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Measures being taken by the Organization for Cooperation between Railways in relation to Euro-Asian (rail) transport corridors

Transmitted by the Committee of the Organization for Cooperation between Railways

In contrast to transport conditions in European States, railway links among the member countries of the Organization for Cooperation between Railways (OSZhD) are notable for lengthy routes (8,000-10,000 kilometres) in a variety of climatic zones (including areas with severe weather conditions) and two changes of gauge during transport in a single direction (1,435 mm - 1,520 mm - 1,435 mm).

Transport operations between Europe and Asia are governed by regulations which differ somewhat from those in Western Europe, and which call for the improvement and coordination of transport conditions. The large number of border crossings must also be taken into consideration. On the basis of analysis of the specific features of the transport process as mentioned above, OSZhD is ensuring coordination of agreed actions by railways taking into account their compatibility in technical, technological, legal and tariff terms with the transport system in operation in Europe.

In 1996, 13 main railway routes between Europe and Asia were identified by the Organization on the basis of research on flows of goods between European and Asian countries.

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Analysis of technical and operational indicators and the technical equipment of these 13 routes showed that individual railway lines and sectors in most countries meet the requirements of the European Agreement on Main International Railway Lines (AGC) and the European Agreement on Important International Combined Transport Lines and Related Installations (AGTC) in respect of many parameters, but not in respect of minimum design speed for passenger and freight trains and the presence of level crossings.

With a view to the agreed development of transport infrastructure in the period 1996-2001, data on infrastructure in rail transport corridors were collected and analysed, issues related to border crossings and the scope for improving freight transport technology were studied, and comprehensive measures for improving the organization of international rail transport operations along the transport corridors were drawn up.

Interested countries signed memorandums of understanding for the development of the corridors, which served as a basis for coordinated actions by States to reorganize and modernize railway lines.

The geography of transport flows has changed significantly over the past five years.

Between 1998 and 2001, on the basis of proposals made by the member countries of OSZhD, efforts were made to refine the Organization's System of Rail Transport Corridors. The results were agreed and adopted in August 2001. The document drawn up provides for the long-term development of intercontinental links along the main railway routes.

Revised OSZhD railway transport corridors between Europe and Asia (situation on 24 August 2001) and measures being taken in relation to Euro-Asian rail transport corridors

Corridor No. 1

Passes through Poland, Latvia, Lithuania, Estonia, Belarus, Russia, Kazakhstan, Uzbekistan, China, Mongolia and the Democratic People's Republic of Korea (and the Republic of Korea in the future).

Route:

Kunowice-Warszawa-Brest-Minsk-Moskva-Nizhny Novgorod-Kotelnich-Perm-Sverdlovsk (Ekaterinburg)-Omsk-Novosibirsk-Krasnoyarsk-Irkutsk-Zaudinsky plant-Karymskaya-Volochaevka-Nakhodka/Vanino/Khasan.

Overall length of the corridor (without branch lines) - 12,233 km, including 10,939 km in Russia (from Krasnoe to Nakhodka). The entire route is double-track and electrified. Length of station track - 750-1,050 m.

The tonnage rating for freight trains on the Russian sector of the corridor stands at 3,500-4,500 tons, while authorized speeds are 80-140 km/h for passenger trains and 80-90 km/h for freight trains. The carrying capacity on the trans-Siberian sector of the corridor is 100-110 million tons of freight per year. There is a margin of unused carrying capacity of the order of 25-30%.

The condition of the infrastructure has been examined, and measures have been devised to increase the volume of transport operations. The countries along the corridor have come to the conclusion that the parameters relating to the railway lines in the corridor are not a limiting factor.

As a result of the phased modernization of infrastructure and the organizational measures adopted, 107,000 TEU containers carrying export-import and transit goods were transported along corridor No. 1 in 2001. The growth in transit operations was made possible by an increase in the rolling stock transporting containers between the port of Pusan (Republic of Korea) and the port of Vostochny (Russia), and an expansion in the Russian Ministry of Railways' container fleet. In addition, a new technology was devised and introduced which allows containers to be loaded and shipped from the port of Vostochny 24 hours a day. Thanks to the new technology, 150 wagons with containers can be shipped each day, instead of 80 at the beginning of 2001.

Together with the Chinese railway administration, a project was implemented for the organization of a container train between Beijing and Moskva, which currently runs four times a month as space is filled. In 2001 2,110 TEU containers were carried on this train.

