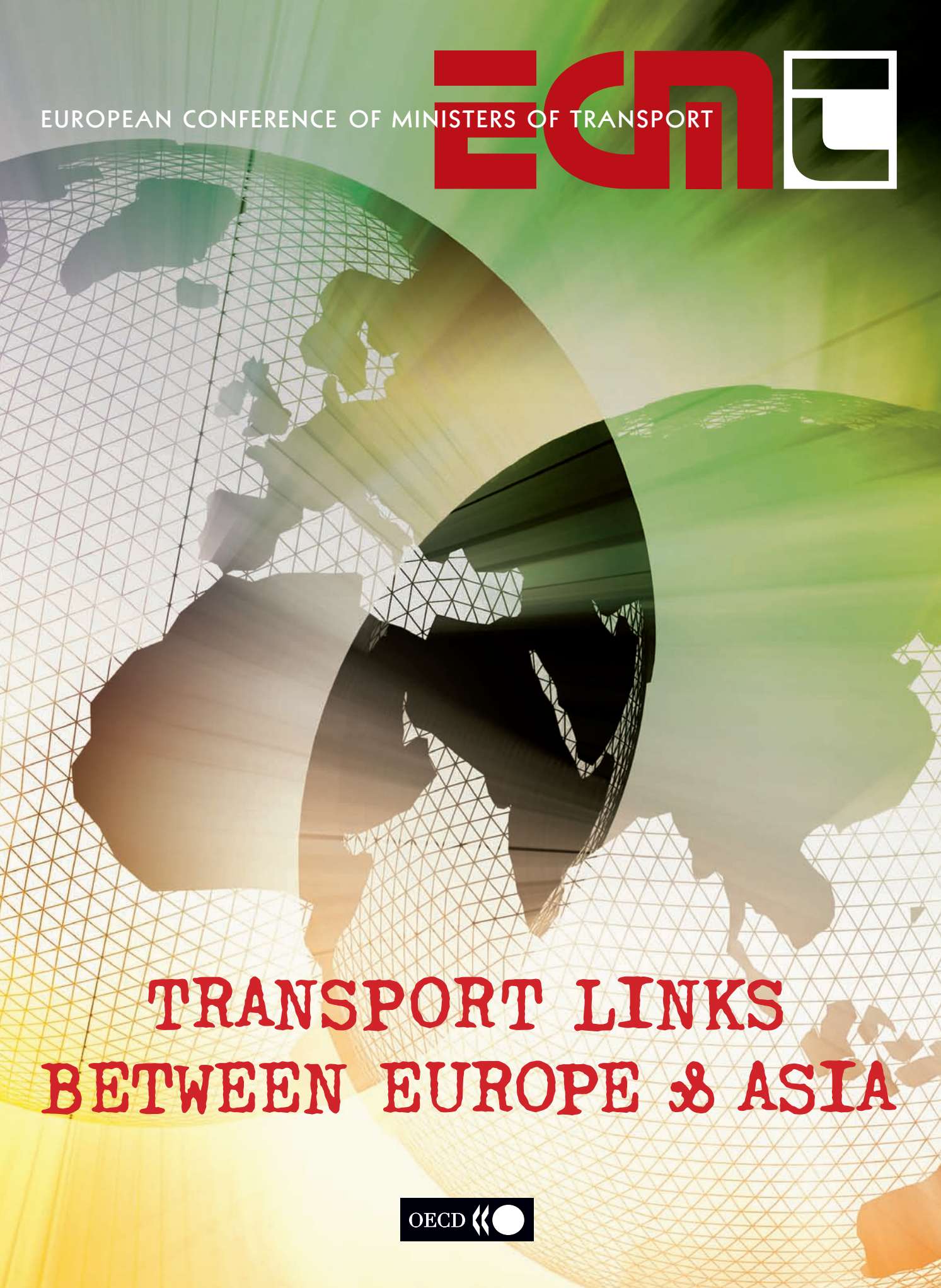
EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT



TRANSPORT LINKS BETWEEN EUROPE & ASIA

OECD

EUROPEAN CONFERENCE OF MINISTERS OF TRANSPORT (ECMT)

The European Conference of Ministers of Transport (ECMT) is an inter-governmental organisation established by a Protocol signed in Brussels on 17 October 1953. It comprises the Ministers of Transport of 43 full Member countries: Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, FRY Macedonia, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom. There are seven Associate member countries (Australia, Canada, Japan, Korea, Mexico, New Zealand and the United States) and one Observer country (Morocco).

The ECMT is a forum in which Ministers responsible for transport, and more specifically the inland transport sector, can co-operate on policy. Within this forum, Ministers can openly discuss current problems and agree upon joint approaches aimed at improving the utilization and at ensuring the rational development of European transport systems of international importance.

At present, ECMT has a dual role. On one hand it helps to create an integrated transport system throughout the enlarged Europe that is economically efficient and meets environmental and safety standards. In order to achieve this, it is important for ECMT to help build a bridge between the European Union and the rest of the European continent at a political level.

On the other hand, ECMT's mission is also to develop reflections on long-term trends in the transport sector and to study the implications for the sector of increased globalisation. The activities in this regard have recently been reinforced by the setting up of a New Joint OECD/ECMT Transport Research Centre.

Also available in French under the title:
Les liaisons de transport entre l'Europe et l'Asie

Further information about the ECMT is available on Internet at the following address:
www.cemt.org

FOREWORD AND ACKNOWLEDGEMENTS

Sea transport will continue to be a key player in the Europe-Asia transport market in the future, of that there can be no doubt. There are nonetheless two factors currently driving the diversification of routes and the opening of new inland links between Europe and Asia: the virtual monopoly of sea transport, a source of increasing problems for land access to ports; and the need to meet the demands of regional trade developing along Europe-Asia corridors.

Economic analysis shows that in a number of cases land links can offer a viable alternative to sea transport, substantially improve the accessibility of the countries they pass through and absorb quite a substantial portion of the strong growth in traffic, particularly container traffic, that has been forecast.

However, establishing efficient inland links between Europe and Asia poses a number of problems that can only be overcome by taking the appropriate policy decisions on issues such as the development of adequate transport infrastructure and the removal of regulatory or institutional barriers that prevent the development of efficient transport services.

It was with this aim in view that the issue was put to the ECMT's Council of Ministers and that the Council, at its 2005 session in Moscow, adopted a document recommending a whole series of actions for developing a comprehensive approach to the provision of efficient inland transport links between Europe and Asia in consultation with all of the interested parties.

This publication features the document approved by the Ministers as well as the *Report on Trends in Europe-Asia Trade and Consequences for Transport*, which served to inform the Ministerial debate in Moscow. The report was drafted by NESTEAR under the direction of Mr. C. Reynaud to whom the ECMT is extremely grateful for the high standard of the work carried out.

Intermodal transport is one of the viable alternatives for managing the expected growth in traffic between Europe and Asia. At the Ministerial session in Moscow, Ministers also adopted a plan of action aimed at facilitating the development of intermodal haulage on links between the two continents. The plan of action is based on the conclusions of a previous seminar in Kiev on the topic *Intermodal Transport between Europe and Asia: opportunities and challenges*. These are also included in this publication.

Intergovernmental and professional organisations on an international level contributed papers to the Ministerial session in Moscow and these have also been included in the publication. The ECMT wishes to express its sincere thanks to the UN-ECE and the IRU for their co-operation in this area and for their permission to reproduce their papers in this publication.

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PART I.

EUROPE – ASIA LINKS

SYNTHESIS REPORT AND POLITICAL DECISIONS REQUIRED

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1. The growth in trade between Europe and Asia and the consequences for transport

ECMT report CEMT/CM(2005)13 (See Part II) on trends in trade between Europe and Asia and the consequences for transport very clearly shows that trade between the two continents has accelerated sharply in recent years, partly as a result of the development of Eastern Asian countries, chiefly China, but also as a result of the emergence of the economies of Russia and the countries of Central Asia. This has engendered a wider geographical dispersal of trade flows, a phenomenon that is crucially important for defining the main routes for international trade between Asia and Europe and not just for trade between either extremity of the two continents, but also for trade between major centres in the interior of the continent of Eurasia.

The observed growth in trade has been seen equally in energy products (gas and oil), which play a key role in exports by CIS countries, raw materials and intermediate products (cement, steel, timber) boosted by major construction programmes, manufactured products and assembly parts (traffic associated with the delocalisation of assembly plants). It has produced strong, highly diversified and in many cases sophisticated demand for international transport, with heavy logistical constraints.

The available projections suggest that the trends recorded since the early 2000s could continue over a 15 to 20-year timeframe, even if it declines a little. Against an overall backdrop of internationalisation and globalisation, trade flows between Europe and Asia, including energy products, raw materials and intermediate products, as well as high value-added products, signals the possibility of a stronger demand on major routes linking the two continents should not be ruled out. China's share in world oil consumption looks set to increase fourfold in 20 years, at a time when major shifts in the geographical distribution of oil production are expected, with the Caspian Sea forecast to play a larger role. It is therefore essential that the transport required to meet these trade needs be provided under satisfactory conditions and that solutions be found to the problems that are apparent in this sector.

One of the main effects of the development of trade between Europe and Asia has been the faster growth of maritime container traffic, at rates in the order of 6% per year. This phenomenon has been accompanied by the use of steadily larger vessels and by rates that have fallen to extremely low levels (less than USD 700 per TEU from Europe to Asia). The available estimates put the number of containers that will depart from ports in Eastern Asia for Europe in 2005 at more than 3 million. Two billion tonnes of freight passed through ports in China alone in 2002, representing an increase of more than 20% in the previous year.

The growth in maritime transport, which has carried the bulk of Europe-Asia trade flows to date (for comparison purposes, container traffic carried by Trans-Siberian rail, which reached record levels in 2004 still accounted for only 155 000 TEU), has been becoming increasingly concentrated in both Europe and Asia on just a few major maritime hubs, partly because of the increase in vessel size. For the future, although experts are generally optimistic about the capacity of these ports to accommodate ships and about the development of associated services on major maritime routes, there is concern over congestion and saturation problems that are steadily becoming more apparent in land access to ports, despite the fact that transhipment to "feeder ships" seems to be quite efficient.

Overall, an analysis of the current Europe-Asia trade points towards two factors that militate in favour of the diversification of routes and the opening up of new land routes between Europe and Asia or, in some cases, the revival of old trade routes such as the Silk Road and the Trans-Siberian route:

- Maritime transport's virtual monopoly on trade between Europe and Asia is causing increasing problems in land access to sea ports, all the more so since the push for productivity gains tends to reduce the number of such ports. As well as, the concentration of maritime traffic along with obligatory points of passage on routes between maritime hubs where shipping traffic concentrates and poses a serious safety problem (risk of pollution following accidents) and a serious security problem (vulnerability to attack).

- The growth in traffic between continental countries, particularly in Central Asia, along the Europe-Asia land routes. Besides trade along the Europe-Asia corridors, trade within the region itself is beginning to develop rapidly, reinforcing the necessity to improve the corridors as a source of development for the countries concerned. For example, it is worth noting that imports to China from other Asian economies accounted for more than half of the former country's total imports in 2003.

As for the ECMT, which now has a scope of coverage that extends over much of the area stretching from Europe to Asia, this poses a challenge on both land and sea with, on the one hand, continuous rapid growth in traffic on major sea routes and in major ports, to which land access is increasingly problematic and, on the other hand, the revival of the great land routes over long distances opening up new opportunities for all modes of transport, particularly rail.

2. Land haulage: an alternative solution

Economic analyses would appear to prove that the land haulage alternative is viable and could free up significant capacity (several million TEU) at competitive costs on a large number of links between Europe and Asia. The first point to bear in mind is that distances by land between Europe and Asia are generally shorter than distances by sea, especially if the origin/destination points on both continents are inland (by as much as half the distance, in some cases). While on the Trans-Siberian route, transport between Europe and the Pacific can take 9 to 10 days, potentially, rail services could be provided that would take no more than 20 or so days from China to Europe via central Asia rather than the 6 weeks or more that ship transport would take. The road transport sector, for its part, estimates that Europe-Asia hauls could be done in two weeks. The only real economic barrier to developing the land transport alternative is the price of these services, which would probably be of the order of two to three times higher than container transport by sea, which is now at particularly low levels. However, it should be noted that port approach costs could wipe out the advantage of maritime transport since the costs of the end-haul by land transport is in any case likely to be a determining factor in weighing up land and maritime routes. The future may well bring a very substantial reduction in rail costs, especially for long-haul rail transport, as operating conditions improve (longer trains, better utilisation of rolling stock and personnel, etc.). Without claiming that overland haulage through Asia is the definitive answer to the problem of land access to ports in Europe and Asia, it could certainly improve access to a large number of inland regions and absorb a substantial portion of the growing number of containers shipped between Europe and Asia, which is expected to top 10 million in 10 years time.

In the bid to find new long-haul land routes that meet not only transit needs but also the accessibility requirements of the countries they pass through, rail transport – with inland waterway mode playing a role on the Volga in the West and the Yangtze in the East – is in a strong position, all the more so since the distances to be covered are long, often several thousand kilometres, and the flows concerned are relatively concentrated in countries that have quite an adequate rail infrastructure, while it is true that some missing links still have to be built. The main trans-Asia continental routes are first and foremost major rail routes and the Declarations produced by the St. Petersburg Conferences

have already identified at least four of them: the Trans-Siberian, the TRACECA corridor, the Southern route via Turkey and Iran, the North-South link providing maritime access to Central Asia through Iran.

Road also plays a key role, particularly providing denser coverage to link main towns. Furthermore, in the South, physical geography poses greater difficulties for rail than for road, which explains the growth in very long distance road haulage in this area, as seen with Turkish haulage services to Central Asia.

The intermodal transport solution undoubtedly seems to offer one of the most promising prospects for land haulage on Europe-Asia links because of its ability to combine the performance of road, rail and maritime modes to its best advantage and to ensure high-quality coverage for all the Asian countries and Central Europe. This was what the Kiev Seminar on Intermodal Transport between Europe and Asia, held jointly by the ECMT and UNECE on 27 and 28 September 2004, so clearly demonstrated.

3. Recommended policy action

Despite efforts to develop efficient land links, **maritime transport** will remain a key player in the Europe-Asia transport market. While shipping companies and ports may be able to cope with the expected increase in maritime traffic, particularly container traffic, inland transport modes for hauls between ports and their hinterlands are not. The risks of saturation on road networks to these ports are high, while rail and inland waterways often have insufficient capacity. It is therefore crucial that Governments take the necessary action, particularly on infrastructure, to improve land access to sea ports; for instance, by developing appropriate rail or inland waterway links and facilitating intermodal transfer between inland and waterway modes.

The Council of Ministers of the ECMT is invited to foster all measures with the potential to improve land access to sea ports and interfaces between sea transport and inland transport.

Other policy action is also crucial for the development of **inland transport** services on Europe-Asia links as a complement to sea transport. It must be said that the development of any genuine inter-regional links along Europe-Asia routes, whether from a practical, legal or institutional standpoint, is still severely hampered even today. Establishing land transport links between Europe and Asia raises a number of problems that can only be overcome by appropriate policy decisions. This is undeniably a challenge in today's context of globalisation and internationalisation and of primary concern are:

- Adapting capacity and making adequate infrastructure available.
- Opening and operating networks that are interoperable, which requires, among other things, the regulation of transport markets and an appropriate regulatory framework.
- Reforming the railways in order to increase productivity.
- Facilitating border crossings.
- Safety and crime prevention.

3.1. Adapting capacity and making adequate infrastructure available

The provision of good-quality land links between Europe and Asia requires investment in order to bring existing infrastructure up to standard and to build missing links, chiefly in border areas due to the links between neighbouring countries which often seem to be less developed than national networks. The limited resources available and the need to ensure good co-ordination between projects will entail development of a planning process on an international scale and a selection of projects after an in-depth review of suitability.

In accordance with the strategy defined in the Declaration on transport infrastructure planning in a wider Europe that was adopted by the ECMT Council of Ministers in Ljubljana in May 2004, priority should be given to an approach based on the major corridors between Europe and Asia as this seems to be the only one that would facilitate the provision of genuinely efficient services for long haul transport.

As stated in the Ljubljana Declaration, it is important that the definition of these corridors and the associated investment projects be based on real needs and on well-defined criteria. It is also crucial that they be viewed from a multimodal perspective and consistent with local and regional projects and national networks so that the countries they pass through will derive maximum benefit from them in order that network continuity will be ensured, thus facilitating the operation of international services. A number of initiatives in this area have already been launched both by international governmental bodies and by industry organisations. A strong policy signal from the Ministers of Transport of the ECMT is therefore necessary to secure good co-ordination and genuine convergence of all of these initiatives.

3.2. Removing barriers to the provision of efficient transport services

Creating Europe-Asia corridors by building the appropriate infrastructure makes sense only if the transport services that can be provided on them are not hampered by a series of barriers that restrict operating conditions and make those services less competitive than maritime transport. Among the main barriers identified in report CEMT/CM(2005)13 on trends in trade and at the Kiev Seminar on intermodal transport between Europe and Asia [document CEMT/CM(2005)2] are the lack of harmonisation of regulatory provisions for the transport market, the inefficiency of rail, difficulties at border crossings, the use of obsolete transport and information technologies, lack of safety and illegal practices.

From the standpoint of harmonising market regulation, it is seen as crucial that any solutions sought be based on existing international agreements, particularly the United Nations Conventions. There could be nothing worse for Europe-Asia links – some recent initiatives give grounds to be concerned – than the parallel development of regional legal systems in total disregard of the international agreements already in force in many countries involved in these links. This sort of development could in no way meet the requirements of trade globalisation or the needs of logistics supply chains. Efforts by the Council of Ministers of the ECMT to promote multilateral co-operation among all the countries and organisations concerned with the genuine integration of Europe-Asia transport systems are therefore warranted.

However, the main weaknesses which provide a barrier to the real growth of land transport between Europe and Asia today are undoubtedly the recurrent problems encountered at border crossings and the facilitation of procedures currently in force.

In order to ensure the coherent development of land transport infrastructure between Europe and Asia, the Council of Ministers of the ECMT at its Moscow session in 2005 decided to:

- Support the continuation of the UNECE and ESCAP programme [see document CEMT/CM(2005)14] to develop Europe-Asia transport links so that the choice of main land routes to be developed between Europe and Asia can be finalised before the end of 2005 (see Part IV) on the basis of the draft agreement reached at the meeting of experts in Odessa from 3 to 5 November 2004, and then implemented.

- Invite the European Commission and the UNECE/ESCAP to work together rapidly to ensure good co-ordination between the work of the High-Level Group on the extension of major trans-European transport axes to neighbouring countries and regions and that of the UNECE/ESCAP programme on the development of Europe-Asia transport links. The aim being to avoid any gaps in continuity between the five to seven axes to be selected by the High-Level Group and the eight to ten routes adopted at the Odessa meeting.

- Stress the need to adopt a multimodal perspective in defining the main corridors between Europe and Asia in order to facilitate the development of intermodal transport along these corridors and to that end:

  - Approve the conclusions of the Kiev Seminar on intermodal transport between Europe and Asia [document CEMT/CM(2005)2] and the Action Plan proposed.

  - Encourage the UIC to continue its action to develop the Northern East West Freight Corridor (NEW) and to ensure that it is fully consistent with the overall planning of the Europe-Asia Corridors [document CEMT/CM(2005)15], to conduct trial runs so that container block-trains can operate on this corridor and to create a few major hubs in Europe and Asia with a view to consolidating container block-train traffic between the two continents.

- Work to ensure the rapid development of a method to identify priority investments for Europe-Asia corridors, based on an inventory of the main physical barriers, in accordance with the criteria proposed by the UNECE/ESCAP at the Odessa meeting drawn from experience with the TEM and TER Master Plans while at the same time ensuring that they are compatible with those selected by the Commission's High-Level Group.

- Invite the countries concerned to make a firm commitment to implement the projects selected, propose realistic finance schemes and provide for completion of the work by 2020 at the latest, the same target date which has been adopted by the EU High-Level Group.

In order to enable truly competitive operation of the various modes of land transport on Europe-Asia links, the ECMT Council of Ministers is invited to take action to guarantee that there is an effective follow-up to the Declarations issued at the St. Petersburg Conferences on transport between Europe and Asia.

To this end, the Council of Ministers of the ECMT at its meeting in Moscow is invited to take all appropriate steps with all countries and organisations involved in the Europe-Asia links to:

- Promote a process of integration of Europe-Asia transport, by encouraging the convergence of national regulations and harmonising the legal and regulatory framework governing the conditions for the provision of transport on the basis of international agreements, ECMT Resolutions, UNECE conventions and the legislation and transport policy guidelines of the European Union.
- Encourage countries that are not ECMT Member countries but are concerned with Europe-Asia links to implement the United Nations conventions listed in UNESCAP Resolution No. 48/11 on the facilitation of road and rail transport as well as other key agreements and conventions such as the ADR or the AETR Agreements [see document CEMT/CM(2005)15].
- Streamline administrative procedures that weigh particularly on Europe-Asia links, for which protectionist considerations are often the only justification.
- Eliminate discriminatory charges, fees and other practices which affect road transport in particular and draft an inventory of these charges along the lines of the inventory produced for ECMT countries [document CEMT/CM(2005)17].
- Encourage railway reform in accordance with the principles set forth in ECMT Resolution 2002/1 in order to:
  - Significantly increase productivity and reduce costs through better utilisation of rolling stock and staff.
  - Implement harmonised pricing and charging policies.
  - Improve network interoperability.
- Encourage development of intermodal transport by:
  - Speeding the signature of the UNECE AGTC Agreement and its Protocol on inland waterway transport by the countries of Eastern Europe, the Caucasus and Central Asia.
  - Promoting measures designed to improve train running conditions at locations where there are changes in gauge and to develop rolling stock to make transhipment unnecessary at such locations.
  - Consultations on the selection of modal interface locations and the creation of a network of logistics centres based on a limited number of well-equipped hubs.
  - Implementing the various measures contained in the conclusions of the Kiev Seminar on intermodal transport between Europe and Asia [see document CEMT/CM(2005)2].
- Enable the development of harmonised information and communication technologies in the countries of Europe and Asia with a view to facilitating the exchange of data and freight flow monitoring while increasing transport security.
- Facilitate border crossings, particularly for transit traffic, by:
  - Simplifying and harmonising border control procedures and ensuring co-ordination between transport, customs and controlling authorities responsible.

