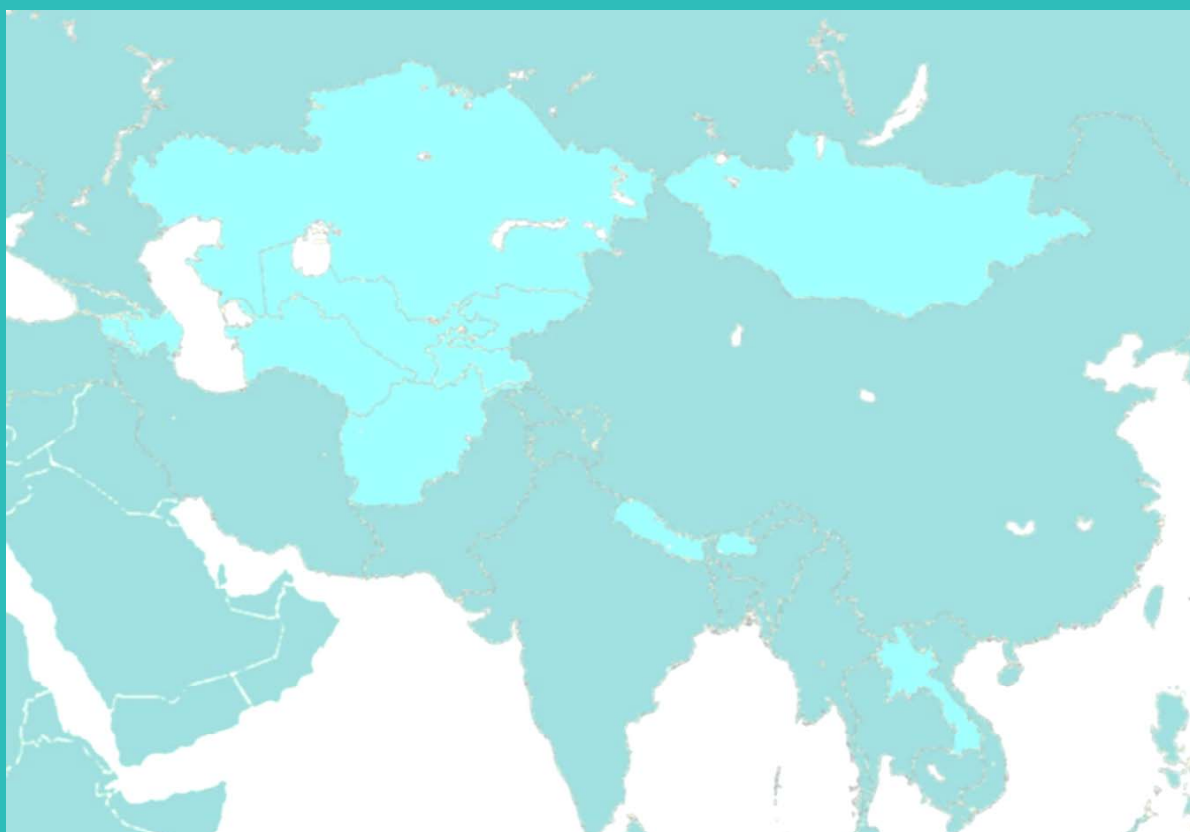


ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Landlocked Developing Countries Series, No. 1

Transit Transport Issues in Landlocked and Transit Developing Countries



UNITED NATIONS

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New York, 2003

ST/ESCAP/2270

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This publication has been issued without formal editing.

Acknowledgements

This publication was prepared under a joint project between the Transport and Tourism Division and the Least Developed Countries Coordination Unit, Office of the Executive Secretary, with financial support from the Government of Japan.

Experts who contributed to the various stages in the preparation of the publication included the consultant, Ruth Banomyong, national focal points of the landlocked and transit developing countries, policy makers, and industry stakeholders. Editorial assistance was provided by Fareeda Maroof Hla.

CONTENTS

	<i>Page</i>
PART A. OVERVIEW	
CHAPTER I. INTRODUCTION.....	1
CHAPTER II. TRANSIT TRANSPORT ISSUES IN LANDLOCKED AND TRANSIT DEVELOPING COUNTRIES.	4
A. Availability and quality of infrastructure.....	4
B. Limited choice of routes.....	4
C. Trade and transport facilitation and border crossings issues.....	5
D. Opportunities of intermodal transport.....	5
E. The importance of cross-border cooperation.....	5
F. Transit transport agreements.....	6
G. Changing global economy.....	9
CHAPTER III. CASE STUDY METHODOLOGY.....	10
A. Four stages in the methodology.....	10
B. Data needed to build the model.....	13
C. Further applications and considerations of the methodology.....	14
CHAPTER IV. SUMMARY OF PRELIMINARY FINDINGS	16
CHAPTER V. RECOMMENDATIONS AND ACTION PLAN ON TRANSIT TRANSPORT COOPERATION.....	20
A. Policy-related actions.....	20
B. Improved coordination within and between countries.....	21
C. Trade and transport facilitation.....	21
D. Promoting competition in the provision of transit transport services.....	22
E. Better monitoring.....	22
F. Enhancing transit infrastructure.....	23
G. Application of information and communications technology.....	24
H. Capacity-building and human resources development for transit transport.....	24

CONTENTS *(continued)*

	<i>Page</i>
PART B. CASE STUDIES OF KAZAKHSTAN AND UZBEKISTAN, LAO PEOPLE'S DEMOCRATIC REPUBLIC, MONGOLIA, AND NEPAL	
CHAPTER VI. CASE STUDY OF KAZAKHSTAN AND UZBEKISTAN.....	26
A. Profile of the Central Asian region.....	26
B. Transit transport infrastructure and facilitation.....	28
C. Analysis of selected corridors.....	36
CHAPTER VII. CASE STUDY OF LAO PEOPLE'S DEMOCRATIC REPUBLIC.....	49
A. Country profile.....	49
B. Transit transport infrastructure and facilitation.....	51
C. Analysis of selected corridors.....	58
CHAPTER VIII. CASE STUDY OF MONGOLIA.....	65
A. Country profile.....	65
B. Transit transport infrastructure and facilitation.....	67
C. Analysis of selected corridors.....	70
CHAPTER IX. CASE STUDY OF NEPAL.....	81
A. Country profile.....	81
B. Transit transport infrastructure and facilitation.....	83
C. Analysis of selected corridors.....	88
REFERENCES.....	92

ACRONYMS

ACIS	Advance Cargo Information System
ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AGR	European Agreement on Main International Traffic Arteries
AGTC	European Agreement on Important International Combined Transport Lines and Related Installations
AH	Asian Highway
ASEAN	Association of Southeast Asian Nations
ATP	Agreement on the International Carriage of Perishable Foodstuffs and on the Special Equipment to be Used for Such Carriage
CIF	Cost, insurance and freight
CIM	Uniform Rules concerning the Contract for International Carriage of Goods by Rail
CIS	Commonwealth of Independent States
CMR	Convention on the Contract for the International Carriage of Goods by Road
COTIF	Convention concerning International Carriage by Rail
CTD	Customs Transit Document
ECMT	European Conference of Ministers of Transport
ECE	United Nations Economic Commission for Europe
ECO	Economic Cooperation Organization
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
EU	European Union
FEU	Forty-foot equivalent unit
FOB	Free on board
GMS	Greater Mekong Subregion
GSP	generalized system of preferences
ICD	Inland Container Depot
ICT	Information and Communications Technology
IFFC	International Freight Forwarding Centre
IRU	International Road Transport Union
KAZATO	Union of International Road Carriers of the Republic of Kazakhstan
KDS/KPT	Kolkata Dock System / Kolkata Port Trust
MCTPC	Ministry of Communications, Transport, Posts and Construction, Government of the Lao People's Democratic Republic
MFA	Multifibre Arrangement
MLA	Basic Multilateral Agreement of TRACECA
NMTTFP	Nepal Multimodal Trade and Transit Facilitation Project
OSJD	Organization for Cooperation of Railways
OTIF	Intergovernmental Organization for International Carriage by Rail

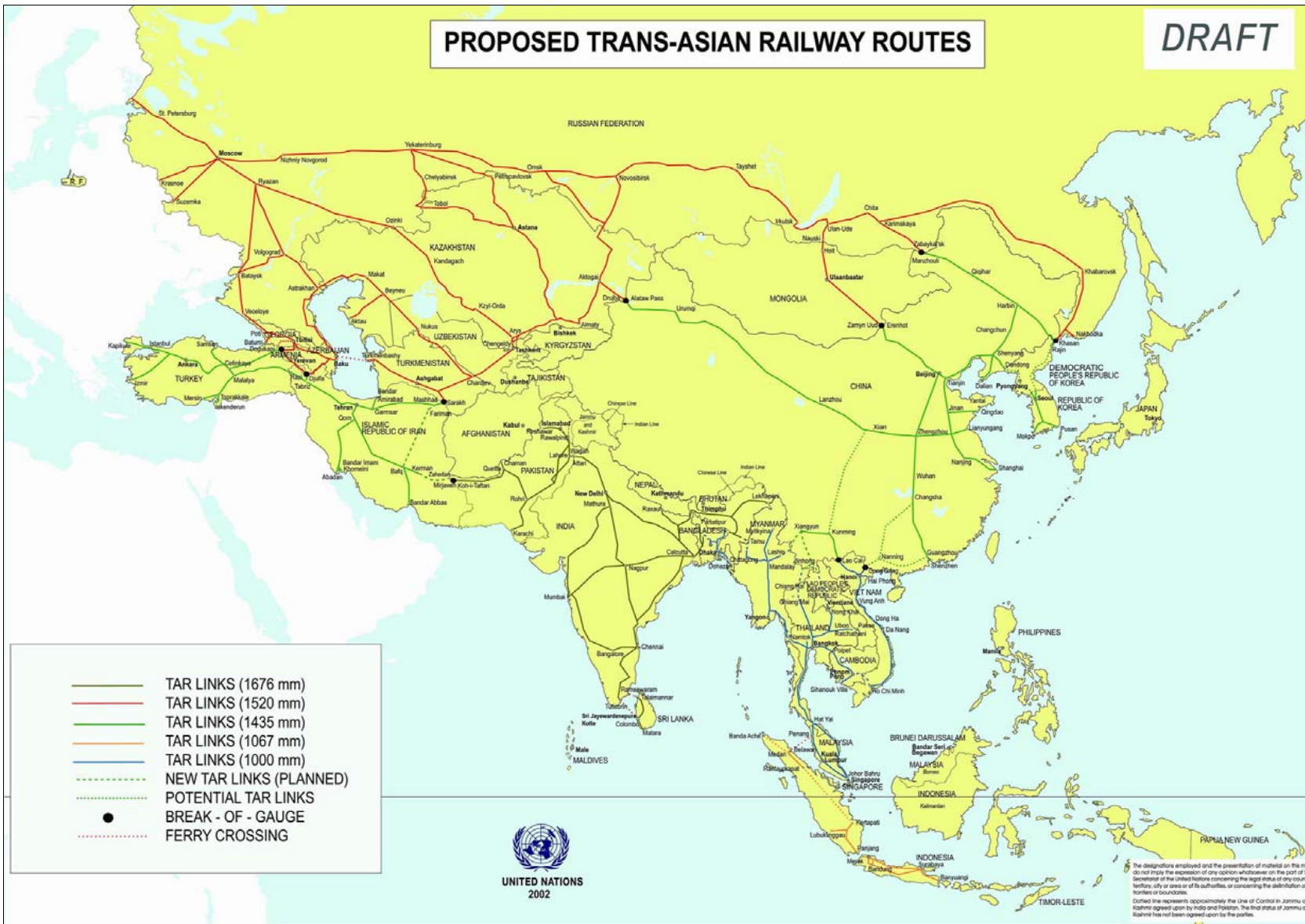
PEC	Pan European Corridor
SAARC	South Asian Association for Regional Cooperation
SAPTA	SAARC Preferential Trading Arrangement
SMGS	Agreement on International Goods Transport by Rail
SPECA	United Nations Special Programme for the Economies of Central Asia
TAR	Trans-Asian Railway
TEU	Twenty-foot equivalent unit
TIR	Transports Internationaux Routiers
TRACECA	Transport Corridor Europe-Caucasus-Asia
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

PROPOSED ASIAN HIGHWAY ROUTE MAP



PROPOSED TRANS-ASIAN RAILWAY ROUTES

DRAFT



PART A. OVERVIEW

I. CHAPTER INTRODUCTION

Owing to geographic and other related attributes, landlocked developing countries are confronted with a range of special constraints that inhibit their full participation in the globalization process. The ESCAP region is home to 12 of the world's 30 landlocked developing countries. Of these, Afghanistan, Bhutan, Lao People's Democratic Republic and Nepal are least developed countries, while Armenia, Azerbaijan, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Mongolia, Tajikistan, Turkmenistan and Uzbekistan are economies in transition. Each of these landlocked countries is disadvantaged by its lack of territorial access to and distance from the sea.

Even within transit countries, the pace of development in areas remote from the coast has been slower as the distance from the sea increases. For the landlocked countries, problems of distance are substantially compounded by the need to cross international borders and by the inability to regulate the through transport process. As a result, the delivered costs of imports are higher, exports less competitive and attraction for foreign direct investment reduced.

Economic development in the Asian region and emerging opportunities for interregional trade are stimulating new directions of trade which are creating a demand for landlocked countries to become "land-linking" countries and provide important transit services to their transit neighbours. In this regard, both landlocked and neighbouring transit countries can benefit from actions taken to increase the efficiency of transit transport.

To give appropriate emphasis to the continuing problems faced by landlocked and transit developing countries and the need to improve their transit transport systems, the General Assembly adopted resolution 56/180 of 21 December 2001 on specific actions related to the particular needs and problems of landlocked developing countries, by which the Secretary-General was requested to convene an international ministerial meeting on transit transport cooperation. Subsequently, by resolution 57/242 of 20 December 2002 on preparations for the International Ministerial Conference on Transit Transport Cooperation, it was decided that the International Ministerial Conference of Landlocked and Transit Countries and Donor Countries and International Financial and Development Institutions on Transit Transport Cooperation should be convened at Almaty on 28 and 29 August 2003.

