognise the huge intercontinental importance of the 1,520-mm gauge network and the investment opportunities that the region's transport system represents.

For the purposes of debating the issues and opportunities of the "1520 area", the forum divides the railways into two areas – Baltic and Central Asia. At the most recent forum in Astana (December 2008), RZD and KTZ signed a Joint Action Plan for co-operation between the two companies, and discussed opportunities for mutual investment in railcar construction and logistics infrastructure.

6.4. Outlook for transport integration

Given the initiatives now under way to integrate their national transport systems, it is clear that EurAsEC and CIS member countries are very committed to a concerted approach in reforming their transit and transport industries. We believe, however, that EurAsEC is more likely to succeed in easing restrictions on transit and utilising its transport capacity more effectively. There are several reasons for this:

- EurAsEC member countries are more uniform in approach, whereas CIS countries have shown different levels of commitment to a common integration policy, in particular, in the transport sector (a number of CIS countries are relatively "passive" and have not sought to engage in closer international co-operation). The Dushanbe meeting of the Council of the Heads of CIS Governments in October 2007 revealed a lack of co-ordination in the activities of CIS member states. This meeting approved the Concept of Future Development of the CIS, which was designed to revive some "dormant" CIS initiatives (among them the integration of transport

systems). Three of the 12 participating countries (Azerbaijan, Moldova and Ukraine) signed this document with the proviso that they can opt-out of any obligations; Georgia and Turkmenistan refused to sign it at all (CIS Executive Committee, 2007).

- Since its inception, the CTP has taken a number of significant steps to foster the integration of transport systems in EurAsEC countries. In this report, we assess the activities of various bodies from the point of view of their relevance to EurAsEC members. The CIS as an organisation of ten former Soviet republics has also worked hard to further their integration (or at least to prevent disintegration).
- The Customs Union upon which the EurAsEC focuses represents the most efficient mechanism for eliminating non-physical barriers, encouraging freight transit, unifying tariff and customs policies, etc. Therefore, it is critical that the members of the Customs Union (Russia, Kazakhstan and Belarus at a time being) co-operate in the creation of an integrated transport system and a common transport policy. Tair Mansurov, General Secretary of EurAsEC, commented that all the procedures necessary to establish the Customs Union are being completed within the anticipated timescale, and the inception of the Customs Union in 2008-2010 is "absolutely feasible". (All-Russia Movement for a Fair Market, 2008).
- The bilateral agreements between EurAsEC countries, though they tend to be somewhat conservative and conventional, have nevertheless consistently proved to be an adequate basis for integration. A bilateral agreement may be a stimulus for action even where two countries are motivated only by self-interest. Even homogenous integration groups such as EurAsEC have their differences. Bilateral agreements are not a contradiction to the basic principle of integration groups; bilateral and multilateral agreements complement each other.

We also notice that *Initiative 1520* provides strong foundations for the integration of 1,520-mm gauge railway networks, and the business forums held under its aegis (including special regional forums in Central Asia) have been instrumental in eliminating physical and non-physical barriers to transportation in CIS and EurAsEC countries.

In our opinion, the task of integrating the transport systems of Russia, Belarus, Kazakhstan, Kyrgyzstan and Tajikistan in the pan-Eurasian context will be better served in its initial stages by accelerating internal integration within EurAsEC. However, pan-Eurasian integration will not be possible without first eliminating barriers within the group. We would stress that the problems associated with creating a single economic space in EurAsEC are still not adequately resolved.

Although the integration groups have made significant progress in resolving the issues discussed in this review, concerted effort is required to remove many physical and non-physical barriers to commercial transportation. EurAsEC countries must pursue a joint, well-coordinated investment policy to develop and modernise their transport infrastructure in the interests of all the member countries. It is clear that members of the group do not share exactly the same goals, and each member country's view of the benefits of increased transit will determine its contribution to EurAsEC's joint infrastructure projects. It is also important to take into account each EurAsEC member country's level of economic development and available resources (see Table 7).

EurAsEC countries	Number of investment projects	Approximate project cost (in $ billion)
Belarus	4	1.5
Kazakhstan	5	8.7
Kyrgyzstan	2	0.42
Russia	56	40.52
Tajikistan	2	0.62
TOTAL:	69	51.76

TABLE 7.
Participation of EurAsEC countries in transport infrastructure projects until 2020

Source: EurAsEC Integration Committee

7. Faster, cheaper, smoother: the priorities for the development of ITCs in EurAsEC

One of the primary objectives of this report is to identify the most efficient international transport corridor routes in EurAsEC. This task is necessary because the construction and modernisation of transport infrastructure are very capital-intensive, and the region must therefore focus its efforts on the most effective and therefore potentially profitable routes.

The criteria for selecting the best potential ITCs in EurAsEC are:

- *the time factor* – selecting the shortest distance between the main points of loading (China and Southeast Asia) and freight destinations (Western European cities) will maximise the key competitive advantage of overland routes, i.e., speed of delivery. Speed of transit via ITCs depends on their state of repair, and, just as importantly, the number of border crossing points;
- *the positive, cumulative integration effect* – ITCs should preferably pass through the territories of EurAsEC countries that are members of the Customs Union; this will greatly reduce the non-physical restrictions upon commercial transport and could, in the foreseeable future, remove them altogether (by reducing tariffs, thereby reducing transport costs and increasing the competitiveness of overland Eurasian transit routes). Countries must invest jointly in the renovation of transport infrastructure and the construction of service stations and logistics centres.

Given these criteria, the priority transit routes for EurAsEC are the Northern corridor of the trans-Asian railway (connecting with the Trans-Siberian Railway) and the Western Europe – West China motorway which is nearly 10,000 km long. In addition, the North-South ITC should also be considered as EurAsEC's best potential route to South Asia.

This is in no way to suggest that alternative international routes should no longer be considered. Additional ITCs will be instrumental in realising the region's transit potential and diversifying cargo flows, i.e., serving more loading and destination points.

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Journal of Eurasian Economic Integration

The Journal of Eurasian Integration is a quarterly academic and analytical journal published in Russian by the Eurasian Development Bank. The members of Editorial Board and Advisory Council are distinguished academicians, practitioners and experts in regional integration. Eurasian Economic Integration brings together academic and analytical articles, reviews of books relating to regional integration, interviews and quarterly chronicles of regional integration. With its focus on economics, the journal is a rich source of material addressing a broad range of issues specific to Eurasian integration. These include integration theory and its relevance to the development context; economic integration (trade, investment, financial institutions); institutional integration; cooperation issues in the post-Soviet space; and international experience of regional integration. The first issue was published in the third quarter of 2008.

Requirements for submissions. Papers should be sent by e-mail to editor@eabr.org for blind review. There are no strict limitations on the length of articles. However, the Editorial Board recommends authors to adhere to 6,000-8,000 words or 30,000-40,000 characters. In addition to the main text, authors must a brief author(s)' biography (100-150 words), executive summary (100-150 words) and bibliography. These materials must be attached in a separate file.

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Industry Reports

As of today the following Industry Reports have been published and distributed:

• Nuclear Energy Complexes in Russia and Kazakhstan: Prospects for Development and Cooperation. April 2008.

• Water and Energy Resources in Central Asia: Utilization and Development Issues. April 2008.

• The CIS Common Electric Power Market. August 2008.

• The Eurasian Development Bank's Investment Policy and the Environment. February 2009.

http://www.eabr.org/rus/publications/AnalyticalReports/

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