- Widespread application of the measures recommended in ECMT Resolutions No. 99/2 and 2002/3 and in the Recommendations adopted by ECMT Ministers in Ljubljana [see document CEMT/CM(2004)7].
- Ratification and implementation of the UNECE International Convention on the Harmonization of Frontier Controls of Goods.
- Effective implementation of the provisions of the TIR Convention and extending its scope of application to countries that have not yet ratified it, particularly ESCAP countries mainly China [see document CEMT/CM(2005)15].
- Using way bills, particularly for container transport by rail, as the only papers to be presented to customs or transport authorities [see document CEMT/CS(2005)15].

- Implement the measures necessary to ensure transport safety and security by:
  - Extending the application of ECMT Resolution No. 99/3 on crime and fraud in transport, ECMT Recommendations on the security of intermodal container transport [see document CEMT/CM(2004)6] together with the provisions contained in the Ministerial Declarations of 2002 and 2004 on the prevention of terrorism.
  - Exchanging information on best practice in this field.

3.3. Final provisions

For the purposes of bringing these actions into practical effect and monitoring their implementation:

The Council of Ministers decided to:

- Request that the resources for strengthening the inter-institutional co-operation that is essential for developing transport links between Europe and Asia be secured, particularly pertaining to ECMT co-operation in its relations with international intergovernmental institutions that are active in this field, such as the European Union, UNECE, ESCAP and the CTM/CIS.
- Encourage regional organisations such as BSEC et TRACECA to take all necessary steps to implement the actions outlined above and to strengthen regional co-operation on transport.
- Request the Committee of Deputies:
  - To undertake a study on the consequences of the growth in traffic between Europe and Asia for the organisation of transport and infrastructure in ECMT Member countries.
  - To report back regularly on the development of land transport links between Europe and Asia and the measures implemented to overcome barriers likely to hamper the establishment of efficient transport services on these links.
  - To take the necessary steps to ensure that this document is circulated to all non-ECMT Member countries concerned with the development of Europe-Asia transport links so that the recommended action can be implemented and consultations with the ECMT arranged to this end.

PART II.[1]

TRENDS IN EUROPE-ASIA TRADE AND CONSEQUENCES FOR TRANSPORT

1. The report was drafted by NESTEAR, at the request of the ECMT.

The onset of the 21st century is being shaped by far-reaching, unprecedented changes in the world economy and in the interactions between countries and continents. The volume of international trade is growing sharply, driven in particular by countries in Asia. Annual gross domestic product increases in excess of 5%, and near 10%, for populations of more than a billion, as in China and India, are exerting a heretofore unknown "mass effect" on production and world trade.

In Europe, the economic growth of recent years has clearly not been as brisk, with recovery lagging behind while in 2003 numerous economic indicators had already started becoming much more favourable around the world especially in Asia and in America, however, Russia entered a phase of sustained growth.

Against this backdrop, Europe too is undergoing profound changes in its institutions, and following a phase of enlargement in the countries of Central Europe, it is undertaking a policy of co-operation and outreach towards new neighbouring countries in the Commonwealth of Independent States (CIS), Central Asia and the Mediterranean.

All of these factors contribute to a sharp increase in trade along a broad East-West axis between Europe and Asia. Many observers expect to enter into a new phase of acceleration, world trade having already grown 2.2 times as fast as global GDP over the past ten years.

It is nevertheless true that Asia's financial difficulties in 1997 are not very distant, and the future of European institutions has yet to be decided. The brutal rise in the price of oil surging to $50 per barrel and rising even higher, tension on the raw materials market as a result of the demands made by Asian countries, an increase in social disparities and environmental risks are constant reminders that economic growth can forcefully be called into question.

But the year 2004, was also a year when a vast number of developing countries returned to macro-economic balances, much more quickly than envisaged. These countries are becoming increasingly aware of the risks inherent in social imbalances and environmental degradation.

Moreover, higher oil prices can create new resources for producer nations in the CIS and in Central Asia, facilitating the funding of new transport infrastructure.

One of the features of the current growth in trade between Europe and Asia is that an entire group of countries now involved, from Europe to China, with important roles being played by Russia and Central Asian countries, and by other, more southerly countries such as Turkey and India. This spatial dissemination aspect is paramount in tracing the broad routes of world trade, which flows not just between the extremities, but also between major hubs within the continent of Eurasia.

The purpose of this report is certainly not to analyse in detail the factors underlying this growth of the countries in Europe and Asia but to highlight the repercussions of that growth on the transport system, modes of delivery, the choice of itineraries and the principal problems addressed in relation to this rise in the volumes transported over particularly long distances.

For the ECMT, whose perimeter now extends over a large swath of the area stretching from Europe to Asia, the issues involved are transport by sea and land. On one hand, sustained sharp growth in traffic on major maritime routes and in large ports and, on the other hand, the rediscovery of major land routes over vast distances opening up new horizons for all modes of transport, in particular to rail.

This report will therefore comprise three parts:

1. A recapitulation of selected economic data on trade growth between Europe and Asia.

2. An analysis of the consequences of that growth on the international transport system.

3. A review of the main problems involved, and emerging prospects.

1. Sudden acceleration of trade between Europe and Asia

The economic awakening of Asian countries was to be expected, and historians have often stressed the fact that some 300 years ago China was a party to roughly one-third of the world's production and trade – a level to which it may return in the next thirty years.

After Japan's breakthrough in the 1950s and that of the Asian "dragons" and "tigers" in the 70s and 80s, China was expected to arrive in force in the 1990s, followed by India. The force with which this occurred came as a surprise at the dawn of the 21st century, at a time when Europe was experiencing difficulties in its recovery.

The breakthrough of international trade by Russia and the CIS countries had also been expected in the mid-1990s, after a successful economic transition by the Central European countries, which have now been integrated into the European Union. These partners are creating a new dynamic along an axis that spans the continent of Eurasia – partners which in many cases possess a wealth of raw materials, including oil, a key asset for a fresh economic takeoff.

This growth spurred by the dissemination of "intangible" information technologies in a context of globalisation, entails "tangible" growth as well, prompting massive construction of urban housing and infrastructure to service the new frontiers.

Further south, a country like Turkey is bolstering its position as a crossroads between East and West, as are to some extent Iran and India, whose populations are becoming more similar to that of China. While India's growth in recent years has been less robust than China's, it is noteworthy to remark that in 2004 with growth rates approaching those of China, India's growth rates reflect an economic model that is different but perhaps just as efficient.

This growth and trade acceleration warrants a closer look at the aspects that will have repercussions on the volumes transported, the means of transport used and the construction of infrastructure between Europe and Asia.

1.1. Growth which was to be expected in Asian countries, and especially China

What came as a surprise was not so much the growth of the Chinese economy but the vitality of its growth: between 1990 and 2001 China's economy recorded average growth of 10% per year - which was probably the highest growth rate in the world over that period – for a population of approximately 1.3 billion people.

Today, China accounts for 4% of global GDP and 5% of world trade, and it has become Europe's second-ranking partner (see Table 1).

Table 1. **European Union Foreign Trade (extra UE-15) in Billion Euros**

Imports

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Extra-EU-15	465.39	464.71	514.33	545.25	581.01	672.57	710.54	779.82	1 033.34	1 028.36	989.31	987.73
Czech Republic		5.64	7.38	9.00	9.77	11.75	14.67	16.84	21.64	25.14	27.54	29.74
Hungary	5.00	4.88	6.06	7.61	8.85	11.68	14.66	17.62	22.05	24.83	25.26	26.02
Poland	7.97	8.41	10.13	12.26	12.25	14.23	16.18	17.58	23.31	26.62	28.26	31.32
Turkey	6.88	6.85	7.90	9.24	10.18	11.87	13.62	15.07	17.55	20.23	22.05	23.98
Norway	20.63	21.06	23.67	25.52	27.86	33.71	28.13	29.59	46.10	45.11	46.50	48.70
Switzerland	37.67	38.47	41.80	43.22	42.75	45.13	49.46	52.88	60.02	60.83	58.74	55.96
European Free Trade Association (EFTA) (CH, IS, LI, NO)	59.25	60.38	66.38	69.93	72.04	80.48	79.45	84.54	108.62	108.56	107.91	107.26
Russian Federation	10.85	17.62	21.35	21.49	23.40	27.04	23.17	25.98	45.72	47.77	47.73	51.84
United States	92.79	90.60	99.87	103.67	113.14	137.85	152.02	160.59	199.02	195.80	175.46	151.17
China (excluding Hong Kong)	17.96	21.13	24.62	26.34	30.04	37.49	41.97	49.65	70.27	75.90	81.87	95.22
Japan	56.34	52.20	53.78	54.30	52.56	59.88	66.04	71.91	87.13	76.28	68.54	66.78
Dynamic Asian Economies (DAEs) (HK, KR, MY, SG, TH, TW)	43.02	46.00	50.62	54.38	57.93	68.12	77.93	85.24	109.43	98.09	91.92	90.95
Oil exporting countries (OPEP)	42.82	41.53	41.48	38.44	43.98	51.29	40.52	48.37	86.22	77.02	67.59	71.26
African, Caribbean and Pacific countries signatories to the partnership agreement (Cotonou agreement)(77 countries)	27.85	24.35	26.08	27.65	30.25	32.14	31.22	32.58	43.33	47.64	45.69	43.28

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Exports

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Extra-EU-15	415.30	468.12	523.77	573.28	626.29	721.13	733.43	760.19	941.27	982.97	994.32	972.92
Czech Republic	:	7.10	9.21	11.66	14.01	15.91	17.21	18.43	24.00	27.67	29.14	30.23
Hungary	5.38	6.45	8.05	8.73	10.03	13.60	16.86	18.44	23.04	23.88	25.04	26.14
Poland	9.22	11.12	12.30	15.31	19.97	25.08	28.21	28.97	33.81	35.68	37.37	38.34
Turkey	8.75	12.41	9.27	13.39	18.32	22.38	22.19	20.58	29.95	20.26	24.34	28.13
Norway	14.34	14.43	16.40	17.48	19.75	23.36	25.09	23.24	25.60	26.15	26.63	25.83
Switzerland	41.86	42.68	46.65	51.04	51.46	53.02	57.18	62.56	70.78	74.76	70.74	68.41
European Free Trade Association (EFTA) (CH, IS, LI, NO)	56.98	57.87	63.76	69.78	72.67	78.07	84.23	87.84	99.00	103.30	99.47	96.54
Russian Federation	7.11	13.16	14.35	16.13	19.13	25.54	21.17	14.73	19.92	27.96	30.46	33.07
United States	79.34	91.40	103.40	103.32	114.88	141.37	161.55	183.02	232.47	239.94	242.14	220.48
China (excluding Hong Kong)	7.57	12.36	13.99	14.69	14.75	16.48	17.41	19.35	25.50	30.09	34.23	40.13
Japan	22.20	24.66	29.00	32.90	35.77	36.10	31.57	35.37	44.94	44.92	42.69	40.06
Dynamic Asian Economies (DAEs) (HK, KR, MY, SG, TH, TW)	37.30	46.91	56.95	65.57	70.20	77.66	60.08	62.00	81.57	81.89	78.22	73.20
Oil exporting countries (OPEP)	43.17	42.07	37.84	38.99	41.94	51.14	47.08	43.94	53.99	63.94	66.80	66.49
African, Caribbean and Pacific countries signatories to the partnership agreement (Cotonou agreement) (77 countries)	23.55	23.19	22.99	26.54	27.54	30.22	32.70	31.52	38.41	40.20	40.24	40.27

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An important feature of this trend is the role played by the export sector and international investments. The Chinese economy is extremely open to the rest of the world, with exports-to-GDP ratios of roughly 40% which is well above the ratios observed in the United States and Japan, and comparable to those in Europe.

A second feature is that only a portion of this international trade is carried out with Europe or America, growth in trade between Asian countries has been even sharper, with significantly higher container traffic.

In an initial phase, the major exporting centres of Asia and China were concentrated primarily on the coasts, triggering a real explosion of major urban centres serving also as ports and attracting rural populations from the hinterland. The new Asian economy was still very maritime-oriented.

But a current objective of Asian governments is to conquer inland areas as well, in order to limit internal migration and establish centres of economic growth in the interior of countries like China. For business enterprises, this conquest of the hinterland, facilitated by the construction of highway, air and rail systems, holds out the advantage of cheaper labour than in coastal cities, where per capita income has swelled to four or five times the national average. Growth is now under way in the great industrial centres of China's heartland.

With regard to business operations, it is important to stress that this growth is relatively diversified, with rapid appropriation of know-how. Many of China's exports are the result of tax-favoured assembly operations involving close associations with foreign enterprises. These activities contribute to a substantial proportion of import and export traffic – a fact having repercussions for logistics, which is becoming a priority in the organisation of product flows.

1.2. The emergence of Russia and the Central Asian countries

Russia and the CIS countries had also been expected to grow once the process of economic transition was under way; by the end of the 1990s, Russia and the CIS countries were back on the road to sustained growth (see Table 2). Since 2001, growth in the CIS countries has hovered between 5 and 6% – outpacing that of the Central European countries (between 4 and 5%) and well above that of Western Europe (around 2%).

In contrast to the pattern in Asia, this growth was sustained more by the availability of raw materials, and oil in particular, than by exports of manufactured goods, with stimulation of domestic demand in both cases.

This has resulted in sharp growth in foreign trade for the CIS countries, in respect of imports and exports alike – growth that gives rise to new flows in the Black Sea and Caspian Sea areas and throughout the eastern Mediterranean. At the same time the economy opened up to world trade, an entire set of flows that had been broken suddenly with COMECOM's collapse were being gradually restored, although these international flows now extend beyond the borders of the former Communist bloc.

1.3. Material growth for all types of products

The models of economic growth and the geographical distribution of centres of activities will have a very direct impact on freight volumes and the spatial breakdown thereof.

Table 2. **Annual Growth in GDP by Selected Countries and Regions, 1977-2025 (Percent per Year)**

Region	History				Projections		
	1977-2001	2001	2002	2003	2001-2025	2005-2010	2010-2025
Industrialized	**2.7**	**0.9**	**1.5**	**1.7**	**2.4**	**2.6**	**2.4**
United States	3.0	0.3	2.4	2.3	3.0	3.2	2.8
Canada	2.9	1.9	3.3	2.0	2.7	3.0	2.5
Mexico	3.3	-0.3	0.9	1.5	3.9	3.6	4.4
Western Europe	2.2	1.7	1.0	0.7	2.0	2.2	2.1
United Kingdom	2.3	2.1	1.7	2.0	2.4	2.5	2.5
France	2.2	2.1	1.2	0.3	2.1	2.2	2.2
Germany	1.9	1.0	0.2	0.0	1.6	1.8	1.7
Italy	2.2	1.7	0.4	0.3	1.9	2.1	2.0
Japan	2.9	0.4	0.2	2.5	1.7	1.8	1.7
Australia/New Zealand	3.1	2.5	3.7	2.6	3.0	3.0	2.9
EE/FSU	**-0.4**	**4.6**	**4.0**	**5.1**	**4.1**	**4.4**	**3.9**
Former Soviet Union	-1.0	5.9	4.8	6.1	4.2	4.5	3.8
Eastern Europe	0.8	2.6	2.7	3.4	3.9	4.1	3.9
Developing Countries	**4.5**	**2.4**	**3.5**	**3.9**	**4.6**	**5.2**	**4.5**
Asia	6.8	3.9	5.6	5.2	5.1	5.8	4.7
China	9.5	7.3	8.0	7.7	6.1	6.8	5.5
India	5.2	5.6	4.3	5.8	5.2	5.4	5.1
South Korea	6.9	3.2	6.3	2.8	4.2	5.6	3.4
Other Asia	5.8	0.5	3.6	3.5	4.3	5.1	4.2
Middle East	3.3	-1.7	3.3	3.9	3.7	4.0	3.6
Turkey	3.3	-7.5	7.8	5.0	4.2	4.2	3.9
Africa	2.7	3.2	3.0	3.3	4.0	4.5	3.9
Central and South	2.4	0.5	-1.2	1.1	3.7	4.1	4.2
Brazil	2.7	1.4	1.5	0.5	3.7	3.9	4.1
Total World	**2.8**	**1.3**	**2.0**	**2.3**	**3.0**	**3.2**	**3.0**

Sources: History: Global Insight, Inc., *World Overview* (Lexington, MA, September 2003). Projections: Global Insight, Inc., *World Overview* (Lexington, MA, September 2003); et Energy Information Administration, *Annual Energy Outlook 2004*. DOE/EIA-0383(2004) (Washington, DC, January 2004).

It would seem more than ever that all types of products are involved, insofar as economic development is not achieved solely through heavy industries, but also through industries that produce high value-added products involving complex production processes bringing together internationally disparate entities.

To be convinced of this, one need only take a quick look at the sectors in question, which suggest all the ensuing transport and logistical constraints.

- Energy products, and especially natural gas and oil: The CIS countries' contribution to world supplies is going to increase considerably during a phase in which development in Asia will ensure that energy needs will not diminish.

- Raw materials and intermediate products: Growth has spawned major construction projects, especially in urban centres. China, for example, consumes half of the world's cement. The fact that the price of a tonne of steel has trebled in less than three years reflects the demand-driven pressures prevailing in the market for intermediate goods. The supply of timber for construction and furniture is another example.

- Manufactured goods: Phases of rapid growth are in many cases accompanied by a sustained increase in imported manufactures of final consumer goods and capital goods. This was the case for the Central European countries, the CIS countries and countries in Asia, including Japan and China. In many cases, this growth proved stronger than initially expected because of greater response to new products in developed and developing countries alike.

- Assembly parts: The relocation of factories and rapid accession to leading-edge industrial know-how in a large number of Asian countries have created production processes that are more widely scattered around the world and more complex, greatly increasing transport requirements. The case of China was cited as especially revealing, showing clearly that the development of assembly plants was not always incompatible with the activity of "affiliated" production units located elsewhere, in more highly developed countries.

All these elements contribute to a strong, diversified and often sophisticated demand for international transport. It has been pointed out that over the past ten years the elasticity of international trade to global GDP increased to 2.2, whereas it had previously been only 1.5. It would not seem that this elasticity is likely to decrease, or that the "dematerialisation" of trade, which is often proffered as an explanation of a deceleration of relative growth of tonnes transported, is contradicted by a new demand for raw materials and intermediate goods.

1.4. Sustainable growth?

Many economists wonder whether the growth in recent years is sustainable, especially in Asia, where very high growth rates have nearly reached the double digits.

The first question, of course, is to define what is meant by "sustainable". If one considers the environmental impact of this growth, it is obvious that the risks increase at the same time. To a greater extent, developing countries are becoming aware of this and are prepared to incorporate environmental protection objectives into their growth strategies.

The same holds true for risks relating to financial, economic and social imbalance, which can also jeopardise such rapid growth scenarios.

Nevertheless, a number of elements prompt a certain degree of optimism:

- Governments are more aware of the risks that these imbalances entail, as pointed out above.

- The reality of a highly interconnected new world economy with foreign investments and associations of enterprises: it has been shown that a large proportion of Chinese exports result from combinations of Chinese and foreign firms.

- Growth models are diverse, whether in India, China, Russia or other countries in which there is a greater capacity to adapt to national and local contexts. As compared with the early 1990s, when talk of growth was relatively "monolithic", the integration of the "market economy" now appears much more "elaborate", and this can be taken as assurance of "sustainability".

Not much documentation is available to support a projection exercise. One of the rare documents in existence is a publication that provides energy projections, in a realm that has always required long-term vision[1].

The projections in that document would suggest that the trends of the early 2000s could and should persist over a 15 to 20-year time frame, even if some of them are moderated.

Statistics in 2002 on container traffic in ports provide insight into the significance of trade globalisation in Eurasia. Table 2 projects growth rates by 2025 for various countries in the world and shows wide variances from country to country, with average annual growth between 2% and 6%, bringing about far-reaching change in the breakdown of value added between countries (*Energy Outlook 2004*).

In the Appendix, a Comext study for 2003 breaks down maritime and rail trade with the main CIS and Asian countries by major product family: it shows the volume of trade in high value-added goods with Asia and of intermediate goods with the CIS.

2. Repercussions on transport between Europe and Asia

The repercussions of the context of economic growth on international transport between Europe and Asia are fundamental. They are not limited to the impact on volume, with tonnage rising by more than 6% per year (doubling in 10 or 12 years), but involve profound changes in transport itself, whether it's maritime which is the mode most commonly used, or by land (not to mention air freight). Today, land transport is positioned as a link in the chain of maritime transport as a means of access to ports, and also as the primary mode of transport over long distances across Russia and Central Asia to China.

The organisation of maritime transport had already been transformed in response to international traffic growth, as can be seen from the emergence of major hubs in the Mediterranean, northern Europe and Asia. Today, ship owners are planning to operate a new generation of vessels in excess of 8 000 or even 10 000 containers on services between Europe and Asia via the Suez Canal[2]: this illustrates the importance that this route has in global trade.

At the same time, networks spanning continental Asia are taking shape and interconnecting, originating in Western Europe and Asia, and also in countries located in the central portion - in Russia, Kazakhstan, Turkey and Iran, with links tailored for long distances holding out new opportunities for rail transport.