Container trains cover around 1,000 kilometres per day. In 2001 the track of the Trans-Siberian Railway was strengthened, enabling the speed of container trains to be increased to 1,200 km per day.

Express container train schedules are being drawn up under which containers will be carried from Nakhodka to Brest in 12.5 days.

Under a pilot project involving German, Polish and Russian railways, a system of tracking documentation for the express trains "Eastern Wind" and "Russia Express" is being devised using the international data transfer standard.

Using the Brest computing centre, an integrated computer system for the operation of the Małaszewicze (Poland)-Brest (Belarus) border crossing was developed, which allows for electronic document exchange between the neighbouring border stations. Copies of electronic shipping and transfer documents are created together with the originals and are used in the operations of the border stations, and also for information purposes.

With the aim of reducing the time spent by wagons and containers at transfer stations, the Belarus railways, together with the State Customs Committee, have developed a simplified procedure for customs processing of goods carried by through trains. A simplified form of the delivery sheet is used, which does not require a detailed description of the goods and their value, making it possible to reduce the time spent by the goods at Brest.

Regulations for joint efforts to facilitate transit shipments of freight on through trains have been introduced. This will allow the use of additional copies of the waybill to confirm delivery, which will make it possible to reduce the waiting time for trains at border stations.

A new legal framework has been developed for organizing freight shipments on the railways of Germany, Poland, Belarus and Russia using a single shipping document, and an agreement on a direct rail freight link between these States has been signed, making it possible to simplify the shipment process and speed up the movement of goods.

In August 2003, under the four-party agreement between the railway administrations of Germany, Poland, Belarus and Russia, the programme of joint activities on the first OSZhD corridor - Berlin-Warszawa-Minsk-Moskva (Crete II) - was reviewed in Warsaw. The heads of the four railways approved and adopted measures in the field of freight transport, passenger transport and infrastructure.

The following specific activities are planned for the development and improvement of this corridor:

- In 2004, construction at Brest station of a device for automatic gauge-switching between 1,435 mm and 1,520 mm wheelsets;
- Modernization of the entire transport corridor (from Berlin to Moscow) by the year 2010, raising traffic speed to 160 km/h;
- Also agreed are measures to simplify customs procedures and speed up the reformatting of consignment notes.

Corridor No. 2

Passes through Russia, Kazakhstan, China and Viet Nam.

Route:

Moskva-Kazan-Sverdlovsk (Ekaterinburg)-Kurgan-Petropavlovsk-Astana-Druzhba-Alashankou-Urumchi-Zhenzhou-Suzhou-Lianyungang.

Overall length of the corridor (without branch lines) - 8,048 km.

From Moscow to the Chinese border the specifications of the route are almost identical to those of corridor No. 1, while beyond to the port of Lianyungang they are inferior in terms of centralized traffic control (CTC) and communications, sector speed and tonnage ratings. On part of the line there are single-track non-electrified sectors.

The annual flow of goods is 23-55 million tons net, with spare capacity of 15-18%.

For goods from western and central China and south-east Asia to the west, the route through China, Kazakhstan and onward to Russia or Uzbekistan is shorter.

The volume of trade between Kazakhstan and China has grown sevenfold in the past decade to US\$ 1 billion.

In accordance with the agreed measures, major operations are being carried out on the Aqtogai-Druzhba sector in Kazakhstan to modernize the infrastructure. Planned measures include major track repairs, reconstruction of buildings and installations, and strengthening of CTC, communications and energy supply systems. Around US\$ 90 million are required for these measures in the period 2002-2005, including over US\$ 6 million for the development of the Druzhba border crossing.

Activities on a larger scale are under way and planned on the Chinese sector of corridor No. 2, from Alashankou station to the port of Lianyungang. Scheduled activities include reconstruction and modernization of the permanent way (including the construction of double tracks), strengthening of the energy supply, CTC and communications systems, etc., modernization of existing rolling stock and acquisition of new rolling stock. A total of US\$ 1,700 million has been allocated for these purposes.

With the aim of further development of container transport, an agreement was concluded between Kazakhstan and China in 1998 on the joint use of the two countries' containers.

In 2000 Kazakhstan purchased 1,000 high-capacity containers which were certified as meeting world standards.

On corridor No. 2 test runs of express container trains were also carried out on the route China-Kazakhstan-Russia-Belarus-Poland-Germany, carrying goods from the western regions of China. The delivery time of goods on this itinerary is 12-14 days, with a speed of 800-950 km per day.