By resolution 57/242, the General Assembly also requested the Secretary-General of the Conference to organize, in close cooperation with the regional commissions, a number of intergovernmental regional and subregional meetings as part of the preparatory process for the Ministerial Conference. In response to this request, the secretariat developed a methodology for analyzing transit transport corridors. Four case studies for the subregions of Central Asia (Kazakhstan and Uzbekistan), South-East Asia (Lao People's Democratic Republic), North-East Asia (Mongolia) and South Asia (Nepal) were conducted where the methodology was applied. The results of the case studies and a framework of recommendations and action plan were discussed and refined through subregional seminars convened in early 2003 with the participation of member States, international organizations, donors and the private sector.

The framework of recommendations and action plan were subsequently reviewed and endorsed by the Commission at its 59th session (first phase) on 24-25 April 2003 as the regional platform to be submitted to the International Ministerial Conference. The key issues contained in the action plan are summarized as follows:

- *Policy-related actions:* Landlocked countries can demonstrate their commitment to improve the transit process through the formulation and implementation of a clear and consistent national policy. It is important that landlocked countries coordinate among themselves, ensure representation at international meetings, and articulate their positions with a single voice.
- *Improved coordination within and between countries:* Multiple agreements on transit transport at a bilateral, trilateral and subregional level along with international conventions can result, and are resulting, in some countries having overlapping and sometimes contradictory obligations. There is a need to ensure a consistent and harmonized legal regime across the region, to the extent possible.
- *Trade and transport facilitation:* Simplification and harmonization of transit transport documentation could lead to immediate benefits in terms of a reduction in transit costs and time, particularly at border crossings. With the potential growth in transit transport through landlocked countries, both landlocked and neighbouring transit countries can benefit from actions taken to increase the efficiency of transit transport.
- *Promoting competition in the provision of transit transport services:* Transport service providers from landlocked countries are sometimes restricted from offering services in the territory of their transit neighbour, even for the carriage of goods in transit to or from their own countries. Limited competition between operators, modes of transport and routes may be resulting in inefficient pricing policies and services.
- *Better monitoring:* Policy makers need accurate information on critical bottlenecks and the tools to monitor the impact of efficiency improvements. The cost/time methodology utilized in the ESCAP case studies can provide countries with a snapshot of the performance of transit transport routes and enable them to make a comparison between routes and border crossings.
- *Enhancing transit infrastructure:* Development of transport and information and communications technology (ICT) infrastructure and, in particular, completion of the “missing links” in transport networks would improve transit transport and could also enable landlocked countries to provide transit transport services to neighbouring countries. An integrated approach is needed in balancing competing priorities in the development of road, rail and other infrastructure. While alternative transit routes are important, volume and economies of scale contribute to the reduction of unit costs.
- *Application of ICT:* ICT applications can assist customs authorities in undertaking their duties and in building a database of information. ICT applications can also increase the efficiency of various processes within the transport sector effectively, provide connectivity between neighbouring countries and increase the ability of shippers to track their goods.

- *Capacity-building and human resources development for transit transport:* Landlocked and transit countries need to engage in capacity building in multilateral agreements, trade and transport documentation and processes and freight forwarding and multimodal transport in order to create a greater awareness of international developments in transit transport amongst stakeholders.

The present publication consists of two parts. Part A contains an overview of the major issues facing landlocked and transit developing countries (Chapter II); a description of the cost/time methodology employed to assess transit transport corridors in the four case studies (Chapter III); a summary of the main findings from the case studies (Chapter IV); and the full text of the framework of recommendations and action plan endorsed by the Commission at its 59th session (first phase) (Chapter V). Part B contains the four case studies on Kazakhstan and Uzbekistan; Lao People's Democratic Republic; Mongolia, and Nepal (Chapters VI – IX).

It is hoped that the contents of the present publication will contribute to a better understanding of transit transport issues and thereby assist both landlocked and transit developing countries in formulating effective policies to enhance their transit transport systems and processes.

CHAPTER II. TRANSIT TRANSPORT ISSUES IN LANDLOCKED AND TRANSIT DEVELOPING COUNTRIES

Efficient transit transport is crucial for landlocked nations. Due to their lack of territorial access to seaports and the prohibitive cost of airfreight, landlocked countries have to rely on the transport of goods by land through one or more neighbouring countries. The additional costs incurred together with problems of distance, make imports more expensive and render exports less competitive, thus putting landlocked countries at a disadvantage in the global economy. Some of the major factors influencing the transit transport systems of landlocked and transit developing countries in the Asian region are described below.

A. Availability and quality of infrastructure

Several regional and subregional networks provide transport infrastructure linkages to and through the landlocked countries of Asia. These include the Asian Highway and the Trans-Asian Railway (TAR), as shown in maps at the beginning of this publication. Examples of subregional transport networks include the Association of South East Asian Nations (ASEAN) Highway; the priority road network in North-East Asia; the Economic Cooperation Organization (ECO) transport network; and the international road network of the Commonwealth of Independent States (CIS). It is true that the basic infrastructure for transit transport exists, but “missing links” in the networks continue to constrain route choice, while insufficient capacity on some corridors and the poor quality of the infrastructure add costs and time to the transit process. As a result, some landlocked countries tend to rely heavily on one or a limited number of transit corridors, despite the choice of possible alternative competing routes.

In addition, there is a lack of infrastructure facilities such as inland container depots (ICDs), particularly at border crossings, to support logistics activities such as the consolidation and distribution of goods and speedy, secure transshipment between road and rail services. Overall, foreign direct investment is less attracted to these countries as destinations, making the task of funding infrastructure development that much more difficult for them.

B. Limited choice of routes

In some cases, transit transport can become more efficient by encouraging the development of alternative routes, not only within one transit country but also through different countries. When a transit transport route passes through the territory of another country, the carriage of traffic along the route is possible only when the transit country grants to the other the right of transit through its territory, usually under specific conditions. Given that sovereign states have exclusive jurisdiction over transportation within their territories, the transit rights, along with any limits on them, are created when sovereign states voluntarily enter into bilateral, multilateral or international agreement and or conventions.¹ In most cases, landlocked countries are bound by such agreements in their choice of transit routes.

Landlocked countries may be able to strengthen their bargaining position in the negotiation of transit and trade agreements by demonstrating the value of the transit business provided to its neighbours, taking into account not only the direct costs involved but also

¹ Transit issues and various international conventions, agreements on transit are discussed in ESCAP, *Transport Planning for Landlocked Countries: Transit Issues and Border-crossing Issues* (ST/ESCAP/1484).

income generated through additional multiplier effects. Transit countries can also benefit from a clearer appreciation of the contribution the sale of transit services makes to their national income.

C. Trade and transport facilitation and border crossings issues

For most regional member countries, transit transport is most heavily constrained by delays and costs incurred at border crossings. Time-consuming border crossing and customs procedures, complicated non-standard documentation, poor organization and a lack of skills in the transport sector are some of the major contributory factors. Overlapping obligations brought about by several bilateral, trilateral and subregional agreements, and the lack of a harmonized legal regime for transit transport, including arrangements for transit fees, further compound the complexity of the transit transport process. Unfortunately, consistent information isolating the causes of these constraints and quantifying the costs and time they add to the transit process, as well as their impact on the economies of landlocked countries, is not available to policy makers. Another factor leading to significant increases in the costs of transit transport for landlocked countries is the return of empty containers to points of origin, a reflection of the present imbalance in trade of landlocked countries and the lack of logistics facilities near borders.

For transit transport issues to be addressed effectively a comprehensive approach is required, involving relevant government ministries, agencies and the private sector; yet several landlocked countries and their transit neighbours have not established facilitation boards or committees. As a result, the essential coordination and cooperation required for effective action has been constrained. Sometimes, landlocked countries have not demonstrated leadership to their transit neighbours in prioritizing and addressing transit transport issues domestically.

D. Opportunities of intermodal transport

While over 90 per cent of the volume of international trade still moves by sea, land and intermodal transport routes are increasingly being seen as viable options for accessing new markets. Intermodal transport, including road, rail and inland water transport, can maximize the use of existing infrastructure. In the open and competitive global economy, any saving on account of transport costs can give a significant competitive edge to producers. The relative efficiency of any transport mode depends on the nature of the goods being carried, the expected delivery time between origin and destination, as well as the level of services provided.

In the current scenario, cost efficient international transport increasingly requires a more coordinated use of different modes, and has to be viewed as part of the total supply chain.

E. The importance of cross-border cooperation

As compared with sea or air transportation, transport by land generally requires coordination and harmonization of a wider range of potentially conflicting issues, particularly between countries. Overland transit is subject to the national sovereignty of each transit country and can therefore exist only within the parameters and concessions that each country is prepared to make. Since transit transport involves the use of transport infrastructure and

vehicles in moving goods and natural persons across national boundaries, issues relating to all these factors need to be addressed if efficient transit transport is to be made possible.

As far as infrastructure is concerned, key issues are the harmonization of technical and operational standards and requirements along international routes under various modes, as well as user charges for the infrastructure. For vehicles, key issues include commercial operating rights, vehicle registration, vehicle technical standards, traffic rules and signage, driving licenses, third party liability and temporary importation of vehicles for the purpose of carrying goods and people across national frontiers. The movement of goods requires facilitation of customs procedures and various kinds of inspection of goods, people and plants, as well as regimes for special categories of goods like perishables and dangerous goods. With regard to natural persons, key issues involve passports, visas, border permits, health inspections, personal effects and currency.

While adjustment and development of transport infrastructure in a coordinated manner is critical to ensure technical compatibility of national transport systems, coordination in the management and control of traffic and user information is key to optimizing infrastructure use. The gains in efficiency from technical measures can, however, be offset in the absence of streamlined legal and administrative systems for international border crossings. Discriminatory road charges, restrictive traffic quotas, restrictions on the use of foreign trucks and, last but not the least, the amount of time needed for police, customs and security clearance of vehicles and drivers are some of the factors that directly influence transport operators' choice of route. The inability to deal with these and other factors adequately results in the loss of the potential income generated by transit traffic to alternative routes.

F. Transit transport agreements

As a first step towards establishing transit routes, landlocked countries have traditionally developed bilateral transit agreements with neighbouring countries to overcome their geographical constraints. Thus bilateral transit arrangements have been developed in the broader context of historical, political, economic and cultural ties. Landlocked countries need such agreements with not only their immediate neighbours, but also all other transit countries en-route to the market for their goods.

In some cases where transit transport involves more than two countries, separate bilateral agreements that may contain mutually incompatible provisions are likely to impede rather than facilitate transit transport. Transit transport involves issues and problems that should ideally be dealt with through multilateral agreements. In the ESCAP region, a growing number of trilateral, quadrilateral and subregional agreements have emerged. Some examples of these are the ASEAN Framework Agreement on the Facilitation of Goods in Transit²; the GMS Agreement for Facilitation of Cross-border Transport of People and Goods; the Transit Transport Framework Agreement of the Economic Cooperation Organization (ECO); and the Transport Corridor Europe-Caucasus-Asia (TRACECA), being developed with the support of the European Community's TACIS programme (see Box II.1). These are usually framework agreements that lay out broad goals and policy directions but leave potentially contentious details to be worked out through separate protocols and annexes.

² The full text of this agreement can be found at <http://www.aseansec.org/8872.htm>.

Box II.1. Examples of subregional agreements relating to transit transport

(a) ASEAN Framework Agreement on the Facilitation of Goods in Transit

The ASEAN Framework Agreement on the Facilitation of Goods in Transit was signed by nine of the ten countries of ASEAN, namely Brunei Darussalam, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam in December 1998. This agreement provides for the mutual granting of transit transport rights, as well as the right to load and discharge goods of third countries destined for or coming from contracting parties. The Agreement came into force in October 2000 but countries have yet to ratify a number of protocols under the agreement.

(b) GMS Agreement for Facilitation of Cross-border Transport of People and Goods

The Greater Mekong Subregion (GMS) Agreement for Facilitation of Cross-border Transport of People and Goods and the annexes that are currently being negotiated is an extension of the trilateral agreement signed between Lao People's Democratic Republic, Thailand and Vietnam in 1999. An integral part of the Asian Development Bank's GMS Program, the Agreement has now been signed by Cambodia and China, and Myanmar is expected to sign in the near future. The annexes and protocols are currently being negotiated with ADB assistance.

(c) ECO Transit Transport Framework Agreement

The Economic Cooperation Organization (ECO)¹ adopted the Almaty Outline Plan in 1993 and the Programme of Action for the ECO Decade of Transport and Communication (1998-2007) in 1998 for the development of the transport sector in the ECO subregion. The Transit Transport Framework Agreement envisages establishing a common regulatory framework for the development and facilitation of transit transport among member countries. The agreement provides for the freedom of transit through the territories of the contracting states for road and rail transport and inland water navigation, as well as access to maritime ports.

(d) Transport Corridor Europe-Caucasus-Asia

Six out of the ten signatories to the ECO Transit Transport Agreement are also signatories to the Basic Multilateral Agreement on International Transport for the Development of the Transport Corridor Europe-Caucasus-Asia (TRACECA) routes.¹ Begun in 1993, the TRACECA programme is a European Union (EU) funded technical assistance (TA) to develop a transport corridor on a west - east axis from Europe, across the Black Sea, through the Caucasus and the Caspian Sea to Central Asia. The agreement provides a framework for the development of transport corridors linking these regions. The scope of the agreement extends to road, rail, maritime, air and multimodal transport, as well as transportation by pipeline, and covers cross-border and transit transport.

An advantage of the framework agreements is that they highlight the commitment placed on facilitation measures by countries along particular transport corridors or international routes. The framework agreements are often viewed as stepping-stones to acceptance of international conventions by signatory countries. This is more likely to be the case when provisions in both types of agreement are in conformity with each other and have been developed through consultations among different subregions. In reality, framework agreements are frequently developed independently by different subregional groupings, leading to the prospect of different provisions being applicable as goods move along a transport corridor that spans two or more subregions.