1. *Energy Outlook 2004.*

2. In some cases continuing on to the west coast of the United States.

Thus the changes in the organization of transport and logistics combine with a diversification of routes and even new combinations of the maritime and terrestrial modes.

The purpose of this second part is thus to explore in greater detail the main repercussions on transport of the changing context of international trade between Europe and Asia.

2.1. Responding to steady, high and even increasing growth in container traffic

The growing use of containers has for some fifty years been closely correlated with the globalisation of trade. In particular, the emergence of Asian countries has led to an increasingly heavy concentration of containers in the area which now shelters the largest container ports. The container was well suited to the needs, offering a standardised load unit, while at the same time the superior performance of container ships facilitated trade to the point that it greatly attenuates the effect of distance. The shipping price of a container from Europe to Asia is hardly more expensive than a 500 or 1 000-km road freight shipment. While maritime transport times are still fairly long, varying between four to six weeks depending on the destination, reliability and regularity make ocean shipping fairly easy to control and integrate into door-to-door logistics chains.

Projections of container traffic between Europe and Asia yield growth rates of approximately 6%[3]. One of the characteristics of this traffic has been the use of ever-larger and more efficient vessels, which today have a capacity in excess of 7 000 containers, as mentioned above, with a special concentration of the largest ships in Europe-to-Asia routes and large port hubs along the way.

The debate over the growth of ship size is still on-going, but it would seem that the limit of 10 000 containers will be reached fairly soon on that route, generating new productivity gains.

Shipping charges fell to extremely low levels around 2000-01, with significant differences stemming from load imbalances between Europe-Asia and Asia-Europe (see Table 3). Today these charges are adversely affected by rising oil prices and higher security costs, but this link in the chain is nonetheless still an extremely efficient one. At this level there would not seem to be any major difficulties in coping with this rising demand and technologies are able to adapt fairly readily.

2.2. The emergence of major maritime hubs

The operation of ever-larger ships also entailed a radical transformation in port service, in respect of both land and sea (feedering).

The outcome was to limit the number of ports involved as ship sizes increased, and to make a more systematic use of transhipments in major hubs between mother ships, for intercontinental transport, and feeder ships, to serve maritime terminals (see Map 1).

The explosion of traffic in major ports is the result not only of trade growth, but also of the generalisation of these modes of transport with a limited number of ports and a greater number of transhipments. Some ports along the most direct shipping routes experience especially high rates of transhipment. But continental ports generally combine land-based service to the hinterland with maritime transhipment.

3. Source: “Regional Shipping and Port Development Strategies” (ESCAP/UNDP).

Table 3. **Shipping charges of the three main maritime lines 2000-2002 ($/twenty footer and difference in percentage)**

	2000	2002	Difference (2000-02)
Trans-Pacific			
United States – Asia	852	768	-9.9
Asia – United States	2 013	1 502	-25.4
Europe - Asia			
Europe – Asia	741	663	-10.5
Asia – Europe	1 620	1 172	-27.7
Trans-Atlantic			
United States – Europe	976	832	-14.8
Europe – United States	1 204	1 182	-1.8

Note: Average from six big shipping companies. The annual figures are averages based on quarterly figures. Twenty footer: standard capacity container.

Source: CNUCED, Review of Maritime Transport (2002, 2003).

Insofar as container port terminals are also becoming increasingly efficient and their operations computerised, and in some cases automated, there would not seem to be any capacity problems at these major hubs, on the scale of the regions served: the number of terminals has risen both in Asia and Europe. Competition between them remains fairly keen, and to a greater extent ports on the southern shore of the Mediterranean are preparing to play this role.

The growth of trade in Asia spurred the emergence of large main hubs in the Mediterranean, whereas these hubs had previously been located almost exclusively on the northern edge of Europe and once dominated transatlantic trade. There were routes via the Panama Canal that can no longer be used by today's largest Asia-bound ships.

The experts generally concur with optimism on the reception of large vessels in "port hubs" and the increasing number of such hubs along the main shipping routes.

Problems of congestion and overcrowding crop up respecting land access, although transhipment onto feeders would seem highly efficient as well.

2.3. Integrating door-to-door logistical chains

The institution of shipping routes between Europe and Asia with a heavy concentration of traffic in the major ports generated new forms of logistical chain integration and land access to the ports.

An initial trend was to seek inland points of dispersion thus making it possible to concentrate port access traffic and to ensure faster and more efficient evacuation towards major inland centres, spawning a rise in the number of "dry ports" offering regular services to improve service to the surrounding area.

In Asia, port-bound services generally involved shorter distances, insofar as over three-quarters of imports and exports were bound for or originated in coastal areas.

The main modes for onward journeys of over 300 kilometres to and from inland points of dispersion became railroads and inland waterways, but the underlying principle being to concentrate traffic along major corridors, the number of these "dry ports" would always be limited.

In this context, many ship owners sought to retain control over the entire transport chain, including management of containers in inland areas and direct contact with forwarders. A smaller number preferred to limit themselves to narrow specialisation in maritime transport.

Nevertheless, the European Commission was prompted once again to lay down the rules governing commercial practices in the realm of port access in order to preclude distortion in the choice of ports within door-to-door chains.

Competition between ports shifted inland with a more direct confrontation between northern and southern ports. Railway links developed very rapidly starting from the ports in Antwerp, Rotterdam and Hamburg, including routes serving the new EU Member States of Poland, the Czech Republic, Slovakia and Hungary. In the Mediterranean, the spreading out from major hubs generally took the form of feeder services redefining the place of major historical ports like Marseille, Genoa, Barcelona, Valencia, Leghorn and Trieste in maritime organisation.

Regarding trade in other goods, such as oil and other raw materials, the question of logistical integration requires specific analysis, depending on the location of production facilities. In the case of energy-generating products, an alternative is transport via pipelines over short or long distances. With respect to raw materials, it must be kept in mind that it is more difficult for the supply of transport to adjust to changes in demand, triggering an increase in maritime tramping rates along with today's sharply rising product prices.

2.4. New land and sea routes

The new transport needs are not limited to higher port and ocean shipping capacity, especially insofar as the growing trade between Europe and Asia also involves continental countries between Western Europe and southern and East Asia.

Both of these factors are conducive to the opening of new land arteries, some of which retrace such historical trade routes as the Silk Road and the trans-Siberian route.

In the search for new long-distance land routes that meet transit needs and also accessibility requirements for the countries along the way, railways and inland waterways are often in a privileged position when long distances are involved – in many cases thousands of kilometres for relatively concentrated flows, in countries equipped with railway infrastructures, even if a number of the "missing links" need to be built to satisfy a market on a scale mirroring the continents involved after a long period during which borders were fairly impervious to trade.

For both the European Union and for the countries of Asia, in particular China, this search for new trade routes is fully consistent with political objectives.

Europe's current policy is characterised by an outreach to new "neighbours". This involves the extension of trans-European networks, redefined to encompass 25 countries, towards the CIS and

Central Asian countries along major corridors, as had been done previously for Central European and Mediterranean countries.

On the Asian side, China is developing an entire network of rail and highway infrastructure at a very rapid pace, designed to cover the entire country and link up with connections to Kazakhstan, Mongolia and Russia, in an effort to reconquer its heartland.

For their part, all of the CIS countries are also adapting their infrastructure from Russia to Central Asia and Caucasus countries, as well as Kazakhstan, Turkmenistan and Iran, which also occupies a central position along the great East-West routes. Connections to countries lying farther to the south, such as Turkey, India and Pakistan, have not been forgotten and are gradually being incorporated into a network of major links within a vast Eurasian expanse.

The major trans-Asian routes are above all railway routes (see Map 2).

1. The Trans-Siberian, which spans Russia from the Baltic to Vladivostok, including a container service as an alternative to ocean shipping. This line extends westward from Moscow and connects in St. Petersburg to extensions towards Finnish ports; it is used frequently for European traffic bound for Central Asia. But more southerly connections, through Ukraine and Central European countries, are possible as well. The AGC network map (see Map 3) shows the main railway connections extending eastward through Kazakhstan towards China and Mongolia.

2. The co-called "TRACECA" corridor, which offers a number of itineraries along what was once the Silk Road. A central route includes a Black Sea crossing to Georgian ports and then a crossing of the Caspian Sea. From there, it is possible to go farther east, towards China for example. Another, more southerly, itinerary runs through Turkey to Georgia and Azerbaijan; today this is primarily a road route.

3. A more southerly trans-Asian rail route through Turkey and Iran. This links up in Central Asia with the networks of Turkmenistan and Kazakhstan, and must be repaired in numerous locations.

Another option for railway shipment to China is through Kyrgyzstan, along a route that has less traffic than the more northerly route through Kazakhstan, via the border station of Druzhba.

In connection with the corridors mentioned previously, a number of projects have been developed for this trans-Asian rail corridor, particularly in Kazakhstan: a European gauge investment has been planned from the Caspian Sea to China over nearly 3 000 km. The line runs along the Caspian Sea, with a north-south branch over 700 km across Turkmenistan making it possible to link up with the Iranian network with 70 km of new track – all of which represents an investment estimated at between seven and eight billion dollars.

There are possibilities for direct connections between the ports of Hamburg and Rotterdam towards the port of Lianyungang in China, where containers already transit towards Central Asia.

On the route between Iran and Turkey, investments have also been planned, this includes a rail bypass of Lake Van and a rail crossing of the Bosporus (by tunnel) for a European-gauge line from end to end, which is similar to the gauge in China.

4. A North-South line through Iran will improve maritime access to Central Asia.

   This North-South rail connection leads to the Iranian port of Bandar Abbas at the entrance to the Persian Gulf: this port is already served by a branch line. The construction of a new route is at hand, it is planned for 2007, and will serve Iranian mines and prevent a detour via Tehran.

   Railway access to maritime services would be greatly enhanced, providing new sea and land combinations for the countries of Central Asia.

Asia is also covered by a dense road network (see Map 4) linking the principal cities together, in particular the southernmost part of the continent, this includes India, Pakistan and the Cambodian peninsula.

While major road itineraries sometimes run parallel to East-West rail lines, especially in the northern part of the continent, this is less true farther south because of geographical difficulties which constrain rail lines more than roads.

Using UNECE (see Map 5) classifications (Europe's "E-routes"), these major road systems are known across Siberia as E20, E24 with a more southerly branch towards Kazakhstan and China, E50 towards the southern shore of the Caspian Sea, E60 across the Caucasus; E24, E50 and E60 still converge at major border points with China (Druzhba).

Due to this progression, the UN along with political support of ECMT must continue to define specifications for a basic network (see Map 6), providing a frame of reference for modal infrastructure and operations.

3. Problems and outlook for transport between Europe and Asia

Analysis of the economic background in Part I, clearly demonstrates that the most likely scenario is very strong growth in traffic between Europe and Asia. The growth will be the result of the integration of an increasing number of countries into both the world market and the regional market, creating a sort of continuity in international trade flows which will no longer be limited to traffic between the Far East and Western Europe.

It was seen that this sharp growth in traffic tonnage, which is hard to quantify, will probably exceed 5 or 6% per year, based on past experience with the opening of economies in Europe and Asia, and on economic trends over the past 15 years[4].

The fact that energy-generating products, intermediate raw materials, goods and high value-added products are involved, boosts the volume and the diversity of transport requirements. This would suggest that a stronger-than-ever increase in demand along the major arteries joining Europe and Asia cannot be ruled out. This is probably the result of the current context of globalisation, as illustrated in the past decade by the rapid integration of the European Union's new Member States and the success of Asian countries.

But a growth situation such as this raises a number of problems involving transport market regulation, capacity adjustment, infrastructure planning between countries, and security and

4. *Energy Outlook 2004*, for example, and the result of the *Maritime Policy Planning Model* (ESCAP/UNDP).

environmental protection. In other words, it calls for a comprehensive undertaking of forward-looking vision, co-operation and empowerment of public organisations on a scale transcending that of most existing regional organisations.

The object of this third part is to evoke a certain number of these problems.

3.1. Market equilibrium and short- and medium-term capacity problems

A doubling of traffic every 10 or 12 years over more than four decades inevitably puts pressure on the transport market and strains capacities.

This pressure does not show up evenly along the chain, some links being better able to absorb it than others. The growth of port traffic in Asia, and even in certain Mediterranean ports, would have been difficult to imagine just a few years ago, and yet it has taken place without the port system appearing threatened with paralysis. The same holds true for maritime shipping, with orders for ever-greater numbers of container ships reaching a point where risks of port or maritime overcapacity cannot be ruled out if the volume of trade were to weaken for a year or two.

But the system is still vulnerable, and all the links in the chain need to be considered.

- **Freight rates for maritime transport**

  An initial question is how shipping rates will be affected by rising demand and oil prices. Higher oil prices have started to put pressure on shipping rates, which had remained very low despite the aforementioned steady growth in traffic. Productivity gains have absorbed cost increases in a still-very competitive market. In recent times, price increases on regular shipping lines have run a fairly moderate 10 to 20%. We have seen, however, that prices on the far-more-sensitive charter market have already trebled or quadrupled. If oil prices stay over $50 per barrel, this situation might be altered drastically, with price increases that would be far more difficult to absorb and a weakening of demand in conjunction with the economic downturn.

  The demand for oil is likely to continue to increase at a pace similar to global growth because of the rapid development in Asian countries. Chinese consumption as a proportion of global oil supplies will quadruple in twenty years.

  Foreseeable major changes will take place in the geographical distribution of oil production, along with countries in the Caspian Sea playing a more significant role.

  Lastly, a substitution between natural gas and oil can also be expected to make an impact on geographical distribution and modes of conveyance between pipelines and maritime shipping.

- **Congestion of land access to ports**

  A large amount of port traffic must be transferred over ever-increasing distances to surrounding areas, particularly respecting containers intended for Europe and Asia's inland regions and heartland countries.

Clearly this issue is moot if a port is used essentially for transhipment (e.g. Algeciras, Gioia Tauro and Malta for Europe), or when the importation or exportation regions are almost exclusively "maritime" (Hong Kong, Taiwan, Japan and thus far China to a large extent) or in the immediate vicinity of the port.

One response to this has been to develop alternatives to road shipping – concentrated inland waterway services if possible, and especially rail services.

Efficient rail service is becoming the best guarantee of port hinterland extensions. Many countries are seeking to connect their ports to freight lines in order to boost rail capacity and service quality. This idea is re-emerging due to the proposal for a freight network in Europe, where port services are driving the demand for connections through sensitive areas like the Alps.

- **Vulnerability and security of maritime shipping routes**

Vulnerability stems from the risk of terrorist attacks and the existence of concentrated shipping points, and from mandatory points of passage along the routes between the port hubs of Europe and Asia.

To date, one response has been to increase the security of maritime shipping and institute control procedures to prevent attacks.

At present, an answer was to increase the safety of maritime circulation and to set up check procedures to prevent the attacks.

The vulnerability of shipping routes only enhances the value of diversifying itineraries and opening land-based alternatives, although these are not exempt from risk either.

3.2. New land trade routes between Europe and Asia

We have seen that these routes are not really "new", insofar as they have existed in the past – the distant past and the more recent past of the Soviet bloc.

Putting aside the issue of river routes, which should not be neglected in the West, one finds the great Russian river like the Volga and in the East the Yang Tze, this is primarily a matter of rail transport. The same track gauge is used throughout the CIS, where transhipment is necessary in order to connect the European Union and the Chinese networks at either end.

Nonetheless, the potential value of road transport should not be ruled out, this includes long or very long distances, as demonstrated by Turkish freight services to Central Asia. However, this could possibly work with road hauliers that need to devise intermodal solutions to optimise the efficiency of road, rail and maritime links to provide quality service for all Asian countries of Central Europe.

Let us recall some quantitative information about these new trade routes.

- Regarding routes between Europe and Asia, distances are generally shorter by land than by sea, especially if the origin and/or destination points are in regions that lie deep within China or Central Asia.

For regions farther south of Asia, the differential decreases and maritime distances converge with land-based ones. Moreover, in many cases the terrain is more difficult.

The most favourable postulation to land routes between the Baltic and North-East Asia, the distance differential is roughly 1:2, with approximately 12 000 km by land (Kazakhstan being just about in the centre) but over 20 000 km by sea.

- Regarding services, it must be acknowledged that available West-East or East-West trans-Asian services are limited. Services have been proposed along the Trans-Siberian railway between the Baltic ports and Vladivostok which do not entail gauge changes for an electrified line: these rail services are included in the COMEXT database statistics for trade with the Baltic Sea States.

  Other than that, we have seen that most services involve routes between Europe and Central Asia, or between Central Asia and China; in either case, transport times would have to be at least two weeks.

- Regarding prices, it is difficult to give rough estimates, especially for the segment between Central Asia and China. In the western portion, the price for a container would range between $1 500 and $2 000, which would seem lower than the prices charged a few years ago. It must be borne in mind that Turkish road hauliers are also very present and competitive on services to Central Asia.

Another question that arises is the prospects for trans-Asian itineraries: from this standpoint the status quo offers a poor reflection of possibilities in the future.

It must be kept in mind that a quality two-track rail line can attain capacities of roughly 50 to 100 million tonnes, if not more.

Looking at speed, a trans-Asian service between Europe and China could take approximately 20 days, whereas it takes over six weeks for ships.

This gives a general idea of the trans-Asian railroads potential under good supply terms as demonstrated by the "Trans-Siberian" and another trans-Asian line set up farther south.

Regarding prices, it is still difficult to make projections; given the extremely competitive rates of current maritime channels, land prices would probably be far more – double or triple, excluding port approach costs, which can be comparable for pre- or post-shipping distances in excess of 300 km.

To save approximately ten days, if not more, there is certainly a new intermediate market between maritime and air freight services between Europe and Asia.

But even more importantly, rail cost analysis as performed in Europe shows that if the rolling stock is used efficiently and operated effectively between six and seven hours per day per driver, and if, where appropriate, long trains are formed, rail costs can be reduced considerably over long distances. This is clearly the case for trips across Russia or through Asian countries over several thousand miles.

In such cases, the cost of rail transport can be less than €10 or €12 per train-km, which would entail a cost of less than €2 000 per load unit – if not far less, depending on train length – to link the two ends of the Eurasian continent.

In conclusion, efficient operation of East-West rail lines would make available a significant additional capacity (of several million TEUs) at costs that could be competitive for many services between regions in Europe and Asia.

In this competition, the cost of onward land carriage will certainly be a decisive factor in the choice between land and maritime transport.

While it cannot be said that trans-Asian rail service would solve the problem of port access in Western Europe, or even in Asia, it could certainly enhance service to a large number of inland regions and absorb a significant portion of the growth in the number of containers in circulation between Europe and Asia – growth that will involve more than ten million containers within the next ten years.

3.3. A vision of corridors between Europe and Asia, with gradual cover of Eurasian networks

A vision of "great corridors" between Europe and Asia is probably what will facilitate implementation of efficient services, as was the case, on a smaller scale, for European enlargement.

According to this vision, it must be emphasised that railways have retained a dominant role in the CIS countries, even if the same cannot be said for services farther south, or for North-South services with Turkey, Iran or India.

This initial vision is the one that already prompted the proposal for the TRACECA corridor linking Western Europe to the Caucasus countries.

In the European Union, this approach is being developed in conjunction with the New Neighbours policy being furthered by the high-level group chaired by Ms. De Palacio.

It is therefore important that this "Eurasian" approach be tied in with national programmes, so that the countries crossed derive optimal benefits, ensuring the continuity of infrastructure and facilitating the operation of international services. These countries' need for international transport can only incite them to move in this direction. The resources derived from raw materials can in some cases deliver the necessary financing.

This corridor approach is in no way incompatible with a network approach – quite the contrary. The process used for Europe's enlargement and outreach to the CIS and Mediterranean countries can be tailored to the context of the Eurasian continent.

Priority corridors will thus become part of a vast continental Asian network under the aegis of international organisations in co-operation with trade organisations in the railway and road haulage industries.

As an enlarged Europe reaches out to Asia, steps must be taken to turn this vision into a truly forward-looking process.

3.4. A forward-looking process for services between Europe and Asia

Analysis of the economic context has shown the abruptness of recent changes, with the expected emergence of the Chinese economy, which itself followed the emergence into the world economy of most of the countries of Asia.

Tomorrow, it is to be expected that a large country like India, with a population in excess of 1 billion, will follow China and in turn experience a phase of more rapid growth; in 2004 its economic growth was approximately 10%.

A little closer to Europe, Russia and the CIS countries enter a new phase of economic growth with strategic reserves, energy products, raw materials, and a central position in land networks, although their access to the sea is in some cases difficult: clearly a sea route via the Arctic Ocean would change all this by putting Europe about 12 000 km from the Far East, but it would also signal a highly alarming change in the earth's environment.

It is probable that Europe was not immediately aware of the irreversible shift in the centre of gravity that has been taking place in the past few years on a planetary scale.

Once again, the transport sector finds itself in the forefront of these changes and is compelled to find new channels in order to cope with them.

The starting of a true prospective step is more than ever for the programming of the investments necessary and the offer of adapted services.

It is undoubtedly more important than ever to institute a forward-looking programme to plan for the required investment and provide suitable services.

This step will include the following:

1. Definitions of common scenarios for trade prospects with basic assumptions compatible with the socio-economic context of the countries concerned.

2. Principles for establishing and operating networks to achieve interoperability between road, maritime and rail services, which is already well under way with the existence of an extensive Russian network and rapid development of the Chinese network with European gauge.

3. Co-ordination with transport infrastructure programmes along major corridors.

4. Socio-economic evaluation of traffic growth and its environmental impact in order to find the best response for sustainable development.

For many Central, East and South-East Asian countries, investment in transport is being sustained by an unprecedented wave of economic development. The aim is not so much to scale back investment but to seek out the most efficient projects for the policy of sustainable transport development.