Corridor No. 3

Passes through Poland, Ukraine and Russia.

Route:

Zgorzelec-Wrocław-Opole-Katowice-Kraków-Medyka-Mostyska-Lviv-Zhmerynka-Kyiv-Zernovo-Suzemka-Moskva.

Overall length - 2,209 km. The entire route is double-track and electrified. Tonnage rating 2,800-3,600 tons. Through speed is low - 200-300 km per day (except for the Russian sector). Annual flow of goods - 5-45 million tons net.

Between 1995 and 1999 data relating to infrastructure were collected and analysed, and issues related to border crossing and the scope for improving the technology of international transport operations were examined.

In 1999 comprehensive measures for the development of corridor No. 3 were agreed.

In the period 1999-2001 major track repairs were carried out on a stretch of over 860 km along international transport corridor No. 3.

Work is under way at Mostyska (Ukraine) border station in the form of major repairs to the station and the technical service unit and the organization of a local computer network.

Work is being completed on the introduction of adjustable-gauge wheelsets with automatic gauge-switching on the Przemyśl-Mostyska and Dorohusk-Yagodin sectors.

The use of this technology will significantly shorten waiting time for trains at border stations.

A memorandum of understanding relating to corridor No. 3 has now been signed by all parties.

The countries along this corridor have decided to continue the practical introduction of comprehensive measures on a bilateral basis. It was noted that they can propose services attractive for clients provided that delivery times are reduced, security is assured and tariffs agreed.

Corridor No. 4

Passes through the Czech Republic, Slovakia, Hungary, Poland and Ukraine.

Route:

Děčin-Praha-Česka Třebova-Přerov-Hranice na Moravě-Žilina-Košice-Chop.

Overall length - 877 km. Double-track itinerary, electrified. Annual flow of goods - 8-15 million tons.

Fundamental work has been carried out on track modernization and raising traffic speeds for passenger trains (to 140 km/hour on certain sectors).

Corridor No. 5

Passes through Hungary, Slovakia, Ukraine, Russia, Kazakhstan, Georgia, Azerbaijan, Moldova, China and Kyrgyzstan.

Route:

Bayanshenye/Sopron/Hegyeshalom/-Budapest-Záhony-Chop-Stryi-Lviv-Krasne-Zhmerynka-Fastiv-Darnitsa-Hrebinka-Poltava-Kharkiv-Topoli-Valuiki-Penza-Kinel-Kurgan-Presnogorkovskaya-Kökshetaū-Aqtogay-Druzhba-Alashankou-Urumchi-Lanzhou-Lianyungang.

Overall length - 11,539 km. Specifications are the same as for corridor No. 1. Tonnage ratings are lower on the Hungarian sector. Annual flow of goods - from 8 to 60 million tons.

The state of the infrastructure has been studied and measures have been drawn up to raise the volume of traffic. The States along the corridor have reached the conclusion that the parameters of the railway lines in this corridor are not a limiting factor. All the States along the corridor have signed a memorandum of understanding, which is being implemented in stages.

For the Hungarian sector of corridor No. 5, Hungarian Railways have adopted a development plan for the period 2002-2006, the main purpose of which is modernization of railway lines, stations and terminuses, CTC and communications installations, and also replacement of rolling stock. The cost of this investment is estimated at US\$ 1 billion.

The largest investment projects relate to modernization of 60-70 km of track each year in the sectors Budapest-Wien, Budapest-Székesfehérvár and Budapest-Miskolc-Záhony.

The maximum speed on certain sectors is being raised in stages to 120-160 km/hour.

By the end of 2003 Hungarian Railways will purchase ten 200 km/h electric locomotives with dual power supply systems, and this will make it possible to reduce train waiting times at border crossings. The delivery of 53 diesel multiple-unit trains is continuing.

A special project for station reconstruction has been drawn up.

On Ukrainian sector No. 5 major work is also under way on track repair (285 km in 1999-2001), line electrification (Krasnoe-Zhmerynka) and reconstruction of locomotive and wagon depots.

Reconstruction of Kiev passenger station was completed in 2002.

A damaged tunnel in the Lavochne-Chop sector is a bottleneck in this corridor.

Reconstruction (US\$ 30 million) or the drilling of a new tunnel (US\$ 130 million) are required.

Corridor No. 6

Passes through Slovakia, Hungary, Romania, Yugoslavia, Bulgaria, Greece, Turkey, Iran and Turkmenistan.