Landlocked and transit countries acknowledge the fact that in order to bring framework agreements into operation, consensus has to be achieved on detailed modalities. Countries also agree that existing international conventions, which have taken many years to develop, have an important role to play. Subregional framework agreements and protocols make frequent reference to international conventions, and seek to incorporate specific provisions from such conventions. Modification or simplification of these provisions in substance or language however could give rise to problems in interpretation, and pose difficulties when countries eventually seek to ratify and accede to the international conventions. There are also circumstances where more than one framework agreement covering similar issues could apply to the members of a particular subregion.

At the global level several international conventions established the right of access to the sea and facilitate transit transport for landlocked countries. In chronological order, these are the Convention and Statute of Freedom of Transit, Barcelona, 1921 (Barcelona Transit Agreement); the Convention on Transit Trade of Land-locked States, New York, 1965; and the United Nations Convention on the Law of the Sea, 1982. New conventions have also been developed, primarily under the auspices of the Economic Commission for Europe, on specific aspects of transport³.

Recognizing that harmonized transport facilitation measures at the subregional, regional and international levels are a prerequisite to international trade and transport, the ESCAP Commission adopted a resolution on Road and Rail Transport Modes in Relation to Facilitation Measures (resolution 48/11 of 23 April 1992). In this resolution, it was recommended that countries in the region should consider the possibility of acceding to seven international conventions in the field of transport facilitation (see Box II.2).

While efforts to implement ESCAP resolution 48/11 must continue, it should be noted that the scope of the conventions covered by the resolution is largely confined to highway transport and customs procedures. The increase in trade following the development of the Asian Highway and the TAR, as well as the opening up of new roads and railways facilitating transit trade and providing opportunities for landlocked countries to become “land-linking” countries, also need to be recognized. The scope of resolution 48/11 may have to be expanded to cover other relevant international conventions that facilitate transit transport.

Since the adoption of resolution 48/11 a number of subregional agreements have emerged, to deal with issues covered by the conventions. There is thus an urgent need for a comprehensive comparison and analysis of the international conventions and the subregional agreements in order that countries could fully understand the provisions and the implications of the convention and assess their compatibility with the subregional agreements currently in place and under negotiation.

³ For a summary list of these agreements and links to their texts, please visit the website of the United Nations Economic Commission for Europe, at <http://www.unece.org/trans/conventn/legalinst.html>.

Box II.2. International Conventions listed in Commission resolution 48/11 on road and rail transport modes in relation to facilitation measures

Convention on Road Traffic (Vienna, 8 November 1968)

Convention on Road Signs and Signals (Vienna, 8 November 1968)

Customs Convention on the international Transport of Goods under Cover of TIR Carnets (TIR Convention) (Geneva, 14 November 1975)

Customs Convention on the Temporary Importation of Commercial Road Vehicles (Geneva, 18 May 1956)

Customs Convention on Containers (Geneva, 2 December 1972)

International Convention on the Harmonization of Frontier Controls of Goods (Geneva, 21 October 1982)

Convention on the Contract for the International Carriage of Goods by Road (CMR) (Geneva, 19 May 1956)

G. Changing global economy

Finally, it is worth noting that with the spread of new manufacturing and trading practices such as outsourcing, ‘just-in-time’ production systems and intra-firm trade, transport costs and time are becoming ever more critical factors in determining global trade and investment patterns. These changes require strategic thinking on the part of the landlocked countries and must be taken into account in their medium- to longer-term plans.

One approach through which landlocked countries can seek to mitigate the disadvantages of their remoteness is by developing exports of high-value, low-weight products in which the share of transport costs in total value is less and alternative transport modes such as airfreight become feasible. Fostering the export of invisibles, such as tourism services, is another option.

Transport costs may also be reduced through pursuing a growth strategy closely integrated with neighbouring economies that can increasingly provide markets for imports and exports within the region. Liberalization of trade and new market opportunities are also creating a demand for landlocked countries to become “land-linking” countries, providing important transit services to their neighbours.

CHAPTER III. CASE STUDY METHODOLOGY

A number of models have been developed to aid transport decision makers in choosing the most effective transport mode or combination of modes that not only minimize costs and risk, but also satisfy various on-time service requirements within the transit corridor. The cost/time methodology presented below and utilized in this study has been adapted from Beresford and Dubey⁴, as improved by Banomyong.⁵ It includes costs and time associated with transport by any mode (road, rail, inland waterway and sea) and with transfers between modes (at ports, rail freight terminals and inland clearance depots) as components. The methodology is based on the premise that the unit cost of transport varies between modes and this will be reflected in the cost curves. For volume movements, sea transport is generally cheapest per tonne per kilometre and road transport is normally the most expensive, with transport by waterway and rail in an intermediate position.

This model may also be used as a useful tool in the debate over the value of time in freight transport operations by analyzing transit times by mode and route. The longer freight takes to reach its destination (including dwell times at terminals), the greater will be the implicit interest costs of working capital. Total implicit costs may, however, be a good deal higher, since some goods may be needed urgently and business may be lost if goods arrive too late. The value of time will ultimately depend on the nature of the commodities being transported and the cost of delays must also be taken into account when appraising the risks attached to specific routes and transport modes. As part of the analysis of the transit routing decision, it is important to examine the trade-off between the monetary outlays for transport and the implicit costs of time.

Points of transshipment, at border crossings or between modes, are incorporated into the cost curves as vertical steps. For example, at ports and inland terminals, a freight handling charge is levied without any material progress being made along the supply chain; therefore, the costs incurred here are represented by a shift upwards in the cost curve at these points. The height of the step is proportionate to the amount of the charge. These vertical steps can also be broken down to reflect different types of charges or processes involving time, such as document fees, transit charges and cargo clearance costs. In this regard, bottlenecks at points of transshipment can be analyzed in themselves and as part of the overall route.

A. Four stages in the methodology

The methodology may be considered in four developmental stages, from its basic form (figure III.1) through two intermediate stages (figures III.2 and III.3) to its final form (figure III.4).⁶ These are presented in more detail below.

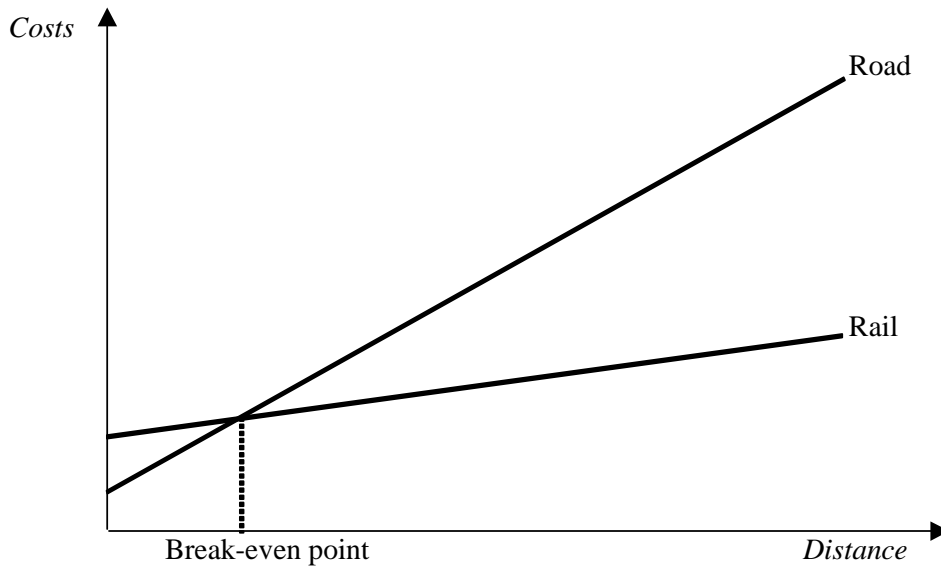
Figure III.1 shows the distance and cost/time data plotted on the x-axis and y-axis, respectively. As can be seen, initially road transport may be cheaper than rail transport over shorter distances, due to the initial costs (or time) required to transport the goods to the railway station. However, as the distance increases, the two lines cross and beyond this point, rail transport has a lower per kilometre cost than road transport, as indicated by the flatter slope.

⁴ Beresford, A.K.C. and R. C. Dubey, *Handbook on the Management and Operation of Dry Ports* (UNCTAD/RDP/LDC/7).

⁵ Banomyong, R, "Multimodal Transport Corridors in South East Asia: A Case Study Approach", unpublished doctoral dissertation, University of Cardiff, Cardiff Business School, 2000.

⁶ These figures are adapted from Banomyong, op.cit.

Figure III.1. Unimodal alternative, road versus rail



Competition between just two modes of transport is somewhat simplistic. In reality, a combination of transport modes can also provide a competitive solution, where the cost of transport by combining both modes is less expensive than just road transport and slightly more expensive than rail transport. In the first part of the journey, it is cheaper to transport the goods by road rather than by rail. However, if the distance to be travelled is further than the break-even distance, transport by rail becomes more economical. Therefore, an intermodal transfer can be arranged at the closest rail freight terminal or ICD. The vertical step in figure III.2 represents the costs (or time) involved when goods are transhipped from road to rail at the rail freight terminal or ICD. The cost of rail transport, in reality, has not increased but the cost of the intermodal transfer is reflected in the combined transport cost from that point on.

Figure III.2. Combined transport, road-rail

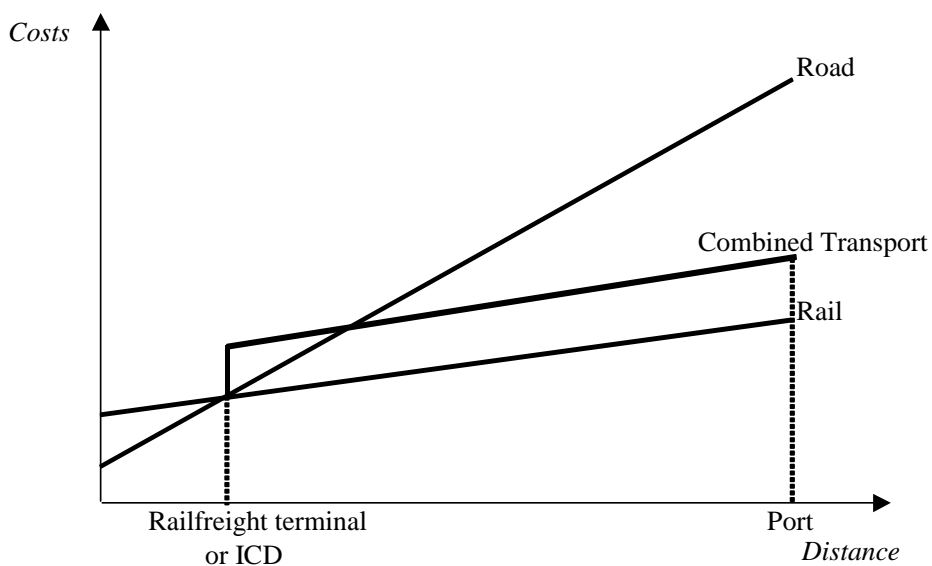
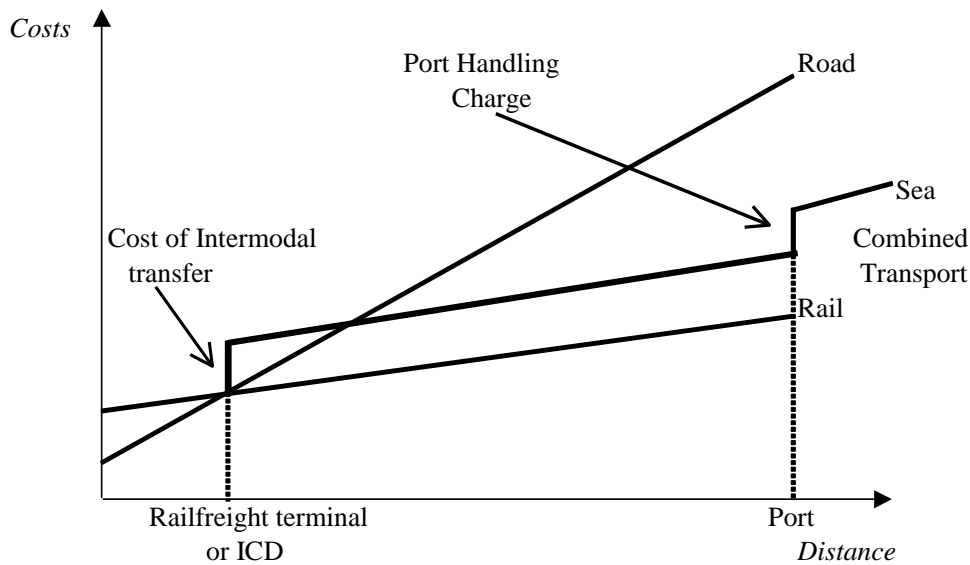
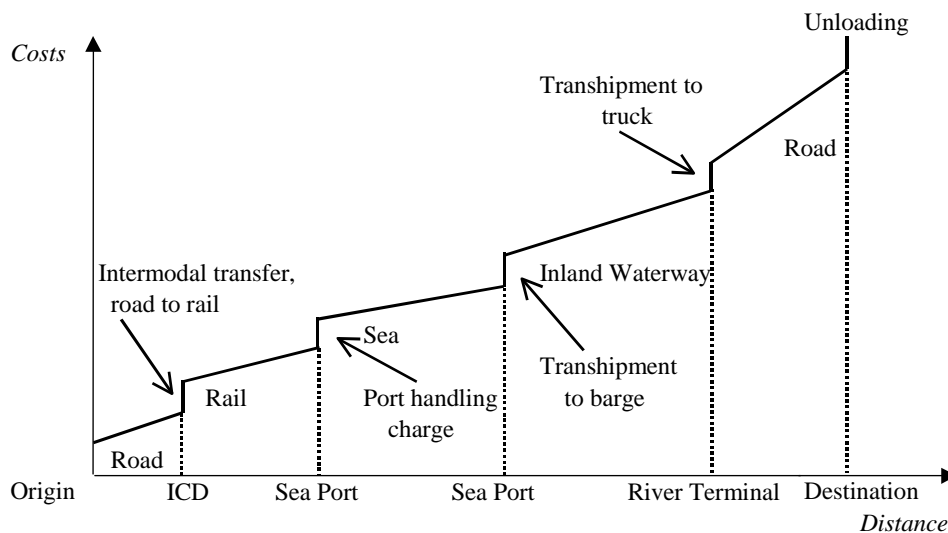


Figure III.3. Combined transport, road-rail-sea



Since the overwhelming majority of traded goods is transported by sea, the most likely destination for the freight in transit will be a seaport, where the goods will be transferred onto sea-going vessels. In figure III.3, the additional costs (or time) incurred at the port are represented by the second vertical step. Thus, cumulative costs from the origin to the port are the sum of the cost of rail transport to the ICD plus the cost of intermodal transfer at the ICD plus the cost of rail transport from the ICD to the port plus the handling charge at the port.