CONCLUSION

The dawn of the 21st century has seen the economies of Central Europe and Asia burst into a global economy, altering the medium- and long-term balance between Europe and Asia.

This phenomenon has been rapid and it is still difficult to assess all of its repercussions; moreover, it is neither very likely nor desirable for this to come to a standstill, lest it jeopardise global economic balance and supplies of strategic basic products.

The transport sector is still one of the most revealing sectors of this evolution, conveying a clearer understanding of the forces involved in trade flows.

Thus it is necessary to open up new itineraries and find new modal combinations better suited to the needs, so as not to increase vulnerability of transport; and to control its impact on the environment.

From this standpoint, it is important to benefit from past experience starting with the opening of the European economy to undertake joint efforts on an even larger scale of services between continents.

APPENDIX
MARITIME INTERNATIONAL EXCHANGES
(COMEXT BASIS FOR 2003)

COMEXT2003_Sea_General Cargo (in thousands of tonnes/year)

Imports

Rep./part.	Ukraine	Belarus	Russia	Sub-Total	China	South Korea	Japan	Sub-Total	Turkey	Total
FR	133	57	740	931	147	37	77	262	108	1 300
NL	61	24	862	948	168	17	98	283	72	1 302
DE	69	130	1 579	1 778	387	155	179	720	104	2 602
IT	1 988	17	3 927	5 933	951	688	356	1 995	1 157	9 085
UK	81	75	1 591	1 747	405	151	321	878	794	3 119
IRL	0	7	239	246	20	20	46	85	93	424
DK	144	14	867	1 025	53	84	14	151	7	1 183
GR	0	0	0	0	0	0	0	0	0	0
PT	63	0	139	203	39	35	36	110	267	580
ES	339	94	1 678	2 111	242	222	215	678	831	3 620
BE	27	84	1 322	1 433	148	194	674	1 015	195	2 643
LUX	0	0	0	0	0	1	3	4	0	4
SW	15	17	2 223	2 255	40	36	71	147	12	2 414
FIN	4	18	671	671	8	10	40	58	14	743
AT	0	0	17	17	12	5	37	53	8	78
Total	2 924	538	15 835	19 297	2 620	1 654	2 165	6 439	3 361	29 097

Exports

Rep./part.	Ukraine	Belarus	Russia	Sub-Total	China	South Korea	Japan	Sub-Total	Turkey	Total
FR	59	1	104	164	843	60	181	1 085	501	1 750
NL	5	1	137	143	625	144	143	912	372	1 427
DE	92	2	191	285	2 103	249	872	3 224	882	4 391
IT	3	0	36	40	551	69	95	715	660	1 415
UK	50	8	129	186	726	447	197	1 371	312	1 869
IRL	0	0	9	9	47	2	10	59	11	79
DK	11	1	190	202	74	35	40	148	49	399
GR	0	0	0	0	0	0	0	0	0	0
PT	0	0	0	1	11	2	4	16	58	75
ES	9	0	87	97	366	47	84	496	487	1 080
BE	1	1	49	51	705	47	47	799	494	1 344
LUX	3	0	3	5	12	4	2	18	12	36
SW	28	8	147	184	266	73	465	804	94	1 082
FIN	2	1	20	23	234	19	501	754	58	835
AT	0	0	3	3	16	5	125	146	7	156
Total	265	22	1 106	1 394	6 579	1 203	2 766	10 548	3 997	15 938

COMEXT2003_Sea_Unitised (in thousands of tonnes/year)

Imports

Rep./part.	Ukraine	Belarus	Russia	Sub-Total	China	South Korea	Japan	Sub-Total	Turkey	Total
FR	7	0	18	25	1 166	69	129	1 364	619	2 008
NL	10	0	13	23	1 307	131	163	1 601	216	1 841
DE	1	1	294	396	3 176	136	253	3 567	454	4 317
IT	33	2	151	185	2 138	124	134	2 395	2 450	5 030
UK	23	9	432	465	2 976	204	291	3 472	889	4 825
IRL	0	0	1	1	114	18	22	154	54	209
DK	0	6	75	81	176	13	8	198	37	316
GR	0	0	0	0	0	0	0	0	0	0
PT	0	0	30	30	95	21	14	130	818	978
ES	102	0	907	1 009	1 312	165	93	1 569	2 537	5 115
BE	0	3	79	83	821	45	121	987	333	1 402
LUX	0	0	0	0	13	1	2	15	0	15
SW	6	4	39	49	362	32	32	426	67	542
FIN	0	0	15	16	109	8	17	134	29	179
AT	0	0	2	2	170	9	10	188	29	219
Total	183	25	2 056	2 264	13 935	976	1 289	16 201	8 532	26 997

Exports

Rep./part.	Ukraine	Belarus	Russia	Sub-Total	China	South Korea	Japan	Sub-Total	Turkey	Total
FR	19	0	173	191	388	148	546	1 081	235	1 507
NL	2	1	518	521	246	90	239	575	101	1 197
DE	9	1	288	298	866	199	442	1 506	230	2 035
IT	19	3	101	122	402	170	411	983	381	1 486
UK	30	4	273	306	282	126	276	684	165	1 155
IRL	1	0	89	90	17	8	32	58	9	157
DK	3	1	84	89	70	40	294	404	3	496
GR	0	0	0	0	0	0	0	0	0	0
PT	1	0	8	9	20	37	26	82	34	126
ES	106	2	219	327	214	123	101	439	281	1 047
BE	4	0	109	113	197	125	223	545	110	767
LUX	0	0	0	0	5	1	3	8	0	9
SW	9	2	95	106	216	37	166	419	83	608
FIN	7	1	73	81	186	49	342	577	169	827
AT	0	0	7	7	77	35	93	205	18	230
Total	210	15	2 036	2 260	3 185	1 188	3 194	7 567	1 820	11 647

COMEXT2003_Sea_Bulk (in thousands of tonnes/year)

Imports

Rep./part.	Ukraine	Belarus	Russia	Sub-Total	China	South Korea	Japan	Sub-Total	Turkey	Total
FR	194	987	5 011	6 192	395	7	29	431	116	6 739
NL	216	0	1 547	1 763	1 468	36	169	1 673	131	3 567
DE	4	45	6 499	6 547	740	9	88	837	31	7 415
IT	4 501	0	4 235	8 736	2 178	14	182	2 375	3 468	14 578
UK	234	97	10 070	10 401	941	18	38	997	154	11 551
IRL	0	0	2	2	29	1	3	33	11	46
DK	14	0	1 996	2 010	401	1	1	403	8	2 421
GR	0	0	0	0	0	0	0	0	0	0
PT	43	20	598	661	10	0	0	10	22	693
ES	979	40	4 954	5 973	507	23	27	557	1 085	7 614
BE	335	8	2 990	3 333	631	25	28	684	291	4 309
LUX	0	0	0	0	0	0	0	0	0	0
SW	5	97	1 903	2 006	397	1	3	401	62	2 468
FIN	9	1	7 098	7 108	555	0	1	557	60	7 724
AT	0	0	1	1	15	0	1	17	3	21
Total	6 532	1 296	46 904	54 732	8 269	136	570	8 975	5 439	69 146

Exports

Rep./part.	Ukraine	Belarus	Russia	Sub-Total	China	South Korea	Japan	Sub-Total	Turkey	Total
FR	49	0	8	57	131	95	73	299	162	518
NL	1	1	44	45	373	71	83	528	938	1 511
DE	1	1	19	20	264	64	122	449	463	932
IT	1	0	4	5	360	65	74	499	958	1 463
UK	4	0	19	23	487	92	71	651	1 358	2 031
IRL	0	0	8	8	1	4	2	7	1	16
DK	0	0	5	5	52	1	4	57	127	189
GR	0	0	0	0	0	0	0	0	0	0
PT	0	0	0	0	40	0	7	47	58	106
ES	0	0	3	4	396	50	42	489	226	719
BE	0	0	17	18	279	90	37	407	1 070	1 495
LUX	0	0	0	0	0	0	0	0	0	0
SW	0	0	168	169	114	5	10	129	1 144	1 442
FIN	0	0	8	9	123	144	13	280	120	408
AT	0	0	0	0	8	1	0	9	0	9
Total	56	3	303	362	2 629	684	539	3 852	6 627	10 840

PART III.

EUROPE-ASIA INTERMODAL TRANSPORT

INTERNATIONAL SEMINAR
"INTERMODAL TRANSPORT BETWEEN EUROPE AND ASIA: OPPORTUNITIES AND CHALLENGES"

KIEV (UKRAINE) 27-28 SEPTEMBER 2004

INTERNATIONAL SEMINAR "INTERMODAL TRANSPORT BETWEEN EUROPE AND ASIA: OPPORTUNITIES AND CHALLENGES" KIEV (UKRAINE) 27-28 SEPTEMBER 2004

CONCLUSIONS AND FOLLOW-UP

At the Ministerial Meeting in Moscow on 24 and 25 May 2005, ***Ministers****:*

- ***Noted*** the conclusions of the Kiev Seminar, as contained under item A of this document, by underlining the close co-operation developed in this respect both by the ECMT and the UN Regional Commissions concerned (UNECE and UNESCAP).
- ***Mandated*** the Deputies to see to the implementation of the measures required to achieve the objectives referred to under item E above.
- **Approved** the Action Plan proposed under item C as a follow-up to the Kiev Seminar.
- To this end, ***entrusted the Joint ECMT/UNECE Working Group*** on Intermodal Transport and Logistics with responsibility for co-ordination and for providing countries which so wish with assistance in this area, and mandate it to report on progress made with respect to any additional recommendations.

Given the present and forecasted traffic increases between Eastern and Western Europe, to what extent and under what conditions could intermodal transport play a significant role in dealing with these additional traffic flows? How could alternative modes to road transport be promoted, given the present European intermodal system difficulties?

To answer these questions, the European Conference of Ministers of Transport (ECMT) and the United Nations Economic Commission for Europe (UNECE) were invited, by the Minister of Transport of Ukraine to hold a Seminar on "Intermodal Transport between Europe and Asia: Opportunities and Challenges", that took place in Kiev on 27 and 28 September 2004 and that brought together more than 23 countries interested in improving intermodal land transport relations between Europe and Asia.

A. Conclusions

The following conclusions were adopted at the end of the Seminar:

"Representatives of transport authorities in Europe, Central Asia and Caucasus States, ECMT, UNECE, UNESCAP, EU and other international organisations as well as transport unions and associations and other concerned bodies, which took part in the international Seminar held in Kiev on 27 and 28 September 2004,

Took into account the importance and timeliness of efforts to develop intermodal transport communication for the sustainable development of international traffic in Europe and Asia,

Supported the initiatives of Member States to accelerate intermodal transport development, creation of up-to-date transport infrastructure and the introduction of new technologies,

Confirmed their adherence to the resolutions of international Conferences adopted before, as well as the provisions of relevant International Transport Conventions and Treaties,

Acknowledged the efforts of ECMT, UNECE, UNESCAP and the EU TRACECA Programme for the development of European and Asian transport links directed toward a consistent, co-ordinated and harmonious development of the transport infrastructure on the Continent,

Welcomed the initiative taken by ECMT and UNECE to work in partnership towards the development of intermodal transport and logistics,

Discussed the prospects of intermodal transport and ways for improving its organization,

Noted that the principal orientation for further joint activities in the creation of effective intermodal land transport links between Europe and Asia should be as follows:

- A combined effort in order to increase the effectiveness of the measurements undertaken to increase the volumes of intermodal transport as well as the development of technical and technological capacities in transport infrastructures of Member States.

- Increased co-ordination of transport activities, customs and border authorities of Member States to simplify border crossing procedures for freight transportation using intermodal transport.

- The removal of physical and non-physical obstacles that impede traffic passing between regions in Europe and Asia.

- The enlargement of the intermodal transport network by accelerating adhesion by the countries in Eastern Europe, Central Asia and the Caucasus to the AGTC Agreement and its Protocol on combined transport on inland waterways.

- The development and implementation of joint investment projects and ensuring their financing.

- The acceleration of freight traffic by rail in gauge interchange stations.

- The creation of a network of logistics centers and information support for freight transport.

- The implementation of harmonized tariff and price policies.

- The development of rail ferry lines in the region of the Black Sea, the Sea of Azov and the Caspian Sea and improved use of the inland waterways for intermodal transport.

- The increased use of rail transit capacities in passage for intermodal freight transport from China to Europe via Kazakhstan, Turkmenistan, Iran, the Russian Federation, Belarus, the Caucasus States, Ukraine and Turkey.

- Support of the United Nations Development Account Project on capacity building in developing, particularly, Euro-Asian transport linkages, jointly carried out by the UNECE and UNESCAP.

- Harmonisation of the regulatory and legal frameworks in the field of transport of Member States on the basis of international agreements, ECMT resolutions, UNECE Conventions and the legislation and principles of EU transport policy.

Asked the International Organisations involved to follow-up and deal concretely with the issues and problems above and to make all the information provided available during the Seminar to a wider audience.

Expressed confidence that the results of the international Seminar will contribute to better coordination of activities for further development of intermodal transport that can serve a dynamically developing trade and economic relations between Europe States, the Near and Middle East, Asia and other territories and increases the effectiveness of the Euro-Asian transport system as a whole.

B. Lessons

Reports and discussions held during the Seminar brought to the fore a certain number of specific considerations to be dealt with as a priority when promoting intermodality between the Europe and Asia:

1. Effective **inter-institutional co-operation** is a prerequisite for any further development of such interregional exchanges. Nevertheless, the diversity and frequency require increased co-ordination on a national and an inter-governmental level. In this respect, the various declarations already available following the three International Conferences on Europe-Asia Transport held in St Petersburg in 1998, 2000 and 2003, should be taken into consideration as should the report on the 2nd meeting of the UNECE-UNESCAP Expert Group on the Development on Europe-Asian Transport Linkages, held on 3 to 5 November 2004 in Odessa.

2. The weakness identified for an effective development of transport linkages between Europe and Asia are the persistent problems at **border crossings**. Facilitation of border crossing procedures, particularly in rail transport, is therefore of utmost importance.

3. As far as land linkages between Europe and Asia are concerned, it would also be advisable to underline the weakness of **rail services**, but in this respect, and contrary to what has been underlined in the ECMT Consolidated Resolution, it is less the **quality** of rail services which must be considered, than the **interoperability** of rail networks, and priority should be given to the main freight routes.

4. Among modes, **inland waterways** are of some importance as far as North-South relations between Europe and Asia are concerned, as well as **short distance sea shipping** in Mediterranean–Black Sea linkages, but **rail transport** should be further developed in East-West linkages.

C. Follow-up

The considerations developed above show that co-operation between various international institutions concerned with the development of land transport between Europe and Asia, should be further enhanced and could be guided by a **framework action plan**, which could be as follows:

1. Identify the **main points** where action is a matter of priority whilst taking into account:

   - The need for consistency between international agreements (AGTC, AGC…) and reference documents used by infrastructure managers which are part of the EIM and the TERFN networks.

   - Analyse the points identified in the report by the group of UNECE-UNESCAP experts which met in Odessa in November 2004 and those contained in the report by the UNECE Working Party on Rail Transport in 2004 (TRANS/SC2/2004/3).

   - The Progress reports on the projected pan-European transport corridors.

2. Give priority to facilitating **border crossings**, all components and all modes combined, but with the focus on rail transport in particular.

3. With regard to **railways**:

   - Give priority to gauge interchange points.

   - Have not only a coherent investment programme, but also an adequate logistical approach.

   - Make pertinent choices concerning interface points between modes - transshipment platforms.

   - Improve the interface between sea ports, railways and inland waterways.

4. Define a **simplified legal framework** so as to avoid duplication and to cover operators from one end of the transport chain to the other, and in regard to facilitating border crossings, establish simplified administrative and customs procedures so as to improve effectiveness in the transport chain.

5. Develop new **information and communication technologies,** within a common framework that facilitates trade and makes it easier to track freight flows.

PART IV.

CONTRIBUTIONS FROM INTERNATIONAL ORGANISATIONS[1]

1. Note: These contributions were presented at the ECMT Council of Ministers in Moscow on 24 and 25 May 2006.

ANNEX 1.

UNITED NATIONS  **NATIONS UNIES**

UNECE - UNESCAP

UNECE WORK ON THE DEVELOPMENT OF EURO-ASIAN TRANSPORT LINKS

1. Introduction

Economic and trade globalization is generating an increase in the transport of goods involving production and consumption centres in Europe and in Asia. At present, goods between Europe and Asia are mostly maintained by maritime transport. This situation is likely to continue for some time, as maritime transport is well established and relatively affordable. The ports also have the capacity to absorb traffic increases. However, increased goods transportation creates capacity problems in the hinterland of many ports, while countries in the Euro-Asian region have become increasingly aware of the importance of Euro-Asian land transport links for the development and integration of the economy. Consideration is given to the possibility of developing land transport links, which could provide viable alternatives to maritime transport links and, at the same time, promote development and integration of countries in the region.

Euro-Asian rail networks and corridors already exist. The Trans-Siberian Railway offers an alternative to maritime transport between Western Europe and the Far East. Road links may also provide viable alternative routes to sea links. Road routes between origin and destination points in Europe and Asia could be up to 8 000 km shorter than sea routes.

According to a number of studies, Euro-Asian land transport links have the potential to compete effectively with maritime transport in several transcontinental and intercontinental shipments categories. However, for this to happen, not only coherent, efficient Euro-Asian land transport infrastructures need to be developed, but also the legal, insurance and tariff structures, as well as security and border crossing procedures will have to be improved.

Since 1995, the United Nations Economic Commission for Europe (UNECE) has been promoting the development of efficient, integrated Euro-Asian land transport links. It has done so through the extension of its infrastructure network agreements to the Caucasus and Central Asia, through its active participation in the preparation of the International Euro-Asian Conference on Transport, through the development, together with the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), of a Common Strategic Vision for the development of Euro-Asian links, and through the implementation, also jointly by UNECE and UNESCAP, of a Project funded by the UN Development Account on the Development of Euro-Asian transport links.

2. Extension of the AGR, AGC and AGTC Agreements to the Caucasus and Central Asia

In 1995, the UNECE Inland Transport Committee (ITC) became aware of the importance of an efficient, integrated Euro-Asian land transport system, consequently they requested the extension of the European Agreement on Main International Traffic Arteries (AGR), which establishes the "E" road network, to the then new UNECE member countries in the Caucasus and Central Asia. In April 2000, after consultations and negotiations with the countries concerned and the completion of the relevant legal procedures, the amendments to the AGR entered into force, which meant that the "E" road network also included the international roads of those countries, extending to the borders of China. Extended routes include: the E 40, from Calais, France, through Brussels, Köln, Dresden, Krakow, Kiev, Astrakhan, Buchara, Samarkand, Tashkent, Bishkek and Almaty, to Leninogorsk, near the border between Kazakhstan and China; and the E 60, from Brest, France, through Basel, Zürich, Vienna, Budapest, Bucarest, across the Black Sea, Tbilisi, Baku, Ashgabat, Buchara, and Dushambe, to Irkeshtam, at the border between Kyrgyzstan and China.

Similarly, since January 2002, the European Agreement on Main International Railway Lines (AGC) also comprises all railway lines of international importance in the Caucasus and Central Asia. Extended rail routes include: the E 20 from Oostende, Belgium, through Brussels, Köln, Berlin, Warsaw, Moscow, Yekaterinburg and Omsk, to end as far as Vladivostok; the E 50, from Paris, through Geneva, Zürich, Vienna, Budapest, Lvov, Volgograd, Makat, Aralsk and Almaty, to Druzhba, Kazakhstan; and the E 60, from Batumi, Georgia, through Baku, across the Caspian Sea, Ashgabat, Buchara and Tashkent, to Arys, Kazakhstan. When developed up to the AGC standards, the new “E” rail lines will also contribute to easier international transport with and through those countries.

At the present time, the European Agreement on Important Combined Transport lines and Related Installations (AGTC) is also being amended to incorporate rail lines that can be used for international combined transport, terminals, border crossing points, ferry links and other installations in the Caucasus and Central Asia.

In addition to extending its network Agreements to Asia, the UNECE has assisted UNESCAP in the development of an Agreement on the Asian Highway Network (AHN), based on the AGR, and is assisting in the development of another Agreement on the Trans-Asian Railways (TAR), based on the AGC and AGTC.

3. Supporting the International Euro-Asian Transport Conferences

Furthermore, the UNECE has actively participated in a large number of Euro-Asian transport conferences. In particular, it provided support to the Russian Federation Government in the preparation of the International Euro-Asian Conferences on Transport held in Saint Petersburg and participated actively in those Conferences. The first Conference, held in 1998, recommended that the

UNECE and UNESCAP, with the support of the concerned Governments, should elaborate a joint programme on the development of transport links between Europe and Asia.

The second International Euro-Asian Conference on Transport, held in 2000, agreed on the following list of Euro-Asian Land Transport Corridors as the backbone of the Euro-Asian Land Transport system:

I. Trans-Siberian

Europe (PETCs 2, 3 and 9) - Russian Federation - Korean Peninsula - Japan, with two branches from the Russian Federation to Kazakhstan - China and Mongolia - China.

II. TRACECA

Eastern Europe (PETCs 4, 7 8, and 9) – across the Black Sea - Caucasus - across the Caspian Sea - Central Asia.

III. Southern

South-Eastern Europe (PETC 4) - Turkey - the Islamic Republic of Iran, with two branches to Central Asia - China and South Asia - South-East Asia/Southern China.

IV. North-South

Northern Europe (PETC 9) - the Russian Federation, with two branches: Caucasus - Persian Gulf and Central Asia - Persian Gulf.

The third Conference, held in 2003, recommended, among others, "the establishment within the UNECE and in close co-operation with UNESCAP, of an effective mechanism that will ensure continuous monitoring of developments and support for all activities by various participants involved in the development of the Euro-Asian Transport links".