Route:

Bratislava-Budapest-Arad-Craiova-Calafat-Vidin-Sofia-Saloniki/Istanbul-Ankara-Lake Van ferry-Teheran-Sarakhs-Saparmurat Turkmenbashi, thereafter following corridors Nos 10 and 2.

Overall length - 6,082 km.

It is planned to begin modernization of the sectors Budapest-Lökösháza and Budapest-Kiskun-Félegyháza, on which speeds will be raised to 120-140 km/hour.

Corridor No. 7

Passes through Poland and Ukraine.

Route:

Gdańsk-Warszawa-Lublin-Dorohusk-Yagodin-Zdolbuniv-Kozyatyn-Zhmerynka-Razdelnaya-Odesa.

Overall length - 1,513 km.

In 2001 350 km of track was repaired, while in 2000-2001 construction work was carried out on electrification of the Ukrainian sector of the corridor over 148 km from Zdolbuniv station to Kovel station. Work was also completed on construction of an optical fibre link on the Rivne-Kovel sector.

At the border stations of Yagodin and Izov, work continues to develop communications facilities and install computers.

In 2001 a container train began to run between Gdańsk and Odesa.

Corridor No. 8

Passes through Ukraine, Russia, Kazakhstan, Uzbekistan and Turkmenistan.

Route:

Fastiv-Znamianka-Nizhnedneprovsk junction-Krasnaya Mogila-Gukovo-Likhaya-Volgograd-Verkhny Baskunchak-Aksaraiskaya-Makat-Beyneu-Naimankul-Nukus-Uchkuduk-Navoi.

Overall length - 3,619 km. Technical specifications are high on the Russian and Ukrainian sectors, lower on the sectors in Kazakhstan and Uzbekistan.

In Uzbekistan, construction of the new 342-km rail line from Uchkuduk to Nukus was completed in 2001. Reconstruction of the existing line on the Navoi-Uchkuduk and Sultanuizdag-Nukus-Naimankul sectors over a total distance of 396 km is under way. Ten stations are located on the newly constructed line, with 1,050 m of receiving and dispatch tracks.

A token system is currently used on this line, so that the stations are equipped with electric signalling and the line sections with coded circuit blocking.

In stage two, electrification of an entire sector of the new railway line is also planned.

Along the new railway line in Uzbekistan, a 20% reduction from current international transit charges has been agreed for transit goods.

Corridor No. 9

Passes through Lithuania, Belarus and Russia.

Route:

Klaipėda/Draugyste-Šiauliai-Kaišiadorys-Vilnius-Minsk.

Length - 567 km.

In 1995 a memorandum of understanding for the development of this corridor was signed in Vilnius.

In the period under review major repairs were carried out on 440 km of track in the Lithuanian sector of the corridor, and over 200 km of telecommunications were modernized using optical fibres. By 2004 the track in corridor No. 9 is to be completely reconstructed, including 47 bridges and viaducts. A project for the reconstruction of Klaipėda seaport with a rail link has been prepared, and work has begun on the development of border stations. Major work continues on the sectors of the corridor in Belarus and Russia to reconstruct and modernize tracks and border crossings.

As a result of the measures already taken, a weekly through train began running between Odesa (Illichivsk) and Klaipėda "Viking" in 2003.

Corridor No. 10 (TRACECA)

Passes through Ukraine, Bulgaria, Romania, Georgia, Azerbaijan, Uzbekistan, Turkmenistan, Kyrgyzstan, Kazakhstan and Tajikistan.

Route:

Odesa/Illichivsk/Constanța/Varna/Burgas-Poti/Batumi-Tbilisi-Baku-Krasnovodsk (Turkmenbashi)-Saparmurat Turkmenbashi-Bukhara-Jizzakh-Khavast-Tashkent-Arys-Lugovaya-Aqtogai, thereafter following corridor No. 2.

Overall length of the route - 4,389 km. The sectors in Georgia and Azerbaijan are fully electrified. On the sectors in Uzbekistan, Turkmenistan and Kazakhstan there is mixed diesel and electric traction. Sector speeds are between 23 and 42 km/hour. Tonnage ratings are 2,500-4,500 tons. Annual flow of goods - from 14 to 17 million tons net. In 2000-2001, freight carried on the Georgia-Azerbaijan sector of TRACECA was five to six times the 1996 level.

Work has been carried out in OSZhD on the TRACECA transport corridor since 1998.