Figure III.4. Multimodal transport from origin to destination



The final stage of the methodology, illustrated in figure III.4, shows that numerous modes of transport may be involved for goods to be moved door-to-door. At each intermodal transfer point there will be a cost (or time) increase represented by a vertical step, which will be cumulated with the transport and other costs that have been incurred up to that point. Should a border crossing occur along the route, the border crossing charges (and time spent) can be represented by another vertical shift upwards in the cost curve at that point, which can then be cumulated with other costs.

B. Data needed to build the model

The costs presented in this study are based on quotes that were obtained during interviews with logistics and transport service providers, traders and governmental officials during study visits undertaken by the Secretariat. These data are not usually publicly available. Prices quoted concerned the shipment of one standard container (twenty-foot equivalent unit or TEU) on a freight-all-kind basis. However, depending on the quantity of goods transported, lower quotes may be possible. Data on transit times offered for each transit route and the variation in delays at critical nodal links were also obtained from the same group of respondents. The information needed to build the model includes:

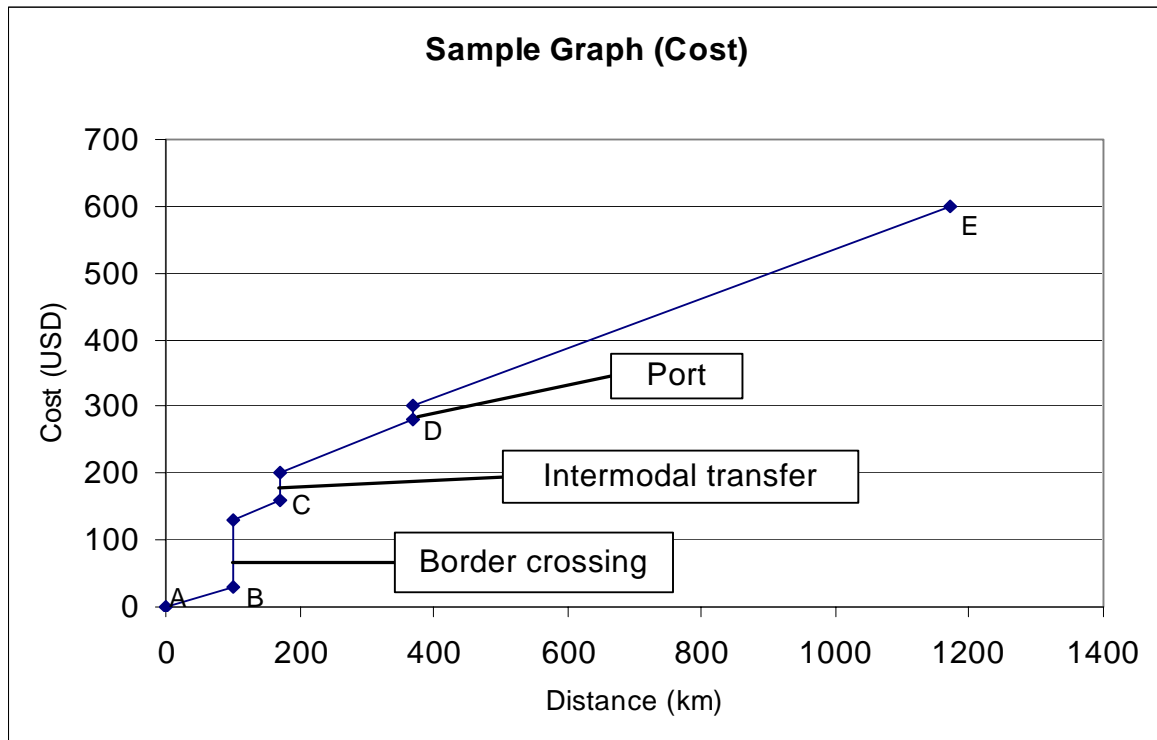
- The origin and destination of the cargo;
- The full routing from origin to destination, with an indication of the places where the cargo is essentially stationary (such as border crossings and points of intermodal transfer);
- Mode of transport for each leg;
- Distance for each leg;
- Transit time for each leg (in hours or days); and
- Cost for each leg.

A sample data table, showing the transit of goods from point A (origin) to point E (destination) is given in table III.1. This data is plotted against distance for each leg of the journey. In the case of costs, the figure will graphically show the relative cost of each leg (or mode, where applicable), as well as indicate the approximate proportion of non-transport costs in relation to transport costs. Further information, for example, a breakdown of costs at border crossings or ports, can highlight areas for action by policy makers. Similarly, by plotting time against distance, the relative speed of transit transport for each leg (or mode) can be compared, and the bottlenecks at transshipment points can be identified. Figure III.5 below is a sample graph using the cumulative cost data from the table.

Table III.1. Sample data table

<i>Leg</i>	<i>Mode</i>	<i>Distance (km)</i>	<i>Cum. distance (km)</i>	<i>Cost (US\$)</i>	<i>Cum. cost (US\$)</i>	<i>Transit time (hours)</i>	<i>Cum. Time (hours)</i>
A to B	Road	100	100	50	50	4	4
Border crossing	-	-		100	150	6	10
B to C	Road	70	170	30	180	3	13
Intermodal transfer	-	-		40	220	3	16
C to D	Rail	200	370	60	280	18	34
Port	-	-		20	300	6	40
D to E	Sea	800	1 170	300	600	72	112
Total		1 170		600		112	

Figure III.5. Sample graph



C. Further applications and considerations of the methodology

1. Issue of reliability

When selecting transport routes, multimodal operators also take into consideration a number of other factors in addition to transportation time and costs, such as the reliability of the route. Reliability can be understood in terms of consistent transit times; regular schedules; predictability of costs; informal charges, such as ‘tea-money’, which are sometimes required to facilitate transport; damage during the journey; pilferage and overall security concerns.⁷

If it were possible to insure against such risks, the insurance costs could be used to assess reliability for comparable routes. One technique which can be employed as part of the application of the cost/time methodology to assess reliability along different routes is to use a confidence index. This index captures the subjective assessment of risk by the respondents who use each transit corridor.⁸ The respondents intuitively assign a rating for each transport mode, intermodal transfer charge and other nodal activities, with uncertainty measured in terms of subjective probabilities assigned to each event. Measurement can be done on a scale from 1 to 5, where the lowest score indicates almost no confidence and the highest, a great deal of confidence. Alternatively, respondents can be asked to assign a plus sign (+) for

⁷ Other factors include the nature of the freight, value, marketing strategy, stockholding policy, and packing requirements.

⁸ The confidence index is derived from the field of political science, especially political instability methodology.

confidence and a minus sign (-) for lack of confidence. A general assessment of confidence can then be obtained by examining the distribution of the individual responses.

A confidence assessment is useful in explaining cases where multimodal operators appear consistently to be choosing routes that are not the most time- or cost-effective. In terms of regularity of schedules and transit times, it also provides an indication of performance of transport operators. Since it is based on a subjective interpretation of operations, such an assessment requires that the persons interviewed be knowledgeable about international trade transactions, transport operations, documentary procedures, and rules and regulations in their respective countries or region. Due to time and resource constraints, the confidence index was not explored for the case studies presented in Part B.

2. Influence of direction of trade flows on corridor costing structure

In the case of landlocked developing countries, the number of containers being imported tends to exceed the number of containers being exported. This is partly owing to the fact that most, if not all, landlocked developing countries have substantial trade deficits. In addition, the majority of goods exported from landlocked countries are primary commodities, which have traditionally been moved in bulk, while their imports (excluding energy resources) are intermediate manufacturing inputs and capital and consumer goods that are more suited to containerization.

The data utilized in the cost/time model are collected from a variety of sources, most importantly transport operators and freight forwarders on the ground. Given the nature of their business, such operators will usually quote the cost for the total journey from origin to destination, without revealing the cost components of the various legs and transshipment points. It is therefore assumed that the quotations received include the cost of returning an empty container to the point of origin (of the imported goods).

Ideally, therefore, data should be collected for both inbound and outbound transport costs, as the latter should be lower than the former. However, another factor influencing the costing structure of transit corridors is the degree of competition between transit transport service providers along the route in question. In many of the countries studied, transit transport operations are run by a restricted number of operators. This means that they are less subject to market forces and can therefore establish similar transit rates for both exports and imports, without reference to the true costs involved.

3. Issue of comparability

In the application of the methodology, the unit of analysis should be a standard container so that comparisons can be made in terms of TEU or FEU (40-foot equivalent unit). Furthermore, as most costs are quoted in TEU, using containers as the unit of analysis allows for a more detailed analysis of the breakdown of costs, for example, at border crossings. The methodology can be adapted for use with other types of unit load but some adjustment will need to be made in order to represent increases in costs and time along a particular transit corridor.

CHAPTER IV. SUMMARY OF PRELIMINARY FINDINGS

The case studies undertaken by the ESCAP secretariat represent a cross-section of landlocked countries from four subregions. The subregions are Central Asia, where the case study focuses on Kazakhstan and Uzbekistan (chapter VI); South-East Asia, where the focus is on Lao People's Democratic Republic (chapter VII); North-East Asia, where the focus is on Mongolia (chapter VIII); and South Asia, where the focus is on Nepal (chapter IX). The case study countries represent least developed countries and economies in transition.

The data for the study were gathered through several means including questionnaires, face-to-face interviews with policy makers, cargo owners, transport operators, transport intermediaries, customs officials and other stakeholders, as well as desk research. The secretariat undertook fieldwork in the selected landlocked countries and, wherever possible, in neighbouring transit countries. Empirical knowledge and information of secretariat staff and research studies undertaken by UNCTAD, the World Bank, and ADB also contributed to the study. Data have been validated, to the extent possible, through four subregional seminars, hosted by the case study countries in early 2003, where the framework for the recommendations and the action plan contained in chapter V were deliberated.

The ESCAP study findings included the following

- (a) Each landlocked country had access to the sea through more than one country, apart from Nepal and Bhutan where sea access passes through India. Each of the landlocked countries had a traditional or predominant route and the movement of goods on these routes could be improved with better transport facilitation. For alternative routes to be attractive, further improvement in infrastructure and service levels and a reduction in non-physical bottlenecks were required.
- (b) The ESCAP study results highlighted the fact that a corridor approach was needed in identifying and dealing with non-physical bottlenecks. Along a transit corridor, the development of infrastructure was subject to competing priorities at the national level. Transit country governments had to balance the needs of landlocked countries and their own local infrastructure development goals in allocating funds for a particular transport corridor. Meanwhile, non-physical bottlenecks including quotas on the number of operators, licensing arrangements, insurance, customs procedures are within the control of governments of countries along a route.
- (c) Both landlocked and transit countries are becoming increasingly aware of the prospect of landlocked countries becoming "land-linking" countries and providing transit countries with alternative routes to international markets.
- (d) The application of the cost/time methodology often challenged common assumptions of transit costs and times at particular border points and along particular routes. Some routes had steeper cost/time curves than expected while others were considerably less expensive in terms of cost and time. While there was general awareness among policy makers of the rough magnitude of costs/time along transport corridors, substantial differences were noted in data and information provided by ministries responsible for transport and customs and information provided by private sector shippers, transport operators and freight forwarders. This scenario, which was observed within each country, was more pronounced when comparing information

gathered from either side of a land border. There seems to be a dearth of accurate and timely information on various aspects of transit transport.

- (e) The findings of the ESCAP secretariat study suggest that national trade and transport facilitation committees could serve as forums for bringing different stakeholders together. Such facilitation committees could consist of senior government officials responsible for trade and transport, customs officials, as well as private sector representatives of cargo owners, transport providers, transport intermediaries such as freight forwarders, multimodal transport operators and other relevant stakeholders. In this regard, the application of the cost/time methodology could serve as the basis for discussion between all stakeholders along a particular corridor to identify and isolate the cost increases and time delays, and to identify solutions to bottlenecks. The Committees could undertake the corridor studies with guidance from ESCAP. The facilitation committees can also seek assistance from academics and research institutes in undertaking the corridor studies and analyzing the results.
- (f) The ESCAP study also points to the need for a mechanism that would bring together the national trade and transport committees of all the landlocked countries so that they could share their experiences and compare best practices. There is, in addition, a need to bring together the trade and transport facilitation committees along a particular transit corridor so that stakeholders from both landlocked and transit countries can undertake a joint corridor study, analyze the results of such studies and jointly come up with solutions to overcome the physical and non-physical bottlenecks so identified.
- (g) Based on the findings of the four case studies, it is evident that there is a wide divergence in terms of minimum and maximum transit times and costs for each transit transport system. As an indicative example, four of the transit routes analysed as part of these studies are compared below. They include:
- Almaty – Kurlin – Krasnoe – Berlin (road);
 - Kathmandu – Birgunj – Raxaul – Kolkata Port (road);
 - Vientiane – Thanaleng – Nong Khai – Bangkok Port (road); and
 - Ulaanbaatar – Zamiin Uud – Erenhot – Tianjin Port (rail).
- (h) The results of the transit time and cost analyses are shown in Figures IV.1 and IV.2 respectively.⁹ As can be seen, differences in time and costs are partly explained by differences in distance. However, differences in time and costs associated with border crossings are less easily explained. Figures IV.3 and IV.4 show the variance in time and costs at selected border crossings.
- (i) While the secretariat has been able to ascertain the cost and time of transit transport in total, further study is required to determine a detailed breakdown of the cost increases or time delays shown in the case studies. The ESCAP secretariat is now in a position to share with relevant countries the types of data needed, the pitfalls in their collection and the best ways to obtain the data and undertake the corridor studies.