4. Common UNECE-UNESCAP Strategic Vision for the Development of Euro-Asian Links

The collaborative effort between UNECE and UNESCAP in 2001 resulted in a Common Strategic Vision for the development of Euro-Asian Transport Links (TRANS/WP.5/2001/14), which outlines objectives, main tasks, information and data needs, implementation mechanism and the necessary resource mobilization, as well as a short-term work programme to eventually facilitate the development of the Euro-Asian land transport corridors. The document identifies the long-term goals and defines as the basic Euro-Asian transport corridors those identified at the second St. Petersburg Conference in 2000. The Strategic Vision also identifies short term operational objectives, including the accessibility of the Central Asian landlocked States, facilitation of international transport, particularly transit transport, in the region, addressing both the regulatory framework and the infrastructure, and development of competitive inland transport routes for Far East-West European traffic as an alternative to existing maritime routes. The Common UNECE-UNESCAP Strategic Vision, which was presented at the Second International Euro-Asian Conference on Transport in

St. Petersburg in 2000, was subsequently reviewed and adopted by the UNECE Working Party on Transport Trends and Economics in 2001 and the Inland Transport Committee in 2002.

For its part, the UNECE Working Party on Rail Transport (SC.2) continually compiles information on trial runs of container block trains on Euro-Asian transport corridors. These test runs, organized on a multilateral and bilateral basis, show competitive advantages that well organized, planned and smooth international rail transport services could have in comparison with sea routes. They also help to identify the obstacles to be removed so that Euro-Asian land corridors can become competitors to maritime transport. The SC.2 also monitors train border stop times on the AGC network, in particular along Euro-Asian transport links, and offers measures to reduce them.

5. The UNECE-UNESCAP Project on developing Euro-Asian Transport Links

A major step forward towards the development of Euro-Asian transport links has been the approval by the UN General Assembly of a joint Project of the five UN regional commissions on the development of interregional transport linkages, funded by the UN Development Account[1], and the subsequent decision of the UNECE and UNESCAP secretariats to focus and join their efforts on the development of the Euro-Asian transport links. The two regional commissions have been allocated about US$ 400 000, to be spent over the period 2003-2006, for this purpose.

The countries most directly concerned were invited to participate in the Project and to nominate Focal Points. They included: all Eastern European UNECE member countries that are non EU members, namely Belarus, Bulgaria, Romania, Republic of Moldova, Russian Federation, Turkey and Ukraine; all Caucasus and Central Asian UNECE and UNESCAP countries, namely Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan; and three other interested UNESCAP member countries, namely Afghanistan, the Islamic Republic of Iran and the People's Republic of China. Altogether 18 countries were invited. International Financial Institutions were also invited to participate in the Project and designate Focal Points.

The First Expert Group Meeting, held in March 2004 in Almaty (Kazakhstan), in which 16 designated National Focal Points, the World Bank, the EBRD, EU-Traceca and non-governmental organizations participated and agreed on the main elements of a strategy to develop Euro-Asian Transport Links. This strategy focuses on the main routes along the four major Euro-Asian Corridors that were agreed on at an international level and represents an extension of the Pan-European Transport Corridors further East. Other elements of the strategy takes into account intermodal aspects, including transshipment points along these routes and addresses border-crossing problems. The meeting also agreed on the data to be provided and the format of the country reports to be prepared by the National Focal Points.

At the second Expert Group Meeting under the project, held in Odessa in November 2004, the Focal Points of 16 participating countries were identified, on the basis of agreed criteria, eight main Euro-Asian rail routes and ten main Euro-Asian road routes are to be considered for priority development. The selected routes include: Northern East-West routes, linking the western borders of Belarus and the Ukraine, through the Russian Federation with the port of Vladivostok in the Pacific Ocean, with branches through Kazakhstan and China up to the Shanghai port; the TRACECA routes, linking Romania and Bulgaria, through the Black Sea, Turkey, Caucasus countries and Central Asia;

1. UN Development Account Project on Capacity-building in developing interregional land and land-cum-sea transport linkages, implemented by the five UN Regional Commissions.

the North-South routes link the North of Russia to the Caucasus countries and Iran. Finally, other selected main routes are Southern East-West routes linking Bulgaria, through Turkey and Iran, with Afghanistan and China, with branches to Southern Iran towards Pakistan and India. The rail and road transport routes selected by the Governments under the Project are described in detail in the **Appendix** to this report which also takes into account the modifications made to these routes at the 3rd Expert Group Meeting in Istanbul in 2005 (see below).

The meeting also agreed on the criteria to prioritize projects and requested that the projects already proposed by participating countries be evaluated in 2005 in accordance with the criteria. This is currently under way. It should be noted, at this point that the criteria adopted for prioritization of both the Euro-Asian routes and the projects should not be as strict as those used in context of the EU High Level Group. Therefore, it should not be surprising that the UNECE-UNESCAP Project provides a larger number of priority routes and of priority projects. It is important that the priority routes and projects identified at the High Level Group are well within those identified in the UNECE-UNESCAP Project. To this end, co-operation and coordination between the High Level Group and the UNECE-UNESCAP Project is considered important.

Furthermore, the meeting requested National Focal Points to provide additional data concerning priority routes and priority projects in order to finalize the relevant Geographic Information System (GIS) database and related maps. It also agreed on future tasks, such as the assessment of technical conditions of the adopted routes, the identification and analysis of the main physical and non-physical obstacles along the routes through a time/cost analysis, including border crossings, and the identification of existing and potential transshipment points along the routes.

The Turkish Government hosted the 3rd Expert Group Meeting on Developing Euro-Asian Transport Linkages that was jointly organized by UNECE and UNESCAP in Istanbul, Turkey, 27-29 June 2005. The Meeting was opened by Mr. Muammer Türker, Deputy-Undersecretary, Ministry of Transport of Turkey and was attended by National Focal Points and Experts from 18 countries in the Euro-Asian region. Representatives form the UNESCWA, EC DG TREN, ECMT, IGC TRACECA, IsDB, IRU, BSEC-URTA, and Europlatforms as well as the private sector, also attended the Meeting.

The National Focal Points from the participating countries finalized the itineraries of the main road, rail and inland water transport routes connecting Europe and Asia to be considered for priority development and identified the main transshipment points along these routes. Furthermore, the Meeting agreed to provide missing and additional data with a view to the completion of a Geographic Information System (GIS) database. It also agreed on a methodology for the evaluation and prioritization of projects along the selected routes.

Finally, the Meeting welcomed the proposal of the UNECE WP.5 Informal Meeting, held on 15 April 2005, that the Expert Group Meeting on Euro-Asian Transport Linkages Project acts as a permanent mechanism for ensuring efficient coordination and monitoring of activities related to Euro-Asian transport links, asked the UNECE-UNESCAP secretariats to prepare a joint proposal for the continuation of the project beyond 2006 and appealed to the international financial institutions and donors to consider co-funding its implementation.

The Project activities in 2006 include, finalization of projects prioritization; measures to address the physical and non-physical obstacles to Euro-Asian transport, including to reduce times and costs at borders through the implementation of the relevant multilateral agreements; strengthening national transport facilitation bodies and formulation of appropriate national action plans; and completion of a

UNECE-UNESCAP in-house study on developing Euro-Asian Transport Linkages to be presented at a final Expert Group Meeting, to be convened by end of 2006.

6. Future work

Thanks to the willingness of the countries concerned to cooperate and also to the funds made available by the UN Development Account, the UNECE-UNESCAP Project on Developing Euro-Asian Transport Links has achieved tangible results. The Project can continue to finance its activities and to achieve further results until the end of 2006. However, the Project, and with it the funds it provides, is foreseen to end in 2006, while the tasks to be performed in order to put in place efficient, competitive Euro-Asian land transport links are numerous, complex and require the long term co-operation of the countries concerned.

It is, therefore, extremely important, after the conclusion of the current phase of the Project, to ensure the necessary funding for the continuation of the Project activities, including the meetings of the Expert Group created under the project, for the period 2007-2010. To this end, the support of the ECMT Council of Ministers will be very important.

APPENDIX

Priority transport routes adopted at the 3rd Expert Group Meeting on Developing Euro-Asian Transport Linkages (27-29 June 2005, Istanbul, Turkey)

Adopted rail routes

		Comment	AGC	TAR[1]
1.	**Brest** - Minsk - Moscow – Nizhniy Novgorod – Perm - Yekaterinburg - Omsk - Novosibirsk - Ulan Ude - Karimskaya – Vladivostock (Port)/ Vostochy (Port)	PETC 2; OSJD 1	E-20	
1.a	**Buslovskaya** – St. Petersburg (Port) –Moscow - Yekaterinburg	PETC 9; OSJD 16	E-10, E-20	
1.b	**Mostiska/ Chop** - Lvov – Moscow	PETC 5, 9; OSJD3	E-30, E-95	
1.c	Tavshet – Irkutsk – Ulan Ude – Naushki – ***Border with Mongolia***		NA	
1.d	Karimskaya – Zabaykalsk – ***Border with China***		NA	
1.e	Kaliningrad – *(Lithuania)* – Minsk		NA	
1.f	Novosibirsk – Lokot – Aktogai		NA	
1.g	Nikeltay – Kandagach – Makat – Oazis (- Aktau port)	TRACECA	E-30, E-50, E-597	
2.	**Brest** - Minsk - Moscow - Yekaterinburg – Kurgan - Astana - Drujba - *Urumqi - Lianyungang (Port)/Shanghai (Port)*	PETC 2; OSJD 1	E-20, E-24, E-50	
2.a	**Buslovskaya** – St. Petersburg (Port) –Moscow - Yekaterinburg	PETC 9; OSJD 16	E-10, E-20	
2.b	Kaliningrad – *(Lithuania)* – Minsk		NA	
2.c	Ekaterinburg – Chelyabinsk – Taranovskaya – Zaayatskaya – Tobol – Astana		NA	
3.	**Curtici** – Arad – Bucharest – Constanta (Port) – Poti/Batumi (Port) – Tbilisi – Baku (Port) – Aktau (Port) – Beineu – Nukus – Uchkuduk – Navoi – Tashkent – Shymkent – Almaty – Dostyk – *Alataw Shankou – Lianyungang (Port)/Shanghai (Port)*	PETC 4, TRACECA; OSJD 6a, 8, 10, 2, 5	E-54, E-562, E-60, E-50	

		Comment	AGC	TAR[1]
3.a	Baku (Port) – Turkmenbashi (Port) – Ashgabat – Chardzhou – Bukhara – Navoi	TRACECA; OSJD 10	E-60	
3.b	Tbilisi – Sadakhlo – Gyumri – Yerevan	TRACECA	E-692	
3.c	Balychi – Bishkek – Lugovaya	TRACECA	NA	
3.d	Tashkent – Kanibadam – Andizhan – Jalalabad – Turugart – *Kashi – Urumqi* (Jalalabad – Turugart – Kashi section under construction)	TRACECA	E-696	
3.f	Dushanbe – Termez – Bukhara	TRACECA	NA	
3.g	Mersin (Port) / Iskenderun (Port) – Malatya – Dogukapi – Gyumri - Sadakhlo – Tbilisi	TRACECA	E-692, E-97	
3.h	**Ungeni** – Chisinau – Bendery – Kuchurgan – Rozdil'na – Odessa (Port) / Ilyichevsk (Port) – Poti/Batumi (Port)	TRACECA; OSJD 5a, 7	E-95	
3.i	Border with FYROM - Sofia – Pleven – Varna (Port) – Poti/Batumi (Port)	PETC 8	E-680,	
3.j	Curtici – Arad – Timisoara – Craiova – Bucharest – Giurgiu – Russe – Kaspichan – Varna (Port) – Poti/Batumi (Port)	PETC 10, 8	E-66, E-56, E-95, E-660, E-680	
3.k	Dragoman – Sofia – Gorna – Burgas (Port) – Poti/Batumi (Port)		E-70, E-720	
3.l	Ungeheni – Iasi – Bucharest – Giurgiu		E-95	
3.m	Bukhara – Karshi – *[Turkmenistan]* - Termez – Kurgan- T'ube – Kul'ab	TRACECA	E-695	
3.n	Kars – Akhalkalaki – Tbilisi (Kars – Akhalkalaki section under construction)		E-692	
3.o	Tashkent – Angren – Pap – Andijan (Angren – Pap section under construction)		E-696	
3.p	Gavar – Meghri – Nourdouz – Jolfa (Gavar – Meghri – Nourdouz section under construction)		NA	
4.	Dragoman – Sofia – Svilengrad – Kapikule – Istanbul – Haydarpasa (Port) – Izmit – (Derince Port) – Ankara – Malatya - Kapikoye – Razi – Qazvin – Tehran – Sarakhs – Sarahs - Mary – Chardzou – Navoi – Tashkent – Shymkent – Almaty – Dostyk – *Alataw Shankou – Lianyungang (Port)/Shanghai (Port)*	PETC 4, 8,10; OSJD 6, 10, 2, 5; TRACECA	E-70, E-60, E-50	
4.a	Mersin (Port) / Iskenderun (Port) – Malatya		E-97	
4.b	Samsun (Port) – Kalin – Sivas – Bostankaya	TRACECA	E-97, E-70	
4.c	Tehran – Qom – Meybod – Yazd – Bafgh – Kerman – Zahedan – Mirjaveh – *Koh-i-Taftan (Border with Pakistan)*		NA	
4.d	Izmir (Port) – Balikesir – Eskisehir		E-74	

		Comment	AGC	TAR[1]
4.e	Izmir (Port) – Usak – Afyon – Yenice – Mersin (Port)/ Iskenderun (Port)		E-97	
4.f	Pehlivankoy – Uzun-kopru – *Border with Greece*		NA	
5.	**Buslovskaya** – St. Petersburg (Port) – Volgograd – Astrakhan (Port) – Alya (Port) – Anzali (Port) – Rasht – Qazvin - Tehran – Qom – Meybod – Bafgh – Bandar Abbas (Port) (Anzali – Rasht – Qazvin section under construction)	PETC 9; OSJD 11	E-10, E-99, E-50,	
5.a	Astrakhan (Port) – Alya (Port) – Amirabad (Port) – Garmsar – Tehran		NA	
5.b	Astrakhan (Port) – Samur – Yalama – Baku – Astara (Azerbaijan) – Astara (Iran) – Rasht (Astara – Astara – Rasht section under study)	OSJD 11	E-60, E-694	
5.c	Astrakhan (Port) – Askarayskaya – Ganyuchikino – Makat – Beineu – Nukus – Uchkuduk – Bukhara – Chardzhou – Sarahs - Sarakhs – Mashhad – Bafgh	TRACECA	E-50, E-597	
5.d	Alya (Port) – Aktau (Port) – Beineu		E-597	
5.e	Tehran – Qom – Arak – Ahvaz - Bandar Emam (Port)		NA	
5.f	Tehran – Kashan – Badrud – Esfahan – Shiraz – Bushehr (Port) (Esfahan – Shiraz – Bushehr planned)		NA	
5.g	Bafgh – Kerman – Fahraj – Chabahar (Port) (Fahraj – Chabahar planned)		NA	
5.h	Murmansk (Port) – St. Petersburg		NA	
6.	**Mostiska/ Chop/Yagudin** – Lvov – Kiev – Kharkov – Liski – Samara – Ufa – Kurgan – Omsk - Novosibirsk - Ulan Ude - Karimskaya – Vladivostock (Port)/Vostochy (Port)	PETC 3, 5	E-30, E-24	
6.a	Chisinau – Tighina – Rozdil'na – Zhmerynka	PETC 9	E-95,	
6.b	Tavshet – Irkutsk – Ulan Ude – Naushki – ***Border with Mongolia***		E-20	
6.c	Karimskaya – Zabaykalsk – ***Border with China***		NA	
7.	**Mostiska/ Chop** – Lvov – Zhmerynka – Fastov – Donietsk – Likhaya – Volgograd – Aksarayskaya – Makat – Beineu – Nukus – Uchkuduk – Navoi – Tashkent – Shymkent – Almaty – Dostyk – *Alataw Shankou – Lianyungang (Port)/Shanghai (Port)*	PETC 3, 5; TRACECA	E-30, E-50, E-593, E-597	
8.	**Mostiska/ Chop** – Lvov – Fastov – Krasnoarmelsk – Kvashino – Uspenskaya – Rostav-na-Donu – Veseloe – Gandtiadi – Senaki – Tbilisi – Alyat – Astara (Azerbaijan) – Astara (Iran) (Astara – Astara section under construction)	PETC 3, 5; TRACECA	E-30, E-50, E-593, E-99, E-60	
8.a	Tbilisi – Gyumri – Yerevan	TRACECA	E-694	

		Comment	AGC	TAR[1]
8.b	Kaliningrad (Port) – *(Lithuania)* – Minsk – Gornosaivka – Nizhyn – Kiev		E-95	
8.c	Kafkas (Port) – Novorossysk (Port) – Krasnodar		E-99	
8.d	Varna (Port) – Novorossysk (Port) – Poti/Batumi (Port)		NA	
9.	Buslovskaya – Moscow – Ryazan – Orenburg – Aktyubinsk – Kandagach – Aris – Tashkent – Bukhara – Karshi – Tashguzar – Baysun – Kumchurgan – Termez – Galaba – Hairatan (border of Afghanistan) (Tashguzar – Baysun – Kumchurgan section under construction)	TRACECA	E-10, E-24, E-30, E-50, E-695	
9.a	Ryazan – Aksarayskaya – Makat – Karakalpakiya – Uchkuduck – Navoi – Bukhara	TRACECA	E-50, E-597	
9.b	Rostov-na-Donu – Volgograd – Baskunchak - Aksarayskaya		E-99, E-50	
9.c	Bukhara – Karshi – Tashguzar – Baysun - Kumchurgan – Sariacia – Dushanbe – Vaghdad (Tashguzar – Baysun – Kumchurgan section under construction)		E-695	

Notes:

1. The Intergovernmental Agreement on the Trans-Asian Railway is currently under development. The TAR references will be added when the Agreement is finalized.
2. Italicized sections are located in countries who have not yet formally agreed to the proposals.
3. Spelling of station names will be checked against those included in international agreements.
4. Numbering is indicative only.

Adopted Road Routes

		AGR	AH
1.	**Torfyanovka** – St. Petersburg (Port) – Moscow – Nizhniy Novgorod – Ekaterinburg – Omsk – Novosibirsk – Krasnoyarsk – Irkutsk – Ulan Ude – Chita – Belogorsk – Khabarovsk – Ussuriysk – Vladivostock (Port)/Vostochny (Port)/Nahodka (Port)	E-105, E-22	AH-8 AH-6 AH-30
1.a	**Brest** – Minsk – Moscow	E-85, E-30	AH-6
1.b	**Mostiska/Chop** – Lvov – Kiev – Moscow	E-40, E-101	NA
1.c	Moscow – Yaroslavl – Vologda – Archangelsk (Port)	E-115	NA
1.d	Semipalatinsk – Novossibirsk (see Note 1)	NA	NA
2.	**Brest** – Minsk – Moscow – Nizhniy Novgorod – Ufa – Chelyabinsk – Kurgan – Petropavlovsk – Astana – Almaty – Khorgos – Jinghe – Urumqi – Xi'an – Lianyungang (Port) / Shanghai (Port)	E-85, E-30, E-125	AH-6, AH-64, AH-7 AH-60
2.a	**Torfyanovka** – St. Petersburg – Moscow	E-18, E-105	AH-8
2.b	Petropavlovsk – Omsk – Pavlodar – Semipalatinsk – Georgievka – Taskesken – Ucharal – Dostyk – Alatawshankou – Kuitun – Urumqi	E-127	AH-60, AH-68, AH-5
2.c	Samara – Uralsk – Aktobe – Dossor – Makat	E-121, E-38	AH-63, AH-61
2.d	Chelyabinsk – Kaerak – Kostani – Astana	E-123, E-016	AH-7
2.e	Archangelsk – Perm – Yekaterinburg – Kurgan – Petropavlovsk	NA	NA
3.	**Mostiska** – Lvov – Kiev – Guktov – Kursk – Saratov – Ozinki - Uralsk – Aktyubinsk – Karabutsk – Aralsk – Kyzylorda – Shymkent – Almaty – Khorgos – Jinghe – Urumqi – Xi'an – Lianyungang (Port) / Shanghai (Port)	E-40, E-95, E-101, E-38	AH-61
3.a	**Chop** – Uzhgorod – Mukacevo – Stryei – Lvov – Kiev – Kharkov – Kamensk – Shahtinskiy – Volgograd – Astrakhan – Atyrau – Beyneu – Nukus – Bukhara – Navoi - Samarkand – Tashkent – Shymkent	E-40	AH-70, AH-8, AH-63, AH-5
3.b	**Yagodyn** – Kovel – Sarny – Kiev	E-373	NA
3.c	Kaliningrad (Port) - Tolpaki – Nesterov – (Lithuania) – Minsk – Gomel – Kiev	E-28, E-271, E-95	NA
3.d	**Mostiska/Chop** – Uzhgorod – Mukacevo – Stryei – Ternopol – Khmelnitski – Vinnitza – Uman – Kirovograd – Dnepropetrovsk – Donetsk – Rostov-na-Donu – Armavir – Mineralijnie Vodi – Vladikavkaz – (Tbilisi) - Makhachkala (Port) – Aktau (Port) – Beyneu	E-50 E-121	AH-70
3.e	Rostov-na-Donu – Krasnodar – Novorossijsk (Port) – Kafkas (Port) – Samsun (Port) / Poti/Batumi (Port) / Burgas (Port)	E-115, E-97	NA
3.f	Sofia – Popvica – Stara Zagora – Burgas (Port) – Kafkas (Port) – Novorossysk (Port) – Poti/Batumi (Port)	E-773	NA