Under the "Basic Multilateral Agreement on International Transport for the Development of the Transport Corridor Europe-Caucasus-Asia", signed in Baku on 7 and 8 September 1998 by 12 heads of State and government, the Permanent Secretariat of the TRACECA Intergovernmental Commission was set up with its headquarters in Baku.

On the Georgian sector of the TRACECA corridor a large volume of work has been carried out in reconstructing and modernizing infrastructure and developing ports.

Ferry complexes have been constructed in the ports of Poti and Batumi, providing a rail ferry link with Ukraine (Illichivsk) and Bulgaria (Varna).

The port stations of Batumi and Poti have appropriate infrastructure for accepting 1,520-mm-gauge rail ferries from Illichivsk, and after reconstruction of Batumi station with 1,435-mm gauge tracks has been completed at the end of 2003, a rail ferry will begin to run from Konstanța to Batumi with wagons of Western European gauge.

There is a ferry connection between Turkmenbashi and Baku.

In 2002 a ferry link was opened across the Caspian Sea between Aqtaū (Kazakhstan) and Baku (Azerbaijan).

On the remaining sectors of the TRACECA corridor work is also being carried out to modernize the permanent way, power supply installations, CTC systems and communications.

In 2002 a "Comprehensive plan for development of the Europe-Caucasus-Asia corridor" was drawn up and a start made on its implementation.

Corridor No. 11

Passes through Russia, Azerbaijan and Iran.

Route:

Buslovskaya-Vyborg-Sankt-Peterburg-Bologoe-Moskva-Kochetovka-Rtishchevo-Saratov-Volgograd-Verkhny Baskunchak-Astrakhan-Karlan Yurt-Makhachkala-Baku-Osmanly Novye-Astara-Rasht-Qazvin-Teheran-Bafq-Bender-Abbas.

Length - 5,391 km. Technical and operational characteristics are fairly high. Annual flow of goods from 10 to 35 million tons.

Major investment is planned to modernize the infrastructure on individual sectors and reconstruct ports on the Caspian Sea.

Corridor No. 12

Passes through Moldova, Romania and Bulgaria. Length 1,327 km.

Route:

Volcinet-Ocnita-Ungheni-Iasi-Bucuresti-Ruse-Varna/Dimitrovgrad.

Of the 1,327 km of track, 651 km are single-track sectors.

In the sector in Moldova, 24 km of railway track have been repaired.

Work is being carried out to reconstruct the locomotive depot, CTC systems and communications. A rail-welding unit has been brought into operation.

Track-strengthening work is being carried out on the sector in Romania. Major repairs are planned between now and 2005 over 380 km of railway track.

On the sector in Bulgaria 24 km of track have been repaired. By 2005 renewal of over 100 km of track is planned.

Corridor No. 13

Passes through Russia, Estonia, Latvia, Lithuania and Poland.

Route:

Tallinn/Sankt-Peterburg-Tapa-Valga-Riga-Šiauliai-Kaunas-Šeštokai-Trakiszki-Suwałki-Białystok-Warszawa.

Length - 1,488 km.

A memorandum of understanding for the development of the transport corridor was signed by the States bordering the corridor in July 1997.

In 2000 the States bordering the corridor finalized a study of actions needed in this area, which was published in the form of a White Paper.

Major track repairs and modernization of the signalling and telecommunications systems are under way.

At the end of 2000, automatic gauge-switching facilities were brought into operation at the Trakiszki/Mockava border crossing.

Work is being carried out to organize through carriages along the route Warszawa-Vilnius-Riga-Tallinn.

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On the basis of the work on transport corridors carried out in recent years, it can be said that the railway infrastructure of the OSZhD countries in most cases has substantial spare track and carrying capacity. The bottlenecks in infrastructure (with restricted track capacity) are border crossings and approaches to major cities and ports.

In all OSZhD member countries the corridors are viewed as priority investment projects for railway development. Rehabilitation and modernization of railway infrastructure are carried out continuously so as to bring it into line with international standards.

Efforts are being focused on major track repairs and modernization, electrification of sectors, modernization of signalling and communications, and computerization.

In most of the countries blueprints have been developed for raising passenger train speeds by stages to 160-200 km/hour.