⁹ It should be noted that the quotations for the route from Kazakhstan and Germany were based on a 12 meter semi trailer, and therefore to obtain some comparability, the costs for this route were halved. The graphs should therefore be taken as indicative rather than as an accurate comparison.

Figure IV.1. Average transit time for the export of containerized cargo

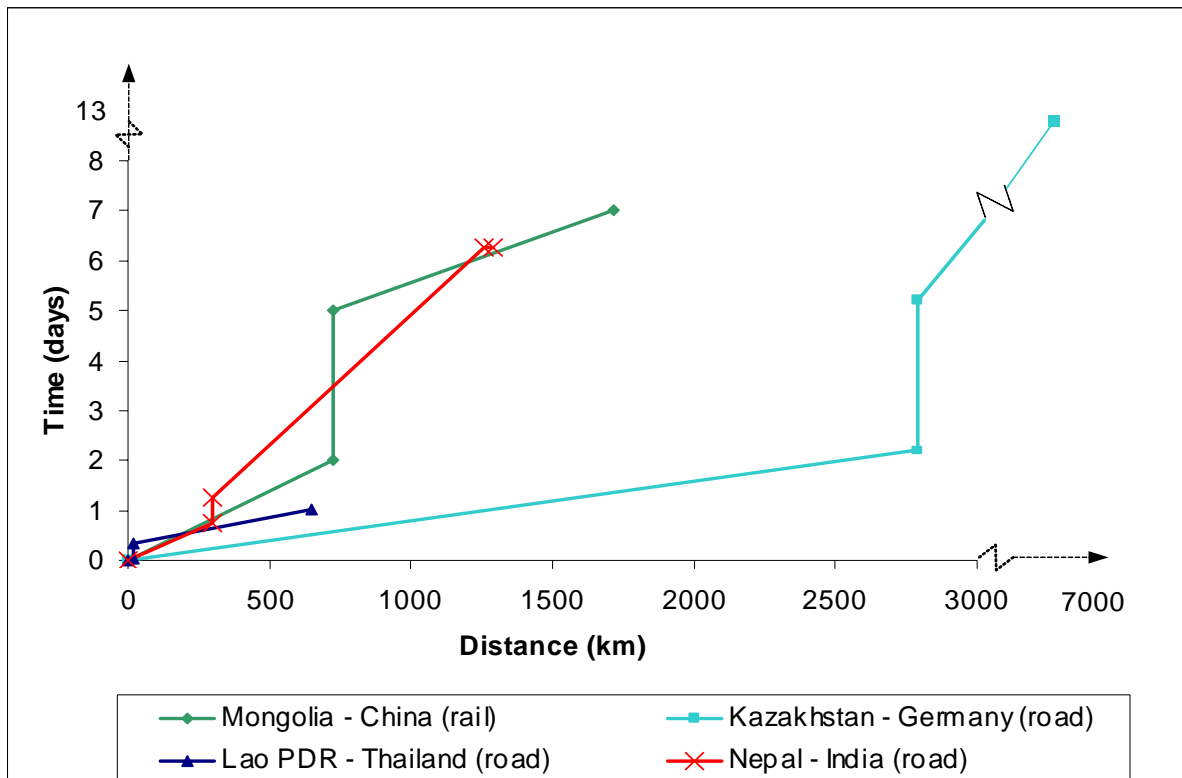


Figure IV.2. Average transit costs for the export of containerized cargo
(Per TEU; for Kazakhstan – Germany per half of 12 meter semi trailer)

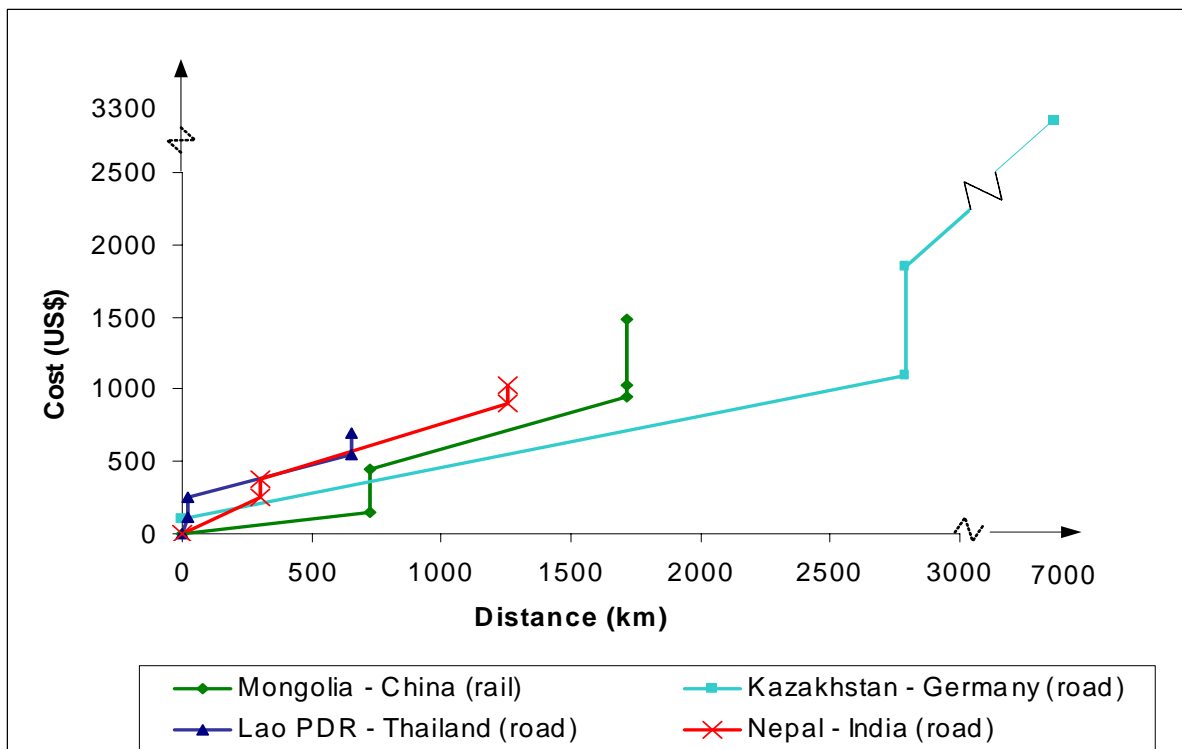


Figure IV.3. Comparison of selected border crossing times
(Hours)

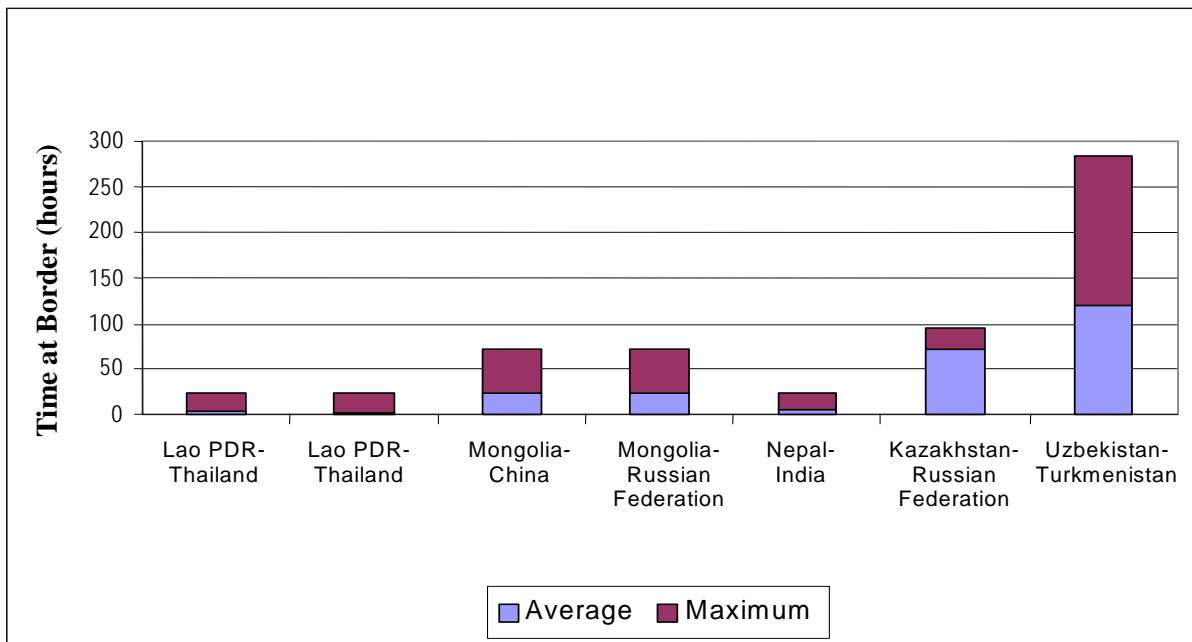
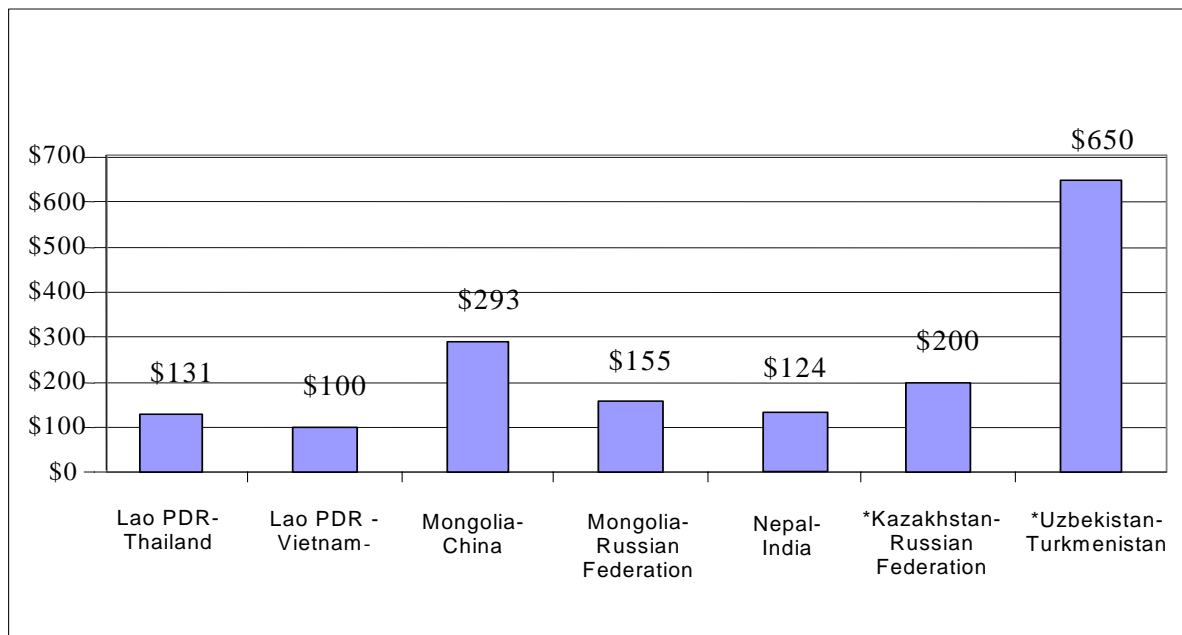


Figure IV. 4. Comparison of selected border crossing costs
(US\$ Per TEU)



* Estimated from cost of standard European 12 meter semi trailer.

CHAPTER V. RECOMMENDATIONS AND ACTION PLAN ON TRANSIT TRANSPORT COOPERATION

The recommendations elaborated below have been formulated and refined through the four subregional seminars held in Kazakhstan, Lao People's Democratic Republic, Mongolia, and Nepal and endorsed by the 59th session of the Commission (first phase) on 25 April 2003. It seeks to focus resources and inputs of landlocked and transit developing countries and donor countries and international financial and development institutions and the private sector on improving the efficiency of transit transport and thereby access to global markets. The actions also recognize the increasingly important potential of landlocked countries to provide transit opportunities for their neighbours, an important factor in the planning of future transit arrangements.

A. Policy-related actions

While landlocked countries do need the cooperation of neighbouring countries in developing efficient transit transport and access to international markets, they also need to demonstrate their commitment to improve the transit process through the formulation and implementation of a clear and consistent national policy. It is important that landlocked countries coordinate among themselves, ensure representation at international meetings and articulate their positions with a single voice.

Specific action by landlocked and transit countries

(a) Development and implementation of a nationally integrated transit transport policy and the promotion of regionally coordinated initiatives where appropriate;

(b) Landlocked and transit countries should establish and/or strengthen national trade and transport facilitation boards or committees with representation of all major stakeholders (Government, private sector, transport operators/associations, etc.) to develop a coordinated and consistent transit and transport strategy. Owing to the crosscutting nature of the work that body would have to undertake, chairmanship should be at the level of deputy prime minister, with clear terms of reference and responsibilities, based on this action plan. Such a body may be supported by subcommittees operating at the working level and focusing on specific routes.

Supporting role of subregional and international organizations

(a) Ensure that the issue of transit transport, particularly with respect to landlocked countries, is regularly placed on the agenda of meetings and brought to the attention of policy makers through discussion and action;

(b) Provide information on and analysis of examples of best practice in the establishment and operation of trade and transport facilitation committees, supported by advisory services to countries that wish to develop a national integrated transit transport policy;

(c) Subregional initiatives may focus on specific transit corridors.