		AGR	AH
4.	**Nadlag** – Arad – Bucharest – Constanta (Port) – Poti/Batumi (Port) – Tbilisi – Alat – Baku (Port) – Aktau (Port) – Beyneu – Nukus – Bukhara – Tashkent – Shymkent – Bishkek – Almaty – Sary-Ozek – Khorgos – Urumqi – Xi'an – Lianyungang (Port) / Shanghai (Port)	E-68, E-60, E-121, E-40, E-60	AH-5, AH-70, AH-63, AH-62
4.a	Tbilisi – Sadakho – Yerevan – Eraskh – Goris – Kapan – Megri – (Agarak) – Nourdouz – Jolfa – Eyvoghli	E-117	AH-82
4.b	Ruse – Giurgiu – Bucharest – Urziceni – Marasesti – Albita – Leucheni – Kishinev – Odessa (Port) – Poti/Batumi (Port)	E-85, E-581, E-58	NA
4.c	Kiev – Odessa (Port) / Ilyichevsk (Port) – Poti/Batumi (Port)	E-95	NA
4.d	Sofia – Pleven – Ruse – Varna (Port) – Poti/Batumi (Port)	E-79, E-83, E-85, E-70	NA
4.e	Merzifon – Samsun (Port of Samsun) – Trabzon (Port of Trabzon) – Sarp (Turkey) – Sarpi (Georgia) – Batumi (Port) – Poti (Port)	E-95, E-70	AH-5
4.f	Baku (Port) – Turkmenbashi (Port) – Ashgabhat – Mary – Bukhara	E-60	AH-5
4.g	Bishkek – Naryn – Torugart – Kashi	E-125	AH-61
4.h	Shymkent – Merket – Almaty	NA	AH-5
4.i	Brest – territory of Belarus - border with Ukraine – territory of Ukraine – border with Moldova – Chisinau – Odessa (Port) / Ilyichevsk (Port) – Poti (Port) / Batumi (Port)	E-30, E-85	NA
4.j	Batumi (Port) – Hopa – Kars – Gyumri – Yerevan (see Note 2)	E-70	AH-5
4.k	Giurgiulesti (river port) - Chisinau	E-584	NA
4.l	Gyumri – Erzurum (see Note 3)	E-691	NA
5.	**Border with Serbia Montenegro/FYR of Macedonia** – Sofia – Kapikule – Istanbul – (Haydarpasa Port) – Izmit (Derince Port) – Merzifon – Refahiye – Gurbulak – Bazargan – Eyvoghli – Tabriz – Qazvin – Tehran – Semnan – Damghan – Sabzevar – Mashhad – Dogharoun – Islam Qala – Herat – Mazar-i-Sharif – Termez – Guzar – Samarkand – Tashkent – Andizhan – Osh – Sary-Tash – Irkeshtam – Kashi – Urumqi – Xi'an – Lianyungang (Port)/ Shanghai (Port)	E-80	AH-1, AH-5, AH-85, AH-77
5.a	Tehran – (Saveh – Salafchegan) – Qom – Yazd – Anar – Kerman – Zahedan – Mirjaveh – *Border of Pakistan*	NA	AH-2
5.b	**Nadlag** – Arad – Timisoara – Lugoj – Carasebes – Dr.-Turnu – Severin – Craiova – Calafat – Vidin – Botevgrad – Sofia	E-70, E-79	NA
5.c	Border of Greece – Kesan – Silivri	E-90, E-84	NA
5.d	Kiev – Uman – Odessa (Port) / Ilyichevsk (Port) – Samsun (Port) – Merzifon	E-95	AH-5
5.e	Mashhad – Sarakhs – Tejen	NA	AH-75
5.f	Mazar-i-Sharif – Polekhumri – Kabul – border with Pakistan	NA	AH-76, AH-7, AH-1

		AGR	AH
5.g	Mazar-i-Sharif – Polekhumri – Nizhniy Panj – Dushanbe – Sary – Tash	E-123, E-60	AH-76, AH-7, AH-65
5.h	Termez – Dushanbe – Vakhdat – Kulob – Khorugh – Murgab – Kashi	E-60, E-009, E-008	AH-65, AH-66, AH-4
5.i	Constanta (Port) – Haydarpasa (Port)	NA	NA
6.	**Torfyanovka** – St. Petersburg – Moscow – Volgograd – Astrakhan/Alya (Port) – Anzali (Port) – Qazvin – Tehran – Bandar Abbas (Port)	E-105, E-119, E-40	AH-8, AH-1, AH-2, AH-70
6.a	Astrakhan (Port) – Alya (Port) – Samur – Yalama – Baku (Port) – Astara (Azerbaijan) – Astara (Iran) – Qazvin – Tehran	E-119	AH-8
6.b	Astrakhan (Port) – Amirabad (Port) – Sari	NA	AH-70
6.c	Astrakhan (Port) – Alya (Port) – Aktau (Port) – Beineu	E-121	AH-70
6.d	Qazvin – Saveh – Ahvaz – Bandar Emam (Port)	NA	AH-8
6.e	Tehran – Qom – Esfahan – Shiraz – Bushehr (Port)	NA	AH-72
6.f	Eserdar – Gudurolum – Inche Boroun – Gorgan – Sari – Semnan – Damghan – Yazd – Anar – Bandar Abbas (Port)	E-121	AH-70
6.g	Tegen – Sarahs – Sarakhs – Mashhad – Birjand – Nehbandan – Dashtak – Zahedan – Chabahar (Port)	NA	AH-75
6.h	Beineu – Aktau (Port) – Turkmenbashi (Port)	E-121	AH-70
7.	Murmansk (Port) - Petrozavodsk – St. Petersburg (Port)– Pskov – Ostrov – Gomel – Kiev – Odessa (Port) / Ilyichevsk (Port)	E-105, E-95	NA

Notes:

1. The representative of the Russian Federation noted that she would consult the relevant authorities in her country on their agreement to this proposal and inform the secretariat accordingly.
2. The representative of Turkey noted that she would consult the relevant authorities in her country on their agreement to this proposal and inform the secretariat accordingly.
3. The representative of Turkey expressed the reservation that this section is not operational as long as the Turkish-Armenian border remains closed.
4. Italicized sections are located in countries who have not yet formally agreed to the proposals.
5. Spelling of towns/cities will be checked against those included in international agreements.
6. Numbering is indicative only.

Euro-Asian Inland Water Transport and River Port Linkages

Inland Water Transport Linkages

No	Country	From – To	E- Number or other international ref. No.
1	Bulgaria	Danube Km 610 – Km 374	Corridor VII, E-80
2	Kazakhstan	Sr.Trekinskiy Yar – Peshnoi island – entering buoy of Uralo-Caspian channel (the Ural river)	
3	Kazakhstan	Irtysch river – Ob river (in Russian Federation)	
4	Moldova	Prut river from the mouth to Ungheni (0 – 559 km)	E-80-07
5	Moldova	a. Nistru river from the port Belgorod–Dnestrovsky (Ukraine) to Bender (0 - 356 km)	E-90-03
6	Moldova	b. Nistru river from the port Belgorod–Dnestrovsky (Ukraine) to Bender (357 km – 667 km)	E-90-03
7	Romania	Danube km. 1.075 – km. 863	Corridor VII E-80
8	Romania	Danube km. 863 – km. 175	Corridor VII E-80
9	Romania	Danube km. 175 – Mm. 0	Corridor VII E-80
10	Romania	Danube – Black Sea Canal	E-80-14
11	Romania	Poarta Alba – Midia – Navodari Canal	E-80-14-01
12	Russian Federation	St Petersburg – Svir – Cherepovets – Rybinsk – Nizhniy Novgorod – Kazan – Samara – Saratov – Volgograd – Krasnoarmeysk – Astrakhan (port) – Caspian Sea (includes Volgo-Baltiyskiy Vodniyput)	North-South Waterway (NSW), E-50
12A	Russian Federation	(Rybinsk) – Moskva – Riazan – Nizkhniy Novgorod (includes Kanal im. Moskvi)	NSW, E-50-02
13	Russian Federation	Azov – Rostov-na-Donu – Oust-Donetsk – Krasnoarmeysk – Astrakhan (port) – Caspian Sea	NSW4, NSW, E-90
14	Russian Federation	Ob river (connect to Irtysch river in Kazakhstan)	
15	Turkey	Lake Van (Tatvan – Van)	
16	Ukraine	Route №9 Dniper river (on regulate condition)	E-40
17	Ukraine	River Danube, border between Ukraine/Moldova – cape Izmailskii Chatal	E-80
18	Ukraine	Danube-Kilia Arm, cape Izmailskii Chatal -sea approach canal (Bistroe Arm Outlet)	E-80-09

Inland River Ports along Selected IWT Linkages

No	Country	Name and Location
1	Bulgaria	Port Complex Rousse (P 80-56) Danube, km 489.300, km 496.050
2	Bulgaria	Rousse East
3	Bulgaria	Rousse West
4	Bulgaria	Port Complex Lom (P 80-53) Danube, km 742 300
5	Bulgaria	Port Vidin, Danube, from km 785 400 to 793 500
6	Kazakhstan	Atyrau River Port (Ural, km …)
7	Kazakhstan	Pavlodar River Port (Ural, km …)
8	Moldova	Bender (P 90-03-02) , Nistru, km 228.0
9	Moldova	Rîbnița, Prut, km …
10	Moldova	Ungheni, Prut, km …
11	Moldova	Giurgiule ti (P 80-62) Danube, km 133.0
12	Romania	Sulina, Danube, km 0
13	Romania	Tulcea (P 80-64), Danube, km. 71
14	Romania	Galati (P 80-61), Danube, km. 150
15	Romania	Braila (P 80-60), Danube, km. 170
16	Romania	Giurgiu (P 80-57), Danube, km. 493
17	Romania	Calafat, Danube, km.795
18	Romania	Drobeta Turnu Severin (P 80-51),Danube, km 931
19	Romania	Orsova (P 80-50), Danube, km.954
20	Romania	Moldova Veche, Danube, km.1 048
21	Russian Federation	St. Peterburg River Port (P 50-02) Neva, km 1 385
22	Russian Federation	Yaroslavl River Port (P 50-05) Volga, km 520
23	Russian Federation	Nizhni Novgorod River Port (P 50-06) Volga, km 907
24	Russian Federation	Kazan River Port (P 50-07) Volga, km 1 313
25	Russian Federation	Samara River Port (P 50-09) Volga, km 1 746
26	Russian Federation	Volgograd River Port (P 50-11) Volga, km 2 560
27	Russian Federation	Ust-Donetsk River Port (P 90-05) Don, km 2 997
28	Russian Federation	Rostov-na-Donu River Port (P 90-05) Don, km 3 134
29	Russian Federation	Azov River Port (P 90-03) Don, km 3 168
30	Russian Federation	Yeysk River Port (P 90-02) Don, Taganrog Bay of the Azov Sea
31	Tajikistan	Nizhniy Panj (Republic of Tajikistan) Waterway name, km… Sherkhan-Bandar, Waterway name, km… (Islamic Republic of Afghanistan)
32	Tajikistan	Nizhniy Panj (Republic of Tajikistan) – Sherkhan-Bandar (Islamic Republic of Afghanistan)
33	Turkey	Tatvan Port (rail ferry port on Lake Van)
34	Turkey	Van Port (rail ferry port on Lake Van)
35	Ukraine	Reni (P 80-63) Danube, 128 km Danube
36	Ukraine	Izmail (P 80-09-01), Danube-Kilia Arm, km 93
37	Ukraine	Kiliia (P 80-09-02), Danube-Kilia Arm, km, 48

No	Country	Name and Location
38	Ukraine	Ust'-Dunaisk (P 80-09-03), Danube-Kilia Arm, km 1.0
39	Ukraine	Belhorod-Dnestrovskii (P 90-03-01), Dnestrovskii Liman, Black sea
40	Ukraine	Mykolaiv sea port (P 40-02-02), Bugskii Liman, Black sea
41	Ukraine	Kherson (P 40-12), Dniper, km 28
42	Ukraine	Odessa River Port, Black Sea
43	Ukraine	Cherkassy river port (P 40-06), Dniper, km 653
44	Ukraine	Kremechuk river port (P 40-07), Dniper, km 541
45	Ukraine	Dneprodzerzhinsk river port (P 40-08), Dniper, km 429
46	Ukraine	Dnepropetrovsk river port (P 40-09), Dniper, km 393
47	Ukraine	Zaporizhya river port Stock insurer company "Ukrrechflot" (P 40-10), Dniper, km 308
48	Ukraine	Nova Kakhovka river port (P 40-11), Dniper, km 96
49	Ukraine	Khersonskii river port, Stock insurer company "Ukrrechflot" Dniper, km …
50	Ukraine	Mykolaiv river port, (P 40-02-01), Pivdenny Buh, km 40

Notes:

1. River ports in the Russian Federation will be confirmed by the relevant authorities in that country.
2. Numbering is for reference only.
3. Sections which are common to two countries will be indicated after confirmation from the relevant authorities.

ANNEX 2.

the world road transport organisation IRU International Road Transport Union

THE IMPORTANCE OF THE EURO-ASIAN ROAD TRANSPORT CONNECTION CONTRIBUTION FROM THE IRU

1. Background

Road transport, which has grown into the principal mode of transport worldwide, plays an exceptional role in international trade development. *As such, the development of goods transport by road between Asia and Europe has become a priority topic over the last couple of years.*

The Far-East, China in particular, has a long history of economic, cultural and trade links with Central Asia and Europe, which can be traced back to the *Silk Road Era* of more than 2000 years ago. Today, both *European and Asian countries are interested in reconstructing the Silk Road* in order to boost economic, cultural and trade exchanges between countries and continents.

Over the past two decades, China, as the fastest developing nation in Asia, has enjoyed rapid annual economic growth. The road transport industry has been instrumental in this growth, providing a major tool for people's mobility and supply chain management in a country of one fifth of the planet's population.

Having realised the crucial function of road transport, the Chinese Government has taken important measures to actively extend and improve the highway network. The 12 freeways (motorways) of a planned length of 35 000 kilometres will form the core of the Chinese road network and it will be built according to international construction standards. After only ten years of efforts, *83% (!)* of this huge project has already been completed and more than 25 000 kilometres of newly built motorways have been open to traffic. More and more attention is being paid to opening China, its Western regions in particular, to international road transport connections.

Maritime transport is relatively inexpensive[1] but a container to reach Europe by sea from China takes on average 4-6 weeks (although it often can exceed 2 months due to port congestion) and inevitably incurs expensive freight handling charges in ports as well as additional time needed for

1. The cost of transporting a 40 feet container by sea is approximately $3 000 from a Chinese port to a European one.

cargo distribution (by road transport!) to European consumer centres. Although huge sums have been and are planned to be invested in port infrastructure in China and elsewhere in the Far-East, as well as in merchant fleets, ports are currently working at full capacity and in recent years they have been struggling to cope with the increasing volumes of traffic. Port saturation characterises also China's principle trading partners, e.g. the US (West Coast). Despite growing difficulties, maritime routes are still viewed as the principal and practically (*and unreasonably*) *only* method of transportation for shipments between South-East Asia and Europe.

Road transport between Asia and Europe however reduce the journey time to about 2 weeks, i.e. by 2-4 times, and the cargo transported on the road can be delivered door-to-door, thereby ensuring high security and quality requirements.

2. IRU Strategy for Co-operation between Asia and Europe

Asia has been a long-time strategic area for the IRU's activities. The reason is simple: Asia is one of the world's most significant product and energy suppliers for Europe. Europe will export more and more technology and know-how to Asia while Asia will export more and more natural resources and manufactured goods to Europe, thereby generating prosperity and triggering an intensive growth spiral in trade exchanges.

When trade grows, road transport and logistic activities follow. In parallel and even anticipation, the IRU is intensifying its focus on Asia and the Far-East, and is contributing to *multilateral*, regional and inter-regional co-operation and development in road transport.

For the road transport industry, further progress in international road transport relations in the Far-East should strictly be based on existing and proven multilateral UN Conventions, in particular those listed in Resolution No. 48/11 of the UN Economic and Social Commission for Asia and the Pacific (UN ESCAP) dated 23 April 1992: Convention on Road Traffic and Convention on Road Signs and Signals (both of 1968), TIR Convention (1975), Customs Convention on the Temporary Importation of Commercial vehicles (1956), Customs Convention on Containers (1972), International Convention of the Harmonisation of Frontier Control of Goods (1982), Convention on the Contract for the International Carriage of Goods by Road (CMR, 1956). It would furthermore be highly recommendable to join ADR (dangerous goods transport by road) and AETR (social regulations for drivers of commercial vehicles, driving and rest time).

3. IRU Member Associations in Asia – a Strong Network

The IRU can think globally and act locally with more than 160 member organisations in almost 70 countries, which add know-how, experience, insight and political weight to this network.

National road transport organisations in many Asian countries are IRU member associations (*Table 1*).

Table 1. **IRU Member Associations in Asia**

Country	Association's full name
AFG	Afghan Chamber of Commerce and Industry (ACCI)
CN	China Road Transport Association (CRTA)
JP	Japan Trucking Association (JTA)
KR	The Korea Chamber of Commerce and Industry (KCCI)
KZ	Union of International Road Carriers of the Republic of Kazakhstan (KAZATO)
MGA	The National Road Transport Association of Mongolia (NARTAM)
RU	Association of International Road Hauliers (ASMAP)
TJ	Tajik Association of Road Transport Operators (ABBAT)
UAE	International Automobile and Touring Club (IATC)
BH	DHL International E.C. (DHL) – associate member
IL	Israel Road Transport Board (IRTB)
IR	Iran Chamber of Commerce Industries and Mines (ICCIM)
KG	Association of International Road Carriers of the Kyrgyz Republic (KYRGYZ AIA)
KW	Kuwait Automobile and Touring Club (KATC)
LB	Chambre de Commerce, d'Industrie & d'Agriculture de Beyrouth et du Mont Liban (CCIAB)
SY	Syrian National Committee International Chamber of Commerce (SNC ICC)
PAK	Pakistan National Committee of the International Chamber of Commerce (PNC ICC)
TM	Turkmen Association of International Road Carriers (THADA)
TR	International Anatolia and Thrace Bus Operators Society (UATOD)
TR	Union of Chambers and Commodity Exchanges of Turkey (UCCET)
TR	International Transporters Association (UND)
UZ	Association of International Road Carriers of Uzbekistan (AIRCUZ)

Source: IRU, November 2005.

4. IRU Euro-Asian Transport Conferences and their Main Messages

In line with its strategy for co-operation between Asia and Europe, the IRU has organised Euro-Asian Transport Conferences to discuss the problems and prospects of road transport between Europe and Asia.

The 1st Euro-Asian Road Transport Conference

The 1st IRU Euro-Asian Road Transport Conference was held in Irkutsk, on 13-14 September 2001. The purpose of this meeting was to develop a short, medium and long-term strategy in order to reduce barriers to road transport in the Euro-Asian region, in particular at borders.

The following important issues of co-operation between Europe and Asia were discussed:

- The road transport operator is faced with immense challenges in moving goods on the Euro-Asian landmass, resulting from recent profound geopolitical and economic changes. *Land transport in Asia is administratively cumbersome, particularly in comparison with Europe*.

- The Asian continent has a large number of *land-locked countries* which are struggling with development issues specific to their circumstances – in particular, exorbitant transport costs incurred for import and export products. This puts them at a natural disadvantage compared with countries enjoying the advantage of having a direct access to the sea.

- Carriers of foreign trade goods suffer losses as a result *of barriers to transport activities at borders.* Direct losses to trade and transport due to idling at borders are doubled if indirect costs of lost economic opportunities are also taken into account. The important border *delays* are caused by bureaucracy as to visa issuance and control, inspection of vehicles' technical standards as well as transport permits and other transport, customs and trade documents. Co-operation between countries and national authorities should lead to *harmonised cross-border procedures as soon as possible*.

- An expansion of the *TIR system* and the implementation of other *UN facilitation instruments* would greatly simplify procedures and reduce border waiting times. However, only a *few UNESCAP member states have so far acceded to international transport conventions.*

Each *country sets its own rules* and interpretations; there is no harmonised method for carrying out border inspections, etc.

- The road transport industry in China has witnessed a soaring growth since *this country* opened its doors to the world and its national economy started on a fast track. With the entry into the WTO, China has started establishing trade and industrial regulations in line with *WTO* conventions. It has improved its legal system and started to build a progressive policy framework for the Chinese road transport sector.

However, a lot is still to be done in this respect, since though being signatories to the GATT, China and its neighbours (eight of them *are* WTO members) do not apply yet such a basic provision of GATT like its Article V (!) on the freedom of transit which involves unrestricted transit movement of road vehicles across the territory of all contracting parties.

The 2nd Euro-Asian Road Transport Conference

The IRU held the 2nd Euro-Asian Road Transport Conference in Tehran, on 6-7 October 2003. This conference identified challenges and opportunities in developing trade and road transport along the Silk Road:

- Trade in Asia is expected to thrive when trade barriers are dismantled under the globalised trading system and, inevitably, this will create greater demand for transport. However, the *lack of proper interregional transport links in physical, legislative and institutional senses* between Asia and Europe, as well as Asia and Africa, represents an immediate challenge in the context of globalisation.

- Transport conditions and procedures are unsatisfactory even in certain developed Asian countries, which still *lack a well-defined and comprehensive transport development policy and sub-sectoral policies on developing* the road, (railway, waterway and maritime) transport sectors. The *state of roads* and, in particular, of those leading to border points between neighbouring countries, is poor. International links are much less developed than national road networks.

- *Protectionist policies* do not allow even a partial liberalisation of the access to the international road transport market. Certain countries fear that the facilitation of border crossing and the harmonisation of transport regulations would hurt national trade and transport interests while the opposite is true.

- TRACECA (EU) and other development programmes are extremely useful, but some countries suffer from the lack of proper local institutions as well as bilateral and multilateral co-operation frameworks that restrict the full absorption and exploitation of the results of development projects.