Journey times for trains on the following routes have been substantially shortened: Moskva-Nizhny Novgorod, Moskva-Rostov-Adler, Sankt-Peterburg-Adler and Kiev-Kharkiv. The Moskva-Sankt-Peterburg railway line has been modernized to allow the passage of high-speed trains. Kazakhstan railways have carried out tests with a view to enabling a "Talgo" passenger train to run at express speeds on the Astana-Almaty sector. The maximum speed allowed on the Beijing-Harbin, Beijing-Shanghai, Beijing-Guangzhou, Beijing-Jiulong (Kowloon), Lianyungang-Lanzhou and Lanzhou-Urumchi main lines is 160 km/hour. The length of higher-speed lines has been raised to 13,000 km, enabling journey time for passenger and goods trains to be reduced significantly. Journey time for passenger trains on the Beijing-Urumchi route has been cut from 71 to 48 hours. In 2002 a special passenger line was constructed between Qinghuangdao and Shenyang, which will achieve an operating speed of over 160 km/hour after its entry into operation.

The comprehensive measures introduced to improve and develop transport corridors have made it possible to ensure steady growth in volumes of freight traffic over the past three years, essentially as a result of modernization of infrastructure, raising of traffic speeds and growth in container operations along much of the length of the corridors. The increase in the volume of freight traffic in 2002 compared with 2001 in all countries (under OSZhD) amounted to 3.4%, while results expressed in terms of ton-kilometres rose by 5.5%.

The length of electrified lines rose substantially. Their share in the total operational length of the OSZhD railway network was almost 38%, which also led to an increase in the volume of traffic. It should be noted that electric traction, the environmentally sound form of traction, is first introduced in the main transport corridors. A momentous event was the completion of electrification of the Trans-Siberian trunk route in 2002.

The work carried out under OSZhD, and various other research projects conducted in a number of OSZhD member countries, once again confirm that rail is the most environmentally sound mode of transport.

Thus, in terms of each unit of energy consumed, rail transport is significantly better, i.e., for the same expenditure of energy resources on railways, a significantly larger volume of freight may be carried. The energy efficiency of rail transport is two or three times greater than that of road transport for both freight and passengers.

The railways of the OSZhD member countries worked actively to increase the volumes of container operations on through trains.

Efforts were devoted to creating new through container trains on the railways of Russia, Ukraine, Kazakhstan, China, the Czech Republic, Slovakia, Hungary, Lithuania and Belarus.

Through container trains began to run weekly between Istanbul (Turkey) and Almaty (Kazakhstan).

On the railways of Ukraine container trains and block trains, and also trains engaged in combined transport, run along the international transport corridors following specially developed schedules. Container trains are also being organized on new routes.

In 2003 alone trains engaged in combined transport were organized and run weekly on the routes Illichivsk-Klaipėda "Viking" and Kiev-Slavkuv "Yaroslav". In keeping with the provisional regulations governing this technology, these trains may include wagons carrying road trains, as well as high-capacity multipurpose and special-purpose containers. In order to transport and feed the lorry drivers, the trains include passenger wagons with compartments, and a restaurant car or a café car. The railways participating in train scheduling identify operators which ensure coordination with other modes of transport in attracting goods for carriage, conclude contracts, and where necessary serve as consignors and consignees of road trains.

Since April 2003 the train "Yaroslav" has been running weekly combined transport operations from Kiev to Slavkuv and back through the Izov-Hrubieszów border crossing. The journey from Kiev to Slavkuv is effected on 1,520-mm wheelsets without trans-shipment at the border.

Experience with the first few journeys showed keen interest on the part of road transport operators transporting goods in the direction Ukraine-Western Europe.

In order to raise efficiency and achieve competitive results from the operation of these corridors, the following tasks must be addressed:

Simplification (acceleration) of border-crossing procedures. Border agencies, customs bodies and railways must achieve a comprehensive solution of this issue by setting a maximum permissible time for these procedures in the form of government decisions, legislation, etc. adopted by the neighbouring States;

More rapid modernization of the infrastructure of the corridors and their technical equipment so as to meet AGC and AGTC requirements as regards higher speeds and multi-level track intersections;

Intensification of efforts to organize regular container train traffic so as to increase volumes of freight carried along each transport corridor. To this end, efforts to create logistics centres within transport corridors should be stepped up;

Making extensive use of piggy-back semi-trailers, both for environmental reasons and with a view to reducing road traffic and enhancing road safety;

Following the example of Austria and Switzerland, adoption of legislation and regulations restricting the use of transport corridors by large-capacity road vehicles;

More effective use of spare track capacity and carrying capacity and greater volumes of freight operations on the broad-gauge line between Ukraine and Poland;

Stepping up of work on raising train speeds by stages, starting with the slowest sectors;

Special attention to environmental issues and minimizing the impact of rail transport on the environment.