B. Improved coordination within and between countries

Along with the development of transport infrastructure comes the need to formalize arrangements with regard to the operation and facilitation of transit transport. Multiple agreements at a bilateral, trilateral and subregional level along with international conventions can result and are resulting in some countries having overlapping and sometimes contradictory obligations. The need to ensure a consistent, and to the extent possible, harmonized legal regime for transit transport across the region is thus important.

Specific action by landlocked and transit countries

(a) Ensure the compatibility of geographically overlapping agreements with respect to transit transport;

(b) Develop national and subregional action plans to address transit transport issues with common and agreed priorities, including implementation of ESCAP resolution 48/11 of 23 April 1992 on road and rail transport modes in relation to facilitation measures;

(c) Active and constructive participation of landlocked developing countries in transit-related meetings of international organizations.

Supporting action by subregional and international organizations

(a) Undertake a study to collate and review elements of existing and proposed agreements within the region and relevant international conventions on transport facilitation and make proposals for regional harmonization;

(b) Facilitate the organization of regular meetings between national trade and transport committees of landlocked and transit countries at the subregional and regional levels.

C. Trade and transport facilitation

Simplification and harmonization of transit transport documentation along transit routes and across the region could lead to immediate benefits in terms of a simplification of procedures and a reduction in transit costs and time. With the potential growth in transit transport through landlocked countries, both landlocked and neighbouring transit countries can benefit from actions taken to increase the efficiency of transit transport. As road transport takes on an increasingly important role in providing transit transport services, there is need to consider equitable approaches to the charging of transit/road maintenance fees.

Specific action by landlocked and transit countries

(a) Simplification and harmonization of transit documents, particularly between neighbouring countries along transit routes;

(b) Minimization/elimination of customs inspections of goods in transit and simplification of customs formalities, while, at the same time, recognizing security concerns by introducing guarantee systems, as appropriate;

(c) Reduction and simplification of transit fee systems and associated charges;

(d) Establishment of a one-stop shop where jointly undertaken customs inspections can be undertaken and other forms of collaboration promoted;

(e) Establishment of a “single-window” facility at the national level to facilitate the processing of all transit transport-related documents at one location.

Supporting action by subregional and international organizations

(a) Provide advisory services and support to countries wishing to simplify and harmonize transit transport documentation;

(b) Undertake a review of transit fees and related charges with a view to simplifying and harmonizing the process at the regional level.

D. Promoting competition in the provision of transit transport services

Transport service providers from landlocked countries are sometimes restricted from offering services in the territory of their transit neighbour, even for the carriage of national goods in transit. Limited competition between operators, modes of transport and alternative routes may be resulting in inefficient pricing policies and services.

Specific action by landlocked and transit countries

(a) Recognize the special need of landlocked countries to use their own trucks to transport goods in transit to and from international ports and markets using their own vehicles; landlocked countries should recognize the needs of transport operators of their neighbouring countries to transit through their territory;

(b) Landlocked countries could consider taking the initiative in identifying alternative, competing transit routes that may form the basis for discussion with their transit neighbours where appropriate and agreed to by the countries concerned;

(c) Strengthen institutional capacity and promote the role of private sector transport operators, including those from landlocked developing countries, to increase competition and efficiency.

Supporting action by international organizations

(a) Identify and provide examples of best practices with respect to liberalizing transit transport markets and facilitating negotiations, at the request of member countries.

E. Better monitoring

The cost/time models utilized in the ESCAP case studies can provide countries with a snapshot of the current performance of transit transport routes. They can also provide policy makers with a clear view of the critical problems facing transit transport and a methodology for monitoring the impact of efficiency improvements. They could facilitate comparisons with other transit routes/border crossings within and outside the country, with a particular focus on, and the identification and transfer of, best practices.

Specific action by landlocked and transit countries

(a) National trade and transport facilitation committees or similar bodies could, inter alia, apply ESCAP methodology, based on the graphical representation of the cost and time data associated with the transit transport process between origin and destination, to assess, monitor and evaluate progress in improving the efficiency of transit transport routes;

(b) Improve data collection and develop a data bank to promote informed policy-making, including identification and monitoring;

(c) Consider applying performance indicators to measure transit transport efficiency.

Supporting action by subregional and international organizations

(a) Provide training on the application of the ESCAP methodology described above and other appropriate techniques to each major transit transport corridor and provide an analysis of regional results.

F. Enhancing transit infrastructure

Development of transport and information and communications technology (ICT) infrastructure, and particularly completion of the “missing-links”, would improve transit transport and enable landlocked countries to provide transit transport services to neighbouring countries. An integrated approach is needed to balance competing priorities in the development of road rail and other infrastructure. While alternative transit routes are important, volume and economies of scale contribute to the reduction of unit costs. The availability of a choice of routes will allow the trade and transport industries to select the most effective route on a commercial basis. The role of the private sector in providing and managing infrastructure facilities along transit corridors is still limited.

Specific action by landlocked and transit countries

(a) Prioritize transport infrastructure investment requirements for transit transport, including for intermodal transport;

(b) Establish logistics facilities and inland container depots as consolidation/distribution hubs, particularly at border crossing points;

(c) Promote the development of competing transport routes to reduce costs and improve service in consultation between landlocked countries and transit countries;

(d) Mobilize financial resources and create public-private partnerships to finance and operate transport infrastructure and facilities;

(e) Improve operations and efficiency of each transit route.

Supporting action by international organizations

(a) Assist regional member countries in identifying and formalizing agreements with respect to highway and railway transport linkages of regional importance, including those providing access to landlocked countries, as well as infrastructure that can promote intermodal transport connectivity, with a particular focus on the development of the Asian

Highway and the Trans-Asian Railway as well as Asia-Europe transport linkages in the context of the development of an integrated transport network;

(b) Assist member countries in creating an environment conducive to private sector participation in the construction and operation of transport facilities.

G. Application of information and communications technology

ICT applications can assist customs authorities in undertaking their duties and in building a data bank of information. ICT applications can also effectively increase the efficiency of various processes within the transport sector, provide connectivity between neighbouring countries and increase the ability of shippers to track their goods.

Specific action by landlocked and transit countries

(a) Computerize customs systems and the transmission of information with respect to goods in transit;

(b) Introduce and develop ICT systems along major transit routes from point of origin to point of destination, including maritime transport;

(c) Provide information on transit transport regulations and their interpretation on the Internet;

(d) Develop systems and encourage the lodging and processing of documents electronically;

(e) Introduce transit transport management and monitoring systems;

(f) Mobilize financial resources through domestic initiatives and also through international cooperation agreed to between the States concerned and through the creation of public-private partnerships to finance and operate ICT applications.

Supporting action by subregional and international organizations

(a) Compile information on computerization of customs processes and electronic data interchange systems adopted by selected countries including best practices;

(b) Develop guidelines and recommendations on information and ICT requirements for efficient transit transport in the region.

H. Capacity-building and human resources development for transit transport

Landlocked countries need to create a greater awareness of international developments with respect to transit transport and increase the capacity of government officials and private sector in addressing issues of concern.

Specific action by landlocked and transit countries

Capacity building is required, particularly in the following areas:

- (a) Negotiation, accession and implementation of multilateral agreements where appropriate and agreed to by the countries concerned;
- (b) Trade and transport documentation and processes;
- (c) Freight forwarding, multimodal transport and other transport operations.

Supporting action by subregional and international organizations

- (a) Assist countries to develop and deliver a sustainable human resources development programme for policy makers and transport industry personnel;
- (b) Provide advisory services, training programmes and other technical assistance.

**PART B. CASE STUDIES OF
KAZAKHSTAN AND UZBEKISTAN,
LAO PEOPLE'S DEMOCRATIC REPUBLIC,
MONGOLIA, AND NEPAL**

CHAPTER VI. CASE STUDY OF KAZAKHSTAN AND UZBEKISTAN

A. Profile of the Central Asian region

The Central Asian subregion, consisting of the republics of Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, occupies a land mass greater than Western Europe. It is bordered by Afghanistan, China, Islamic Republic of Iran, Russian Federation and the Caspian Sea but many Central Asian republics, unlike other landlocked states in Asia, are also partially bordered by landlocked countries. Uzbekistan is doubly landlocked. As a consequence, goods exported and imported by these republics often transit through more than one neighbouring state on the way to their final destinations, making the task of accessing markets and seaports more complex for these countries.

Central Asia is sparsely settled, with an estimated population of around 55 million. Transportation and communications face substantial barriers in the region, as the landscape is generally harsh, consisting of desert or semi-desert and steppe, as well as towering mountain ranges. Water is scarce in the region, and severe environmental problems have arisen from the poor conservation and utilization of this important resource from excessive irrigation. Nevertheless, the economies of the subregion are based largely on agricultural production, as well as their vast natural resources. The subregion has a significant percentage of the world's oil and gas reserves. The shares of the agricultural and industrial sectors continue to be large in each of these countries, contributing to more than half of GDP.

In Central Asia, the industrial sector is heavily reliant upon the mining and processing of natural resources, as well as the production of related machinery and equipment. The heavy reliance on petroleum is reflected in the high share of this sector in both Kazakhstan and Turkmenistan and the double-digit rates of economic growth achieved by these countries during the recent rise in oil and gas prices. The economies of Kazakhstan and Uzbekistan comprise four fifths of the economy of the Central Asian subregion, with Kazakhstan alone accounting for half of subregional economic output.

The five Central Asian republics have committed themselves to a process of market-oriented structural reforms but progress has been somewhat mixed.¹⁰ Reforming the so-called natural monopolies and fostering the development of private business activities have been among the more difficult steps on the reform agenda. However, the promotion of small and medium-sized enterprises has received strong impetus in both Kazakhstan and Uzbekistan, in particular. Poverty reduction has also been an issue of significant policy concern. The process of transition to a market economy has engendered considerable economic and social dislocations and disruptions in the form of higher unemployment reduced purchasing power and increased income inequality. The strong economic growth in recent years, after a period of negative growth rates in the early-1990s, has gone some way to alleviating these problems, but much remains to be done.

The Central Asian republics rely on a few commodities for the bulk of their export earnings, making them vulnerable to fluctuations in global commodity prices. For example, aluminum and cotton account for 70 per cent of annual export revenue in Tajikistan. The undiversified nature of the economies of these countries makes them heavily reliant on imports of consumption and capital goods. In Kazakhstan, where exports of oil and base

¹⁰ ESCAP, *Economic and Social Survey of Asia and the Pacific 2003* (United Nations publication, Sales No. E.03.II.F.11).

metals are the principal revenue earners, the large oil and gas sector also affects the terms of trade, crowding out domestic manufacturers, and leading to a more import intensive economy. There are prospects of increased economic diversification as foreign investors move into the pipeline and machinery sectors in this country, followed by food processing and other industries. Turkmenistan and Uzbekistan are pursuing import-substituting industrialization policies, in textiles, for example, through the introduction of non-tariff barriers and limits on hard currency sales. The countries of the Commonwealth of Independent States (CIS) continue to be the most significant trade partners for the Central Asian republics, but countries outside the CIS are gaining in importance, for exports as well as imports.

Although a number of regional preferential trading arrangements exist among the Central Asian republics, these countries have generally taken World Trade Organization (WTO) obligations in precedence and trade liberalization in line with these obligations has been more successful. Upon liberalization of its trade policies, Kyrgyzstan became the first member of CIS to join WTO in 1998. Kazakhstan, Tajikistan and Uzbekistan are currently observers at WTO and in the process of accession.

At the regional level, the republics of Central Asia have created two preferential trading arrangements in recent years with other member countries of the CIS. Kazakhstan, Kyrgyzstan and Tajikistan, together with Belarus and Russian Federation formed the Eurasian Economic Community in 2000. The Eurasian Economic Community, formerly known as the CIS Customs Union, aims to create a common external trade border by pursuing a unified foreign economic policy, regulating tariffs and prices, as well as facilitating the accession of its members into international trade organizations. Further, in 1992, all five Central Asian republics acceded as member countries to the Economic Cooperation Organization (ECO), an intergovernmental regional organization established in 1985 by Islamic Republic of Iran, Pakistan and Turkey as the successor organization of Regional Cooperation for Development. However, all countries in the subregion have trade-restricting policies and practices.¹¹ Although tariff barriers may be relatively low, they have occasionally been raised very sharply and suddenly and some countries have imposed export taxes. The use of non-tariff barriers, including import quotas and government licenses, is more common. Procedural and operational barriers to trade create serious impediments that result in slow and difficult border procedures. Regulations can change without notice and the sudden closure of borders to trade is not unknown. The imposition of transit fees, transport restrictions and multiple inspections all act to limit intraregional trade.

Transport infrastructure in the Central Asia subregion was heavily influenced by the needs of the former Soviet Union, with road and rail networks designed to facilitate traffic flows towards the European part of Russia, particularly Moscow.¹² Road and rail connections within Central Asia itself, and between Central Asia and its neighbours to the east and south are less well developed. There is one major paved road corridor through the subregion, running east to west, linking Tashkent to Almaty, with connecting roads to China and Turkmenistan. There is also a single rail corridor to China, passing through the high mountains of the Kazakh-China border.

Although current road and rail networks are adequate in the sense of linking major cities and commercial and industrial centres, they are badly deteriorated and in need of

¹¹ From the Asian Development Bank web site, <http://www.adb.org/Carec/trade.asp> (2 July 2003).

¹² From the Asian Development Bank web site, <http://www.adb.org/Carec/transportation.asp> (2 July 2003).

upgrading and improved maintenance. The roads, in particular, were not built to support the heavy volume of trucks now using them. The demand for transport services changed dramatically after the five Central Asian republics became independent and the centralized Soviet economy was dismantled. The volume of freight traffic fell rapidly, by an estimated 80 per cent in the Kyrgyz Republic, 66 per cent in Kazakhstan, and 67 per cent in Uzbekistan in the years immediately following independence.¹³ However, the demand for freight traffic has been increasing recently, and this has favoured road transport, which provides greater flexibility to the growing numbers of small and medium-sized enterprises. The economy of Kazakhstan continues to be one of the most freight intensive in the world.¹⁴

Given the reliance on primary commodities for exports and on imports for capital equipment and consumer durables, rail and road transport are the principal modes of transport for the Central Asian republics. Since these countries are remote from the sea, most transit goods reach their final destinations by land transport modes rather than being transshipped at their nearest port. Air transport, although limited, is nevertheless essential in order to cover the vast distances in the thinly populated subregion. Water transport is largely limited to ferries crossing the Caspian Sea and to seasonal inland water transport, through the system of rivers and canals in Russian Federation, connecting the Caspian Sea with the Baltic Sea and Black Sea.