- In general, there are *just a few bilateral or multilateral agreements* that guide road transport of passengers and goods between neighbouring countries in Asia and even fewer countries have acceded to and apply international transit conventions, despite the fact that some countries would have a considerable volume of this type of traffic.

- At this conference, the possibility of transiting goods by road from China to Europe was discussed. More than *95% of Chinese goods are carried to European countries by sea.* China has not acceded to the *TIR Convention, but Kazakh operators* (trans-loading [!] cargo from Chinese trucks to Kazakh ones) have carried out a few successful transit operations *carrying Chinese goods to Ukraine, Russia, Belarus and the Baltic countries, opening TIR carnets* at the Kazakh-Chinese border.

  The State Customs Committee of Russia, however, issued an order (No. 888) that *virtually paralyzed this traffic* in its entirety.

- Delegates called for a fast introduction by transport operators of best available transport technologies and practices and the creation of an infrastructure satisfying free-flowing traffic.

The 3rd Euro-Asian Road Transport Conference

This Conference was held in Beijing, 26-27 September 2006. It was attended by 400 foreign and 500 Chinese delegates and featured an important national exhibition on road transport logistics as well as a Conference of Ministers from Asian and European countries. The joint Declaration of Ministers fully recognizes the vital role road transport can play in supporting trade between Asia and Europe (see in the box).

The Beijing-Brussels Truck Caravan composed of a Kazakh, Russian, Lithuanian, Latvian and Polish vehicle, symbolically opening the Silk Road left from Beijing on 27 September and following stopovers and press events in Astana, Moscow, Riga, Vilnius and Warsaw, arrived in Brussels on 16 October. This undertaking, following the Lisbon-Vladivostok Caravan of 2004, has proven once more the ability of road transport to be a viable option for carrying goods between Asia and Europe linking

production and distribution centres anywhere from the Pacific to the Atlantic and allowing the integration of previously remote regions into the modern, global economy.

The main conclusions of the Conference have been:

The road goods transport industry, hauliers and their associations endeavour to:

- Encourage progressive road transport market integration by direct and indirect forms of inter-company co-operation between Asian and European hauliers, as well as their integration into the full logistic chain, which incorporates also other modes of transport through multi-modal operations.

- Facilitate road transport by the accession to and the implementation of UN Conventions, regulating international road transport, by countries in Asia and Europe through Association support to governmental agencies in Asian countries in the form of analysing and presenting the beneficial impact of such Conventions on the practical facilitation of border crossing haulage operations.

- Reduce artificial and bureaucratic barriers to trade and transport across Asia and Europe by disseminating the application rules of international road transport agreements and Conventions among transport operators and drivers in Europe and Asia, in particular with regard to the use of transport and customs documents, as well as requesting state authorities to streamline control operations based on the latest developments of control technologies and procedures.

- Enhance security in road transport on Euro-Asian road links by adopting and implementing industry security guidelines and checklists; reinforcing awareness of security matters throughout the supply chain, in particular regarding the daily activities of transport managers, truck drivers, shippers, dangerous goods transport operators and operators working closely with customs administrations; and enhancing public-private partnerships with Governments to reinforce security in road transport based on a balanced use of facilitation and security tools.

- Acknowledge the merits of the IRU's 3 *"i"* strategy for Sustainable Development along the Silk Road by putting to good use the best industry practices promoted by the IRU. These encompass perfect examples of hauliers' awareness of sustainable mobility requirements and their positive reaction to related governmental ***i***ncentives. They cover also company incentive systems, like the one aimed at fuel economy. They witness about beneficial technical and technological transport ***i***nnovations and related investments in, as well as the optimal use of, public and company ***i***nfrastructure. In this respect, modern roads and motorways in an extended Silk Road network represent an indispensable element of the inter-continental Land Bridge between Asia and neighbouring Continents.

- Develop favourable and enforceable measures as well as encourage the road transport industry's own efforts to reduce road accidents on Euro-Asian road links by intensifying research into the causes of accidents, increasing accident risk awareness among truck drivers, enforcing basic rules which prohibit speeding and the consumption of alcohol while driving, regular checking of the vehicle safety devices and extending road safety related training.

- Enhance the quality of road transport and logistics services in countries concerned by Euro-Asian road transport operations by promoting the development and harmonisation of training curricula for professional drivers and transport managers and any other professional manpower employed in the road transport industry through extending the framework of the IRU Academy's and its accredited institutions' useful activities.

- Improve institutional links, regular exchanges and co-operation between Asia and Europe of transport operators and their associations across the borders to provide ever more efficient and more environmentally friendly road transport services, to allow an increase in the wealth of nations, continued economic growth and employment through the development of trade on the Euro-Asian landmass.

- The 4th IRU Euro-Asian Road Transport Conference has been invited to Warsaw, Poland, in May 2007.

Joint Declaration of Transport Ministers

Beijing, 27 September 2005

The Ministers of Transport and the accredited representatives on behalf of the Ministers from the Republic of Azerbaijan, the Republic of Belarus, the People's Republic of China, the Czech Republic, Georgia, Greece, the Islamic Republic of Iran, the Republic of Kazakhstan, Mongolia, the Islamic Republic of Pakistan, the Republic of Poland, Romania, the Slovak Republic, the Republic of Turkey, Ukraine and the Socialist Republic of Viet Nam, invited by the Minister of Communications of the People's Republic of China (MOC), attended the Euro-Asian Transport Ministerial Meeting in Beijing on 27 September 2005 and the 3rd Euro-Asian Road Transport Conference on 26-27 September 2005 jointly hosted by MOC and the International Road Transport Union (IRU).

The International organizations and financial institutions including the United Nations Economic and Social Commission for the Asia and Pacific (UNESCAP), the United Nations Economic Commission for Europe (UNECE), the European Commission (EC) and the IRU were also represented in this Meeting.

Extensive and intensive discussions were conducted in a constructive and frank manner on the theme of *Enhance the Development and Co-operation regarding Euro-Asian Road Transport.*

THE MINISTERS AGREED THAT:

The economic and trade development in Asia and Europe would be greatly enhanced by a strengthened mutual co-operation in road infrastructure and transport development and the establishment of a sound legal framework governing the facilitation of cross-border and transit transport and the removal of non-physical barriers in road transport caused by artificial and bureaucratic formalities blocking facilitated road transport in and between the countries in Asia and Europe, under the auspices of international organizations and financial institutions.

THE MINISTERS:

- Noting with satisfaction a tangible progress made in recent years in road infrastructure development on the Euro-Asian Continent and the solutions applied by the countries to promote road transport in this region providing a sound foundation for the further expansion of transport co-operation between Europe and Asia.
- Being aware that the non-physical barriers still remain as major obstacles in the further development of road transport.
- Bearing in mind the importance of road safety in ensuring Euro-Asian economic development and social well-being.
- Recognizing the importance of the strengthened road transport co-operation between and among the countries in Asia and Europe, the harmonized development of road infrastructure and the formation of the Euro-Asian transport corridor and network in securing the transit transport.
- Acknowledging the constructive role of the international organizations and financial institutions in promoting the development of road infrastructure and transport in and between Asia and Europe.
- Being fully aware of the need to provide the landlocked countries with an access to road transport amenities for fostering the economic and trade development of these countries.

COMMIT THEMSELVES TO:

1. **Strengthen** the friendly and mutually-beneficial international co-operation in road infrastructure and transport development to promote the economic prosperity and social progress of Asia and Europe.
2. Step up the efforts in developing road infrastructure to establish the Euro-Asian transport corridor so as to pave the way for the growth of road transport.
3. **Encourage** the application by the countries concerned of the United Nations Conventions pertaining to the facilitation of international road transport and creating favorable cross-border and transit transport conditions through the removal of non-physical barriers caused by artificial and bureaucratic formalities with a view to facilitating road transport between Asia and Europe.
4. Establish an open and sustainable integrated transport system so as to provide safe, efficient, reliable and environmental-friendly freight and passenger transport services by road.
5. Take measures to effectively eliminate the potential dangers to international road transport and improve the emergency response capability of road transport in the event of natural disaster, thus ensuring the security of human life and vehicles.
6. Explore the possibility of setting up a mechanism for exchanges and communication on a regular basis of the latest information and advanced technology relating to road transport development among the countries.
7. Call upon the relevant international organizations and financial institutions to provide assistance for the development of the Euro-Asian road transport corridor.
8. Request the IRU to continue playing its active role in promoting international road transport.

5. Security

To ensure physical security for long-distance road transport, vehicles should be fitted with GPS and other on-board IT equipment giving not only a location and providing a link with the dispatcher to reflect the route, but in case of an emergency transmitting a special signal, so that further distress measures could be taken.

Customs security lies in the use of the TIR system. The use of modern computer systems (SafeTIR, CuteWise) creates the conditions to move to on-line systems of data transfer about cargo movement, which makes any uncontrolled interference difficult.

6. Infrastructure

The Euro-Asian Trans-Continental Land Bridge is substantially shorter, by some 6 000 kilometres, than maritime connections and therefore potentially more economic.

For the newly land-locked Central Asian republics, economic and social welfare is highly dependent on *transport corridor efficiency*. Consequently, high-performing transport, handling and warehousing facilities in such corridors should have top priority to achieve economic and social progress.

The Silk Road encompasses parts of the Asian Highway Network linking Asian capitals, industrial centres and important ports. This network is supported by UNECE and UNESCAP in order to tie the European and Asian highway systems. International financial institutions have increased their investments in this network by offering financial means to several countries along these corridors.

7. Legal Framework

World Trade Organization (WTO)

China's and other Asian countries' entry into the WTO represents a historic opportunity to boost the road transport sector, since WTO membership, beyond its requirements for free transit traffic (see above) and liberalised bilateral transports, facilitates direct capital investment, as well as the international transfer of advanced foreign management concepts, logistic solutions, technologies, know-how and operational experience in the transport sector.

Major United Nations Transport Conventions

See above.

Bilateral and Regional Governmental Road Transport Agreements between China and Asian Neighbouring Countries

Bilateral and regional agreements on road transport market access may be useful in a first phase of development. Several Asian countries have signed such agreements among themselves and with a number of European countries.

In a more advanced stage, however, Asian countries should consider joining global UN conventions and agreements on regulating international road transport in general and market access for their road transport operators in particular.

8. Conclusions

Road transport is the mode of transport which can offer an unbroken door-to-door service between Asia and Europe. It can significantly contribute to general economic and social development and the distribution of wealth on the two Continents.

Development prospects of road transport between China, its Asian neighbouring countries and further on to Europe are very promising.

The strategy of the IRU is to focus much attention on Asia with special emphasis on multilateral forms co-operation and development.

The necessary international legal framework already exists in the form of United Nations' Transport Conventions aimed at promoting international road transport through such vital agreements as TIR, CMR, ADR and others. There is *NO* need to reinvent the wheel in this respect and develop parallel regional systems in contradiction with real requirements of globalisation in trade and supply chain management systems.

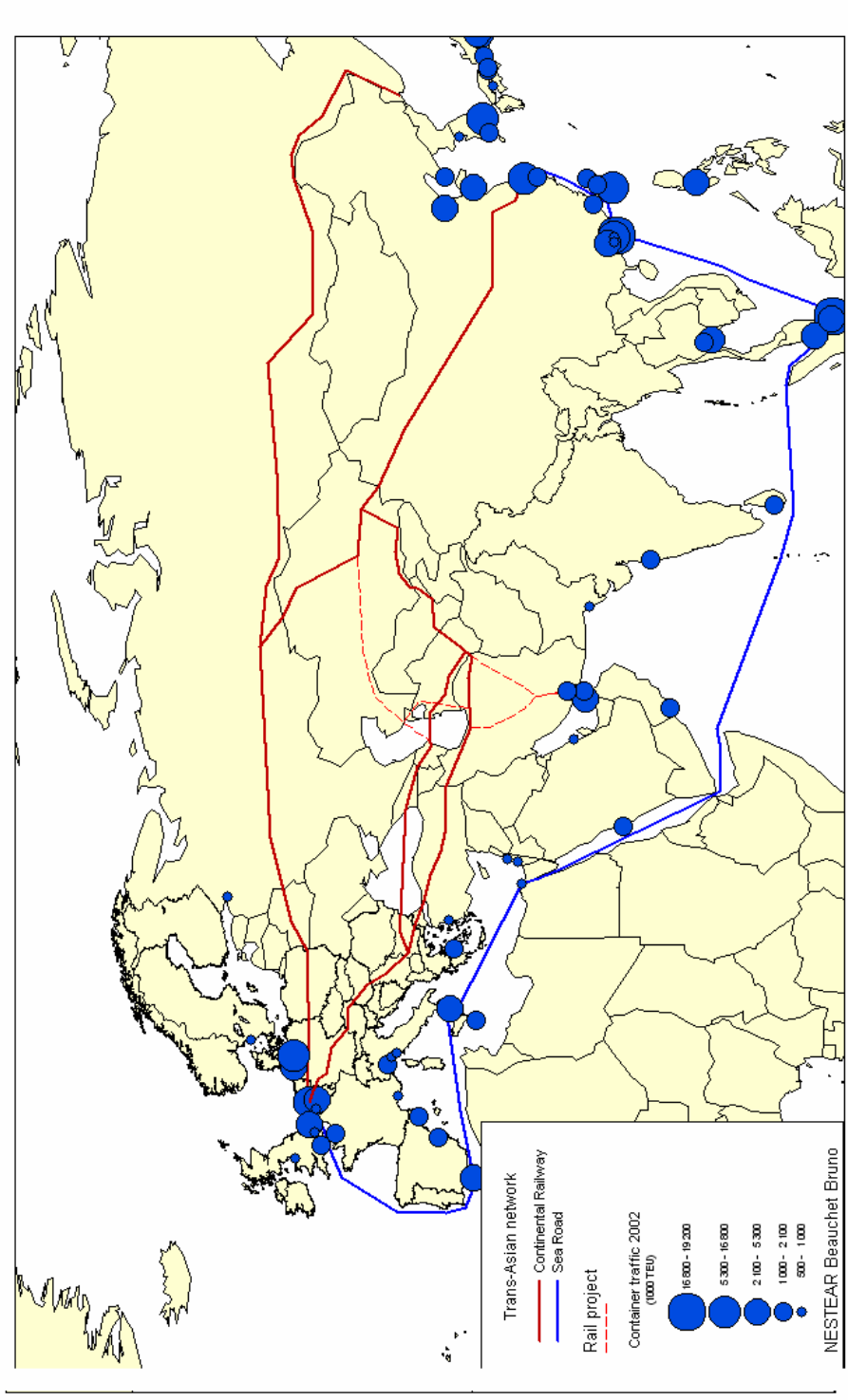
Both Asian and European countries are interested in infrastructure development projects, highway construction in particular, to link Europe and Asia.

The new Silk Road is thus under construction. China, which holds a key to progress in Asia, has made also substantial steps forward in the construction and rehabilitation of road links in its own territory. It has taken pragmatic measures to develop road transport operations between China as well as Central and Western Asian countries. The proven concept of a multilateral co-operation in the field of road transport is gaining ground among Chinese governmental institutions.

Despite these encouraging developments in road transport between China, its neighbouring countries and Europe, there are still too many artificial obstacles in the way of further progress. These will have to be overcome and the conditions of the Euro-Asian road transport systems must be improved significantly in the interest of world trade and economy.

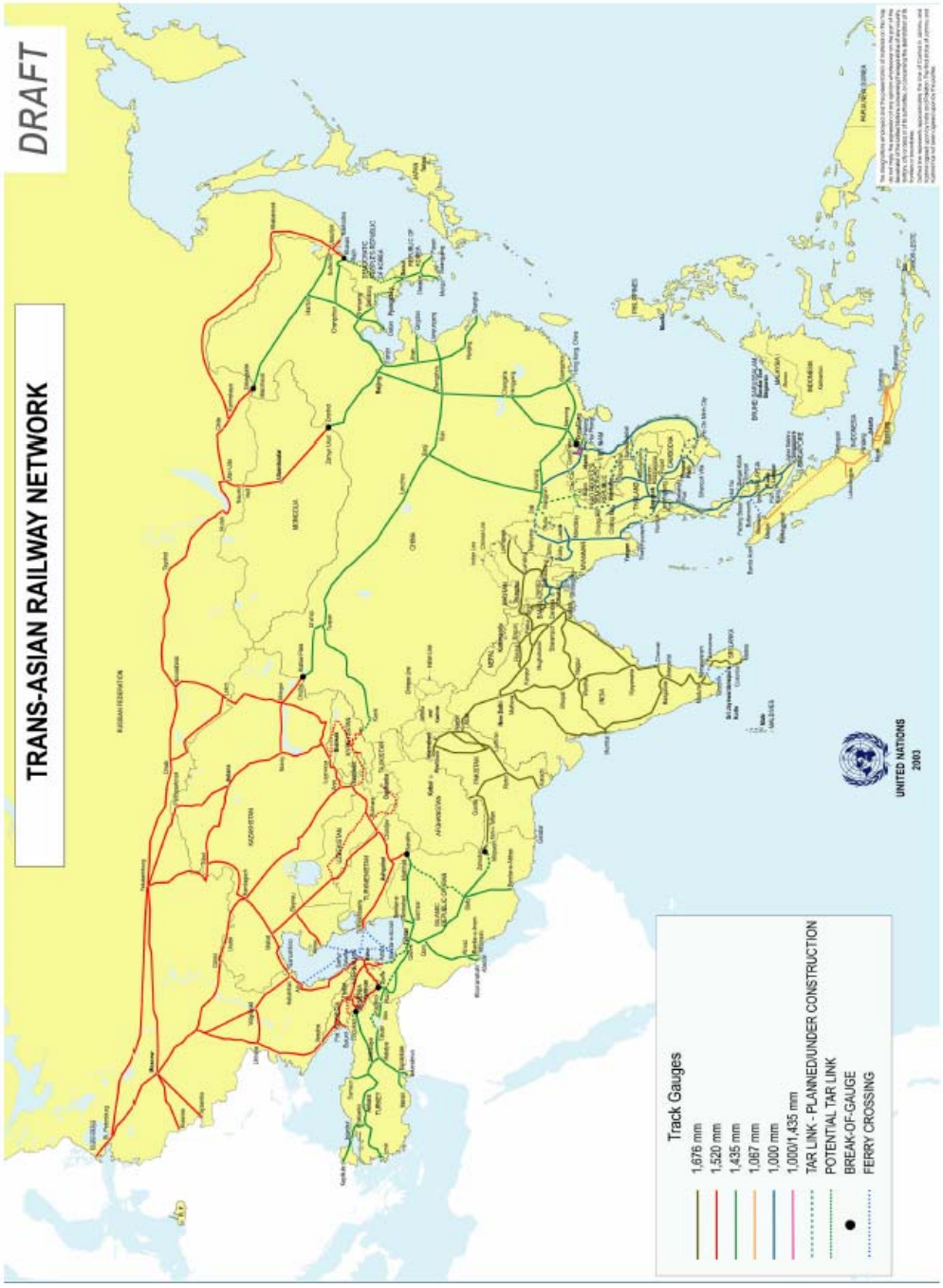
MAPS

Map 1. **Main Maritime Ports of Container Traffic**



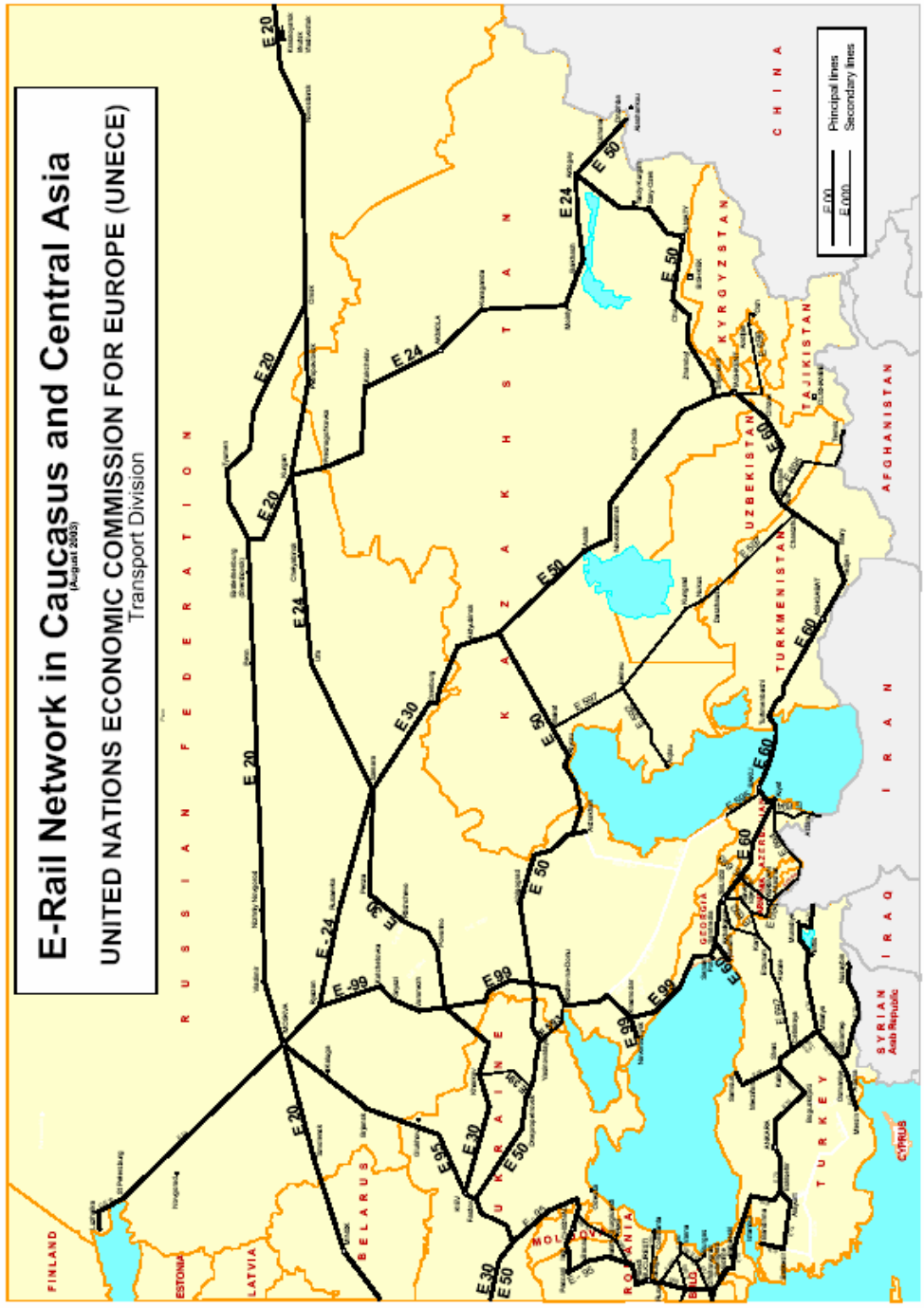
Source: Nestear.