B. Transit transport infrastructure and facilitation

1. Transit transport infrastructure

(a) Railway transport

Railway transport provides the backbone for container and bulk cargo transport, connecting Central Asian republics with ports on the Baltic Sea, Black Sea, Mediterranean and Persian Gulf, as well the Pacific. With the break-up of the former Soviet Union, these countries have had to cope with the transition from an integrated system, which used to serve the transport needs of a vast, centrally controlled economy, to systems that serve national interests.¹⁵ At present, the railway networks are expanding to connect with additional routes, such as to Islamic Republic of Iran and China.

A number of countries in Central Asia and the Caucasus have acceded to the AGTC, namely Belarus, Georgia, Kazakhstan, Poland, and Russian Federation. The European Agreement on Important International Combined Transport Lines and Related Installations (AGTC) formalizes the transport network for multimodal transport and ensures conformity and application of internationally approved standards on agreed railway routes within the territory of its member countries. However some countries are unable to accede to the AGTC because their railway infrastructure does not yet meet its performance standards.

Parallel to the formalization of the European railway networks, ESCAP is promoting the formulation and formalization of the Trans-Asian Railway (TAR) among member countries and its integration into an integrated transport network. In this context, ESCAP is

¹³ *Regional Economic Cooperation in Central Asia*, Asian Development Bank (1998).

¹⁴ From the World Bank web site,

<http://wbln0018.worldbank.org/ECA/Transport.nsf/Countries/Kazakhstan?Opendocument>.

¹⁵ Only the Kyrgyz Republic does not depend substantially on rail for its transport needs, mainly because it has a very limited network.

organizing demonstration runs of container block trains along the TAR northern corridor between Asia and Europe. Out of five agreed routes for the demonstration runs, the Lianyungan (China)-Kazakhstan-Russian Federation-Belarus-Poland route would be very relevant for container transport to and from Central Asia. Once container block trains have been established on that route, the service would provide efficient access to ports in China as well as in Europe.¹⁶

According to some transport operators, exports of processed and manufactured goods from the Central Asian subregion have been increasing gradually, leading to a higher demand for empty containers for exports. This would reduce the transit transport costs of imports into the subregion, by reducing the frequency of empty returns. As a result, some shipping lines with representatives in the region are developing the logistics of access for republics in Central Asia and are beginning to sound out the market.

(b) *Road transport*

In recent years, road transport has been increasing its market share of transit freight, particularly for the import of manufactured and consumer goods from Western European countries and Turkey. The opening of the CIS countries to international trade has resulted in a dramatic increase in road transport with extensions to more distant destinations. Road transport routes for the transit transport of Central Asia and Caucasus have been identified through the E-road network as laid down in the 1975 European Agreement on Main International Traffic Arteries (AGR), administered by the United Nations Economic Commission for Europe (ECE), and the Asian Highway network, for which an intergovernmental agreement is currently being drafted under the auspices of ESCAP. Both network agreements identify transport routes as well as minimum technical standards to be met for roads designated for international road transport. The geographical coverage of both networks includes countries in Central Asia, as well as transit countries.

An increasing number of private sector transport operators are participating in the road transport sector, although there are significant differences in national regulations and compliance requirements along international routes. This situation presents problems for transporters in Central Asia travelling to Europe, as the enlargement of the European Union (EU) extends eastwards and countries increasingly comply with EU Directives as international transport standards. Nevertheless, there are increasing numbers of medium-sized operators in the subregion able to operate to and from Europe, using modern trucks that meet the high technical and environmental standards enforced in the EU. The lower cost structure of Central Asian truck operators gives them an advantage that allows them to compete against their counterparts in Europe, even under the current difficult conditions where most road traffic is generated outside the subregion, for example in Turkey, Islamic Republic of Iran, Russian Federation, and in the countries of Europe.

¹⁶ For implementation of the container block train demonstration runs along the TAR Northern Corridor, a Memorandum of Understanding has been signed by ESCAP, Belarus, China, Kazakhstan, Mongolia, Poland, Republic of Korea, Russian Federation, the International Union of Railways and the Organization for Railways Cooperation (OSJD). For further information, see ESCAP website at <http://www.unescap.org/ttd>.

2. Legal framework

The existing frameworks for transit transport in the Central Asian subregion are based on national regulations, bilateral and multilateral agreements, as well as international conventions. The main regulations and agreements, which differ between railway and road, are described separately below.

(a) Rail transport

The railway networks of the CIS countries and China, Islamic Republic of Iran and Turkey provide rail transport linkages for Central Asia and Caucasus. These networks are identified regionally through a number of agreements and intergovernmental programmes, which include:

- Multilateral agreements under the auspices of ECE, such as the European Agreement on Main International Railway Lines (AGC) and AGTC;
- Trans-Asian Railway (TAR) routes identified by ESCAP;
- Transport Corridor Europe-Caucasus-Asia (TRACECA) routes; and
- Railway routes for container and passenger trains promoted by the ECO.

In addition, the framework of legal instruments regulating rail transport in Central Asian republics consists of national regulations and a number of important conventions, such as the 1972 Customs Convention on Containers and two conventions specific to railways:

- The Agreement on International Rail Freight Communications (SMGS), which has 24 member countries, including countries in CIS, China and Islamic Republic of Iran, and is managed by OSJD; and
- The Uniform Rules Concerning the Contract for International Carriage of Goods by Rail (CIM), formulated by the Convention Concerning International Carriage by Rail (COTIF) and managed by the International Organization for International Carriage by Rail (OTIF).

National regulations concerning rail transport usually define the status of the national railway organization and its functions concerning infrastructure, including track, rolling stock and train operations. Historically, railway organizations in Central Asia had a monopoly on infrastructure and operations, inherited from the former Soviet Union, but recent policy changes in some countries has led to greater private sector participation. For example, Kazakhstan recently introduced legislation permitting private rail freight operators, and private entities have emerged in that country operating their own rolling stock. However, difficulties have been reported, as the current regulations under SMGS do not cover the freight forwarding business sufficiently.

The railway organizations that are members of OSJD work under different legal, economic and technical conditions. The main difference is in the application of different systems of transport laws (SMGS, on the one hand, and COTIF, on the other) and the existence of different gauges (mainly 1,435 mm and 1,520 mm), to which the various standards and technical provisions are connected.

Despite efforts to harmonize transport laws, both systems are likely to exist in parallel for quite some time. This means it is necessary to find a way of making it easier to transfer from one system to the other so that the individual parts can be brought more closely into alignment. Some countries participate in both systems, making the procedure for issuing transport documentation more flexible and facilitating international rail transport. In recent years, the tendency of both systems to expand areas they have in common has been given a boost with the accession of Islamic Republic of Iran to SMGS and its willingness to accept the SMGS consignment note as the common transit document for rail transport under TRACECA. The joint OSJD and ECE work¹⁷ on using the SMGS consignment note as a customs transit document will also contribute towards making railway transport operations easier.

Railway transit tariffs are set in accordance with the so-called MTT/ETT (International Transit Tariff) scale, which is intended to apply to rail freight traffic between OSJD member countries. The tariffs are based on a tariff book originally elaborated in the former Soviet Union and revised twice yearly in OSJD forums. The mechanisms for setting tariffs are institutionally and legally entrenched. Although the tariff is based on MTT, national governments set domestic rates. The tariff scales appear to be based on costing methodologies, dating from the central planning era. The MTT scales allow heavy discounts, which compensate somewhat for the lack of rational costing and permit some commercial flexibility. In general, high transit tariffs appear to cross-subsidize domestic traffic.

Because the traditional MTT tariff structure is commodity and distance oriented, it is perceived to be an obstacle for multimodal transport for which unit rates and through tariffs per container unit would serve the needs of customers better. A number of attempts intended to increase transport efficiency through greater use of container transport, including projects under TRACECA¹⁸, have had limited success. Obstacles to the use of containers in Central Asia and the Caucasus is a sign of the problem, and the lack of common through tariffs for containers constitutes the major institutional barrier to their wider application. Inclusion of common through tariffs for international container transport in the framework of MTT/ETT would promote containerization and multimodal transport in Central Asia and the Caucasus.

(b) *Road transport*

(i) *International conventions*

Compared with other parts of Asia, the countries in Central Asia have a relatively high rate of accession to many of the international conventions administered by ECE. This is reflected in appendix table VI.1 below, which shows the status of accession to the seven international conventions recommended under ESCAP Resolution 48/11 on “Road and Rail Transport Modes in Relation to Facilitation Measures” (23 April 1992), as of October 2002. The primary convention which facilitates customs transit procedures to and from Central Asia is the TIR carnet, while the Safe TIR System is used for closely monitoring the security chain.

Implementation of these conventions require the strengthening of public administration in the transport sector and increase of resources at the disposal of the relevant

¹⁷ ECE Inland Transport Committee, Working Party on Customs Questions affecting Transport, 102 Session, Oct 2002.

¹⁸ TRACECA Intermodal Service Project: *Final Report 2001*.

ministries, as well as authorities at provincial and local levels. Effective enforcement of the conventions also requires close international and national cooperation, for example, between transport authorities, customs and law enforcement authorities.

(ii) Subregional cooperation agreements

The countries in Central Asia have been involved in several multilateral agreements on international transport. In 1995, China, Kyrgyzstan, Kazakhstan and Pakistan signed an agreement for traffic in transit. In 1998, the twelve TRACECA countries signed the Basic Multilateral Agreement on International Transport for Development of the TRACECA routes. In the same year, the ECO members signed the Transit Transport Framework Agreement. Also in 1998, China, Kyrgyzstan and Uzbekistan signed an agreement on international road transport. These agreements contain standards and regulations aimed at the facilitation and harmonization of transit transport for the signatories, including the republics of Central Asia.

Given the complexity of multilateral agreements, it is not surprising that the implementation process has been relatively slow. In this regard, a number of key issues need to be further analyzed and addressed. One is the issue of overlapping agreements. Kyrgyzstan is a signatory of all four agreements, while Kazakhstan and Uzbekistan are signatories to three and Azerbaijan, Pakistan, Tajikistan and Turkey to two. With different provisions in each agreement, countries need to review carefully the implementation of substantive articles of the agreements. They also need to list clearly their commitments to each agreement as contracting parties.

While some of the agreements have entered into force and are currently being implemented, in most countries the management systems for customs, immigration, traffic management and so on have not as yet been put in place or adjusted in accordance with the requirements of the agreements. Countries need to take action to establish appropriate management systems within the relevant national authorities.

Finally, both the ECO and TRACECA agreements encourage contracting parties to accede to a number of international conventions for transport facilitation that provide a framework beyond the regional coverage of these agreements.

(iii) Bilateral agreements

To facilitate and promote transportation of goods and passengers between countries in Central Asia and Europe, bilateral transport agreements have emerged to regulate reciprocal usage of road networks in accordance with applicable national laws. These agreements regulate terms and conditions under which transport operators from one nation can function in the other, including acknowledgement of each other's national laws and regulations. Annual quotas, fixing the total number of permits granted by each country, are ascertained through bilateral consultations reflecting transit transport requirements of both sides. A number of permits, available free of charge, are also granted under these agreements to give preferential access to one country's road network for truck operators from the other.

Road transport between a Central Asian and a European country requires transit transport through a large number of countries for which permits must be obtained, in order to make use of preferential treatment under the bilateral regulations. Where bilateral agreements do not exist, for example, in the case of Kazakhstan with Austria and the United Kingdom of

Great Britain and Northern Ireland, treatment is often not reciprocal. Truck operators from Kazakhstan are not permitted to enter or transit either country in Europe but truck operators from both countries can enter Kazakhstan on payment of a transit fee, according to a national regulation applicable to trucks not holding bilateral permits.

The system of quotas through bilateral agreements appears to be complicated, since a number of government agencies are involved in the process. Reports indicate¹⁹ that bilateral quotas are often too low, resulting in extremely high prices for road permits on occasion. These high prices, together with difficulties in obtaining permits, result in a great deal of inconvenience and expense. For example, trucks of one nationality may have to be substituted for another, loads may have to be transhipped from one truck to another at border crossings, and so on.

High levels of transit fees tend to have a prohibitive effect on transport of landlocked countries that depend on transit routes through neighbouring countries. For example, the feasibility of exporting agricultural commodities, with limited sales margins, may depend on the level of transport costs. In this regard, it has been reported that high transport costs are proving prohibitive for the export of agricultural products from a number of Central Asian countries to traditional markets in Russian Federation. Producers from Turkey who benefit from lower transport costs have substituted supply.

The European Conference of Ministers of Transport (ECMT) also operates a multilateral permit scheme for journeys between its member countries.²⁰ The ECMT permits facilitate transport operations of member countries, with liberal movement within the ECMT region. As the five Central Asian republics have not achieved membership in ECMT as yet, they are obliged to establish the complex and time consuming system of bilateral agreements with countries in Europe. Participation in the ECMT multilateral transit permit scheme for the Central Asian countries would certainly be a big step towards harmonization of road transport between the subregion and Europe.

(iv) National Regulations

The main national regulations with regard to road transport are:

- Regulations concerning the terms and conditions under which foreign transport operators are permitted to use national roads;
- Regulations with regard to permissible vehicle dimensions, gross vehicle weight and axle loads;
- The customs code and regulations for cross-border and transit transport; and
- Visa regulations for foreign truck drivers.

¹⁹ TRACECA project: *Unified Policy for Transit Fees and Tariffs-Inception report*.

²⁰ Member countries of ECMT are: Albania, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Bosnia Herzegovina, Croatia, Czech Republic, Denmark, Estonia, Former Yugoslav Republic of Macedonia, Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, the Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, Yugoslavia.