Map 2. **Trans-Asian Railway network**



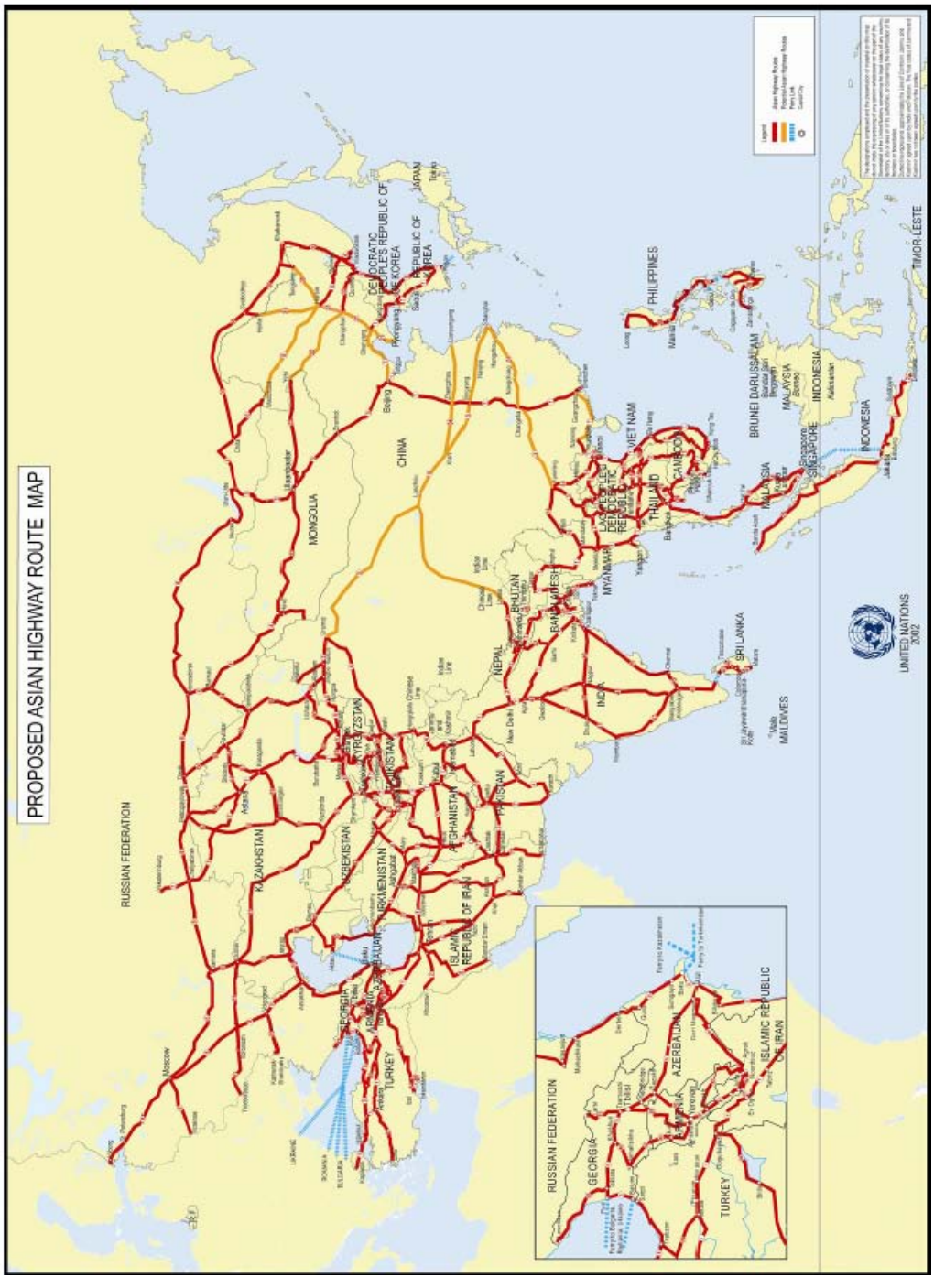
Source: United Nations, 2003.

Map 3. **E-Rail Network in Caucasus and Central Asia**

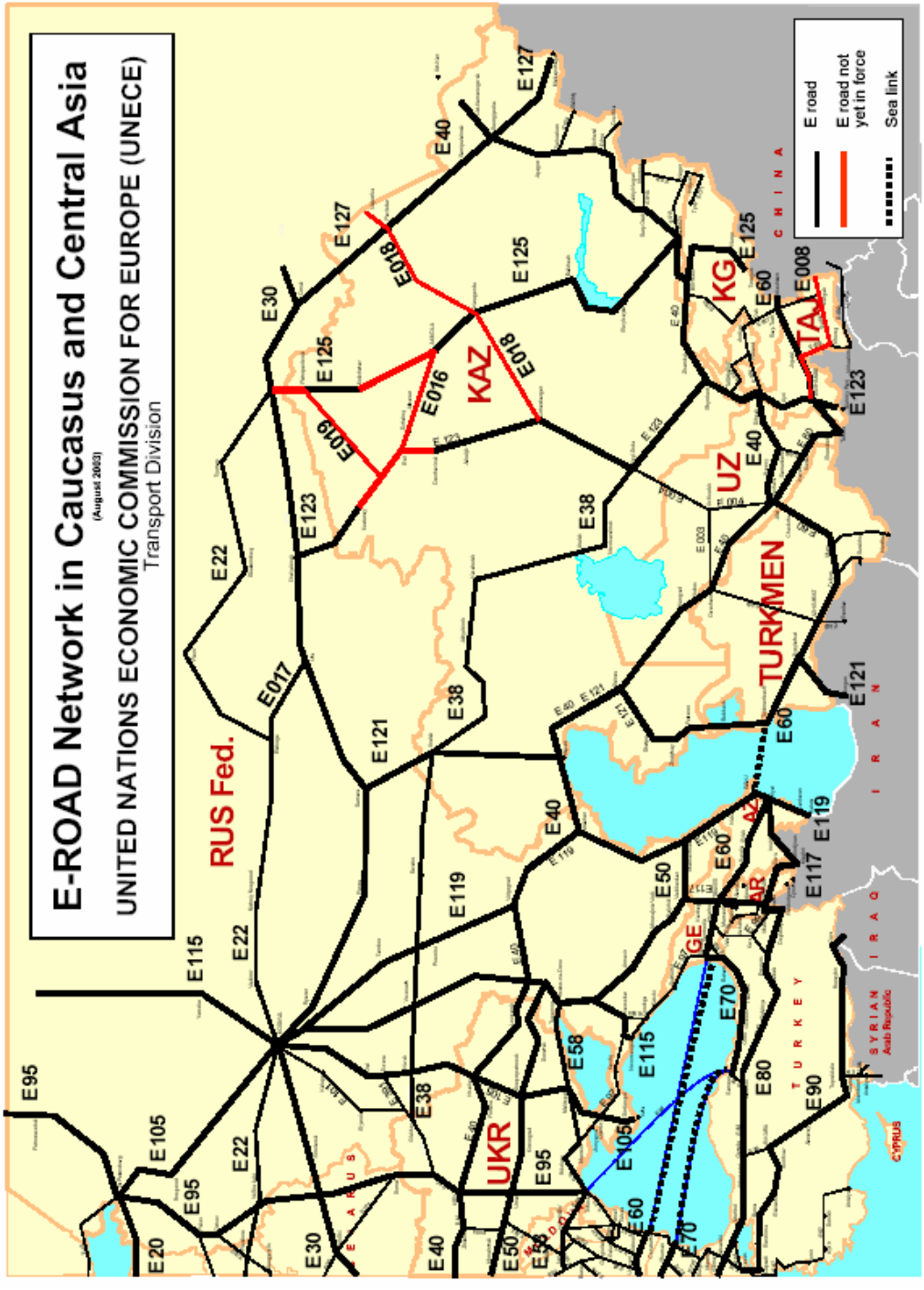


Source: United Nations Economic Commission for Europe, 2003.

Map 4. **Asian Road Network Project**



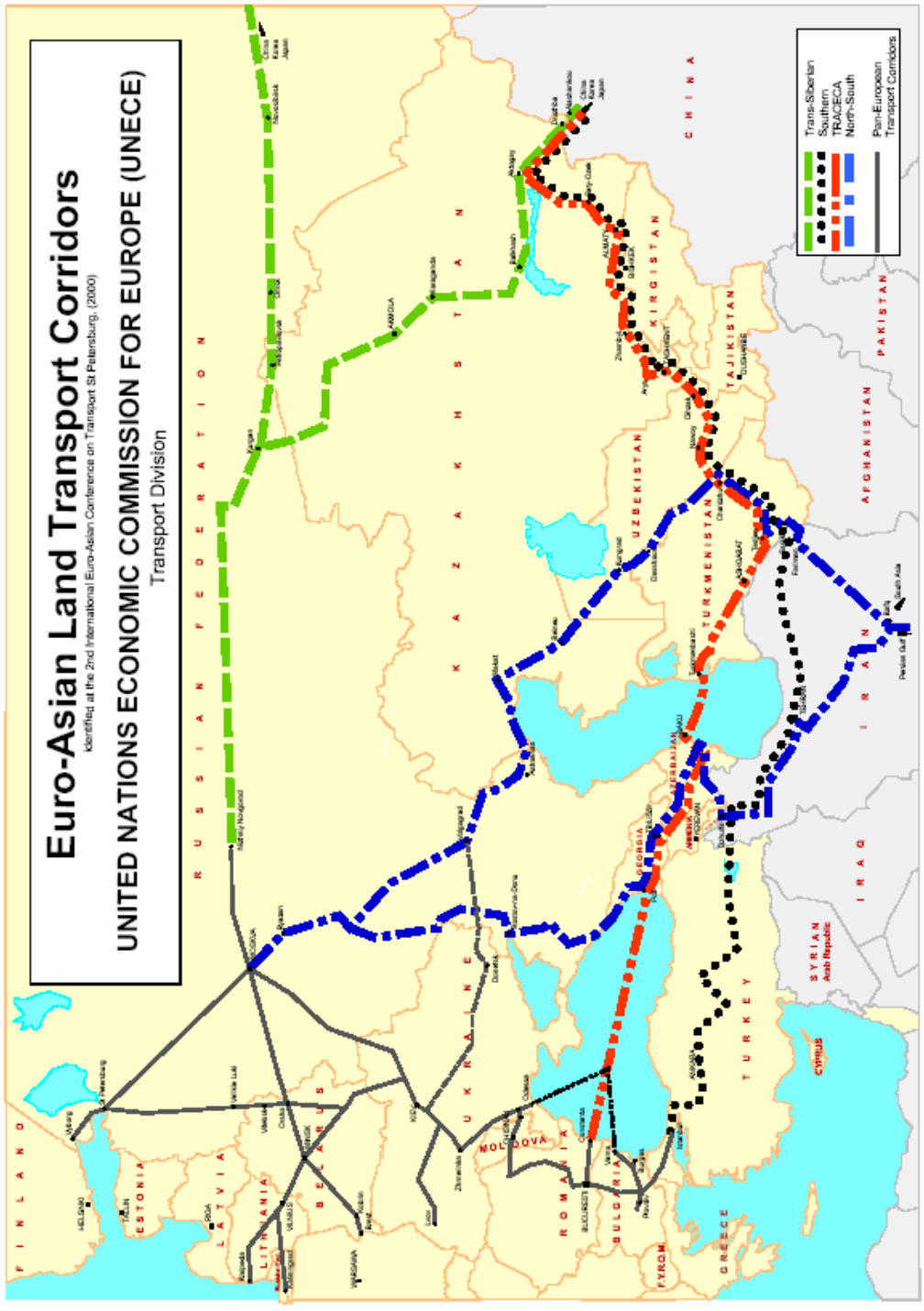
Source: United Nations, 2002.



Map 5. **E-Road Network in Caucasus and Central Asia**

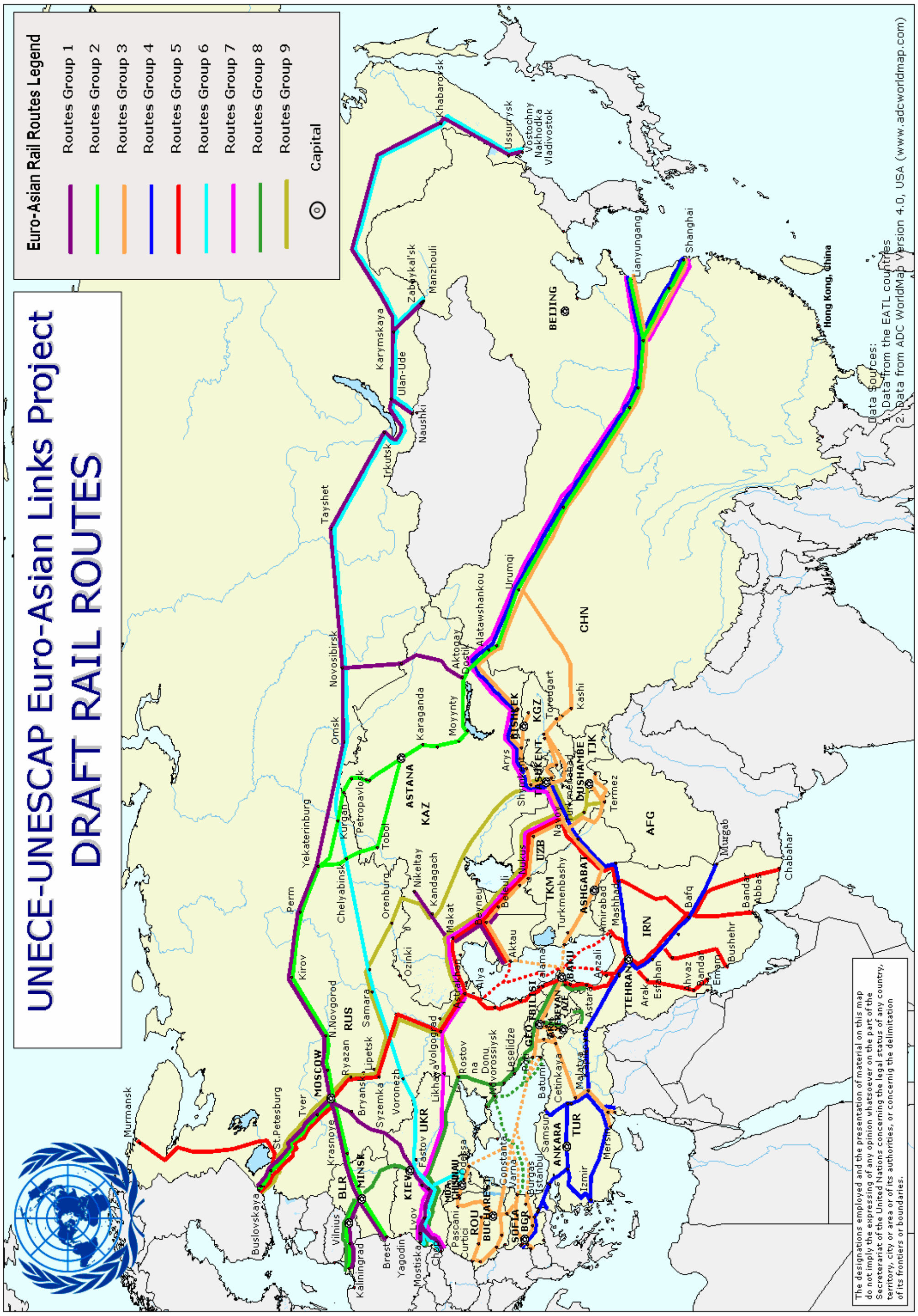
Source: United Nations Economic Commission for Europe, 2003.

Map 6. **Corridors of Euro-Asian Road Transport**



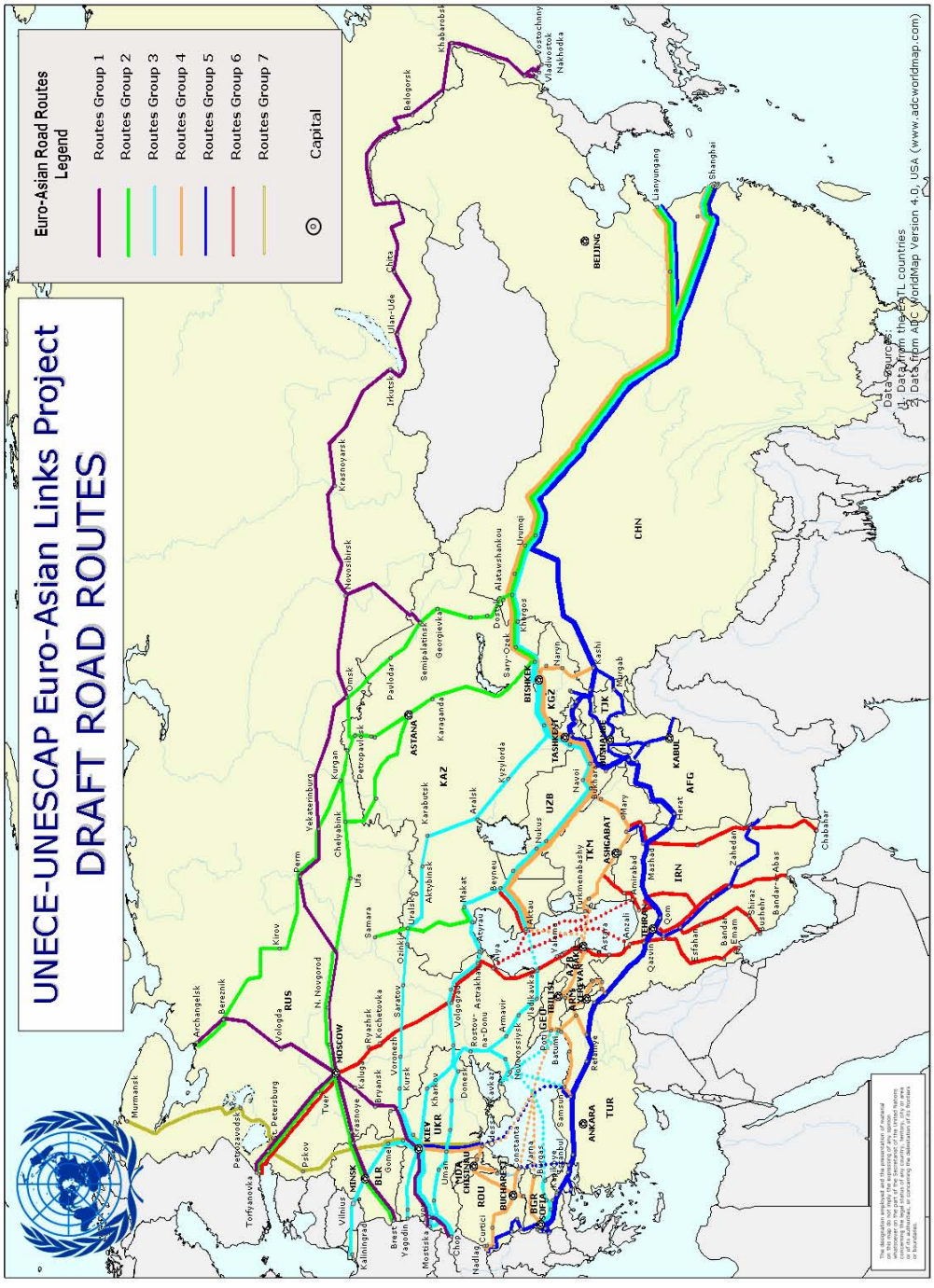
Source: United Nations Economic Commission for Europe, 2000.

Map 7. **Main Euro-Asian rail routes**



Source: United Nations Economic Commission for Europe.

Map 8. **Main Euro-Asian road routes**



Source: United Nations Economic Commission for Europe.

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TRANSPORT LINKS BETWEEN EUROPE & ASIA

Land links between Europe and Asia can offer a viable alternative to sea transport. They substantially improve the accessibility of the countries they pass through and can absorb a substantial portion of the growth in intercontinental traffic, particularly container traffic, that has been forecast.

However, the provision of efficient land links between Europe and Asia requires appropriate policy decisions on issues such as the development of adequate infrastructure and the removal of regulatory or institutional barriers that prevent the development of efficient transport services.

The ECMT's Council of Ministers thus recommended a series of actions aimed at developing a comprehensive approach to the provision of efficient inland transport links between Europe and Asia at its 2005 session in Moscow.

This publication features the recommendations approved by the Ministers and the "Report on Trends in Europe-Asia trade and Consequences for Transport", which served to inform their discussions in Moscow. It also includes the plan of action approved by Ministers to facilitate intermodal transport between Europe and Asia and the conclusions of a previous seminar in Kiev on "Intermodal Transport between Europe and Asia: Opportunities and Challenges".

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