Kazakhstan recently overhauled its rules and regulations concerning road transit by the introduction of a decree regulating the entry, exit and transit of all foreign buses with more than nine passengers, including the driver, and trucks able to carry loads over 3.5 tonnes. The decree sets out the regulations for granting transit permits, taking into account bilateral and multilateral agreements, and provides equal treatment for all countries. The fee currently payable for an entry or transit permit, for trucks without permits obtained through bilateral quotas, is about US\$ 160. In addition, customs procedures have also been recently streamlined. By way of contrast, national regulations for road transit in Uzbekistan have a bilateral orientation, where a number of decrees of the Cabinet of Ministers of the Republic of Uzbekistan regulate entry and transit fees for vehicles of specific neighbouring countries.

Establishment of non-discriminatory national legislation for road transit transport, taking into account requirements and commitments resulting from bilateral and multilateral agreements and international conventions, could be an important step in framing governing policy for developing the transport sector and implementing transport facilitation measures at the national level. The legislation recently introduced in Kazakhstan can be seen as an example in this regard. If comparable policies and national regulations could be established in all the landlocked and transit countries of Central Asia, transit and cross-border procedures would be greatly harmonized.

Nevertheless, it is worth noting that road transport operators from Uzbekistan are not actively utilizing transit routes via Kazakhstan as yet, even after the introduction of the new transport regulations. These truck operators indicate that the route is not viable in economic terms, owing to high transit charges of about US\$ 1,500 per truck through Kazakhstan. These charges are apparently the sum of payments for transit fees as well as to rent-seeking entities. Closer cooperation between the authorities concerned in both countries to implement the new national legislation in the context of the bilateral agreement between Kazakhstan and Uzbekistan may result in reduced transit costs.

(c) *Customs Convention*

In addition to the above, transit transport systems and processes in the region are affected by the International Convention on the Simplification and Harmonization of Customs Procedures (Kyoto Convention). This Convention, which entered into force in 1974, is a key legal instrument for harmonization of cross-border procedures. It was revised in 1999 to take account of the tremendous increase in international cargo, as well as rapid developments in information technology and the highly competitive business environment under which international trade occurs today. Since implementation of the Kyoto Convention is considered to be an important step towards accession to WTO, Kazakhstan has initiated the process of acceding to the revised convention and is making every effort to implement its provisions, both nationally and bilaterally. The steps being taken include the introduction of transit transport legislation, revised customs guidelines and implementation of a central, computerized customs system.

3. Transit transport procedures

(a) Rail transport

Complex operational processes and procedures accompany border crossings by rail. These include changes of locomotive and crew, break-of-gauge operations, marshalling, technical inspections and preparation of rail transfer documents. Institutional procedures include customs checks of railway bills against wagon lists and cargo documents, customs inspections, veterinary and phytosanitary controls. Average border-crossing times in Europe are in the 30-40 minutes range, whereas those in the CIS countries are measured in days rather than hours. The ECE recommendation for border stopping time is 60 minutes for international shuttle trains²¹ and 30 minutes for combined transport.²² Regional studies carried out under the auspices of TRACECA²³ indicate that border-crossing procedures can be simplified and streamlined and have recommended performance indicators to establish common standards (box VI.1).

Box VI.1. Railway border performance indicators

It is recognized that the processing time for this type of operation is dependant on the size of train, number of wagons and whether wagons are being inspected by one or two railway organizations. However, it is considered that a target processing time of 120 minutes should be achievable, even on the largest international trains.

The breakdown of the 120 minutes is as follows:

- Railways: registration of documents – 30 minutes
- Customs: registration of documents – 60 minutes
- Railways: final preparation of documents – 30 minutes

Inspection by both railways and customs should be completed within the overall time span of two hours. In the case of total transit trains with bulk cargo, this should be reduced to 90 minutes.

Source: TRACECA Project: Harmonization of Border Crossing Procedures, Recommendation of Border Harmonization Evaluation Workshop.

(b) Road transport

Border crossing times vary from a number of days to a few hours or minutes. Whereas crossing borders in Western Europe is a swift procedure, it is cumbersome and time consuming in the CIS countries. A huge number of checks and inspections can be applied to international road transport, depending on the country concerned, related to the cargo, the vehicle and the driver. Procedures related to cargo include customs control and inspection, veterinary and phytosanitary inspection. Procedures related to the vehicle can include a fuel quantity check for the taxation of fuel levels exceeding a given tax-free threshold; vehicle tax; road charges; transit fees; Green Card for vehicle insurance; mandatory national insurance payments; transport permits (bilateral, transit, third country, ECMT); payments for special permits; axle loads; gross vehicle weights and dimensions; vehicle certificate; road

²¹ UNECE Inland Transport Committee, Resolution 248 on the Reduction of Border Stopping Time of Shuttle Trains in International Traffic.

²² AGTC.

²³ TRACECA Project: *Harmonization of Border Crossing Procedures, Recommendation of Border Harmonization Evaluation Workshop.*

worthiness; compliance with ADR and ATP provisions; customs security of transport vehicles; statistical data, and so on. Procedures related to the driver include the driving license, passport and visa as well as checks of provisions concerning driving and rest periods.

Existing border procedures in the Central Asian republics are not yet in compliance with the principles of the revised Kyoto Convention nor do they meet obligations arising from many bilateral and multilateral agreements²⁴ and international conventions that have been signed and ratified. Although these agreements have been concluded in order to simplify and harmonize cross border procedures, the procedures have not changed significantly over the years. As traffic increases, border delays will become more severe and countries need to attach the highest priority to improving border procedures and facilities.

Regional studies carried out under the auspices of TRACECA²⁵ indicate that border-crossing procedures can be simplified and streamlined and recommend performance indicators to establish common standards. For outbound and inbound trucks, average transit time through the control zone should not exceed 20 minutes per truck and a processing minimum of three trucks per hour per processing lane should be achieved. The target is to achieve 10 minutes per truck or six trucks per hour per lane in future, with automation or the introduction of reduced controls.²⁶ The recommended performance indicator is also in line with the provisions of the TIR convention but may be considered a long term target to be achieved through the implementation of a number of measures to improve physical conditions as well as legislation.

C. Analysis of selected corridors²⁷

1. Road transport routes

Transit transport by road is primarily used for connecting Central Asia with markets in Western Europe, Turkey and Russian Federation. Among the main road transport routes which serve the region, two are examined in more detail below.²⁸ These are the road transport routes between Central Asia and:

- Countries in Europe via the northern route through Kazakhstan, Russian Federation, Belarus, Poland and Germany;
- Countries in Europe via the southern route through Islamic Republic of Iran, Turkey, and the Balkan countries.

Taking the example of Tashkent to Berlin, the relative distances along five main routes between Central Asia and Europe are shown in table VI.1.

²⁴ MLA Basic Multilateral Agreement of TRACECA, ECO Transit Transport Framework Agreement.

²⁵ TRACECA project: *Harmonization of Border Crossing Procedures, Recommendations of Border Harmonization Evaluation Workshop.*

²⁶ TRACECA project: *Border Harmonization Evaluation Workshop, Baku, September 2002.*

²⁷ The analysis below is based on information collected during a mission to Kazakhstan and Uzbekistan, responses to questionnaires distributed to Governments and freight operators in Central Asia, and various reports and studies.

²⁸ A third route between Tashkent/Almaty and the port of Bandar Abbas in the Islamic Republic of Iran is also being used by road operators, but is not covered in this study.

Table VI.1. Transit routes for road transport between Central Asia and Europe

<i>Transit Route</i>	<i>Length (km)</i>
1) Northern route (via Kazakhstan, Russian Federation, Belarus, Poland, Germany)	5 790
2) Southern route (via Uzbekistan, Turkmenistan, Islamic Republic of Iran, Turkey, European countries, Germany)	7 000
3) TRACECA route (via ferry Aktau-Baku, Poti-Ilichevsk, Ukraine, Poland, Germany)	6 250 (4 710 road and 1 550 ferry)
4) TRACECA route (via ferries Turkmenbashi-Baku, Poti-Ilichevsk, Ukraine, Poland, Germany)	5 980 (4 440 road and 1 400 ferry)
5) Pan European Corridor III route (via Kazakhstan, Russian Federation, Ukraine, Poland, Germany)	4 600

Routes used by transport operators vary from country to country. Truck operators in Kazakhstan prefer the northern route into Europe, which has an average transit time of 10-13 days²⁹ whereas truck operators in Uzbekistan opt for the significantly longer southern route to enter the EU, with an average transit time of about 20 days.³⁰ Since the two major cities of Kazakhstan and Uzbekistan, Tashkent and Almaty, are very close to each other and the distance along the northern route from EU countries to Tashkent is virtually the same as to Almaty, the rationale underlying route selection appears to relate to factors other than distance. Transport operators must also consider impediments in transit countries that affect transport costs along the possible routes. Transport operators in Kazakhstan and Uzbekistan stated that transit fees are a major issue affecting the economic viability of different transit routes.

The route assessment revealed that other possible routes, such as the TRACECA routes, or via Kazakhstan, passing the Caspian Sea on the northern side, Russian Federation, Ukraine and leading into the Pan European Corridor III (PEC III) through Poland, are not yet perceived as alternative options. For example, although the TRACECA route crossing the Caspian Sea by ferry and transiting through Azerbaijan and Georgia is shorter than the southern route, it is currently perceived as not being viable. The reasons are the poor condition of access roads to the port of Aktau in Kazakhstan, insufficient ferry services across the Caspian Sea for trucks to Baku and high transit fees, and charges imposed along the route transiting through Azerbaijan and Georgia.

Under present conditions, truck operators in Central Asia are confined to their chosen routes, as Kazakh road transport operators realized recently, when the TIR carnet system was about to be suspended on the territory of the Russian Federation at the end of 2002. Alternative independent viable trucking routes need to be developed to overcome the present route confinement. There is also a need to examine ways to counteract the implications of the current trade imbalance. The road transport association in Kazakhstan (KAZATO) indicated

²⁹ KAZATO.

³⁰ UZIFA, Central Asia Trans.

that 75 per cent of current transport volume between Europe and Central Asia is imports into Kazakhstan and 25 per cent exports to European countries, indicating a ratio between imports and exports transported by road of 3:1.

Comparison of northern and southern routes between Central Asia and Europe

Overall transport time for road transport between countries in Central Asia and Europe varies between 10 and 20 days depending on the transport route and country. Factors influencing the road transport time include: border crossing procedures; regulations for issuance of visas; customs transit regulations; control stops by traffic police; and poor road conditions. Reported transit times and other significant waiting times on the northern and southern routes are summarized in the box VI.2.

Box VI.2. Transit times and waiting times

Northern route

- Average transit time is 10-13 days for destination in Germany (KAZATO)
- Russian customs operates a “customs convoy” which can lead to 3-4 days waiting time for trucks (KAZATO)
- Waiting time at the Belarus border is 4-7 days (KAZATO)

Southern route

- Average transit time is about 20 days (Central Asia Trans)
- Visa regulations for Turkmenistan require 5-12 days waiting time (Central Asian Trans, UZIFA, IRU Report)
- Ferry in Turkmenistan (IRU Report)

The data on distances, time and cost for transit transport along the northern and southern routes is given in Tables VI.2. and VI.3. below and plotted in Figures VI.1. and VI.2. From Figure VI.1. it can be seen that road transport on the northern route is, on average, 7-10 days shorter than on the southern route, indicating that Kazakh transport operators perform comparable transport services between Central Asia and Europe in 50 to 65 per cent of the time taken by operators from Uzbekistan.

Analysis of the transit time on the northern route clearly indicates that more than 50 per cent of the transit time is spent waiting at border crossing points between Kazakhstan and Russian Federation (3-4 days) and between Russian Federation and Belarus (4-7 days). Assuming that waiting times could be reduced to a reasonable level of, for example, five hours waiting time at each border through policy measures, transit time would then be shortened by more than 50 per cent, to about 6 days.

Road conditions, institutional barriers within countries and other stoppages influence the average driving speed of the trucks in various countries. For transit through Belarus, Kazakhstan, Poland and Russian Federation, the average speed is about 50 km/h, while for transit through Austria, France, Germany, Italy and Spain the average speed is about 70 km/h. The average speed is an indicator of road conditions and the level of institutional barriers within transit countries, and may point to the importance of improving road transport infrastructure in order to achieve the economic benefits of faster road transport.

Table VI.2. Distances, transport time and cost over the northern route
(per 12 meter semi trailer)

<i>Northern Route</i>	<i>Distance (km)</i>	<i>Cum. Distance (km)</i>	<i>Time (days)</i>	<i>Cum. Time (days)</i>	<i>Cost (US\$)</i>	<i>Cum. Cost (US\$)</i>	<i>Cum. Cost without Convoy (US\$)</i>
Almaty	0	0	0	0	200*	200*	200*
Almaty – Kurlin (Russian Federation)	2 789	2 789	2.21	2.21	2 000	2 200	2 200
Kurlin		2 789	3	5.21	1 500**	3 700**	2 400
Kurlin – Krasnoe (Belarus)	1 902	4 691	1.6	6.81	1 500	5 200	3 900
Krasnoe		4 691	4	10.81	280	5 480	4 180
Krasnoe – Brest (Poland)	599	5 290	0.48	11.29	↓	↓	↓
Brest		5 290	1	12.29	↓	↓	↓
Brest – Kostrzyn (Germany)	796	6 086	0.64	12.93	900	6 380	5 080
Kostrzyn		6 086	0.17	13.10		6 380	5 080
Kostrzyn – Kassel	481	6 567	0.29	13.39	200	6 580	5 280

* Cost of TIR carnet, customs clearance. ** Including US\$1 300 cost of convoy.

Source: Data collected by ESCAP staff. (Cum. = cumulative).

Table VI.3. Distances, transport time and cost over the southern route
(per 12 meter semi trailer)

<i>Southern Route</i>	<i>Distance (km)</i>	<i>Cum. Distance (km)</i>	<i>Time (days)</i>	<i>Cum. Time (days)</i>	<i>Cost (US\$)</i>	<i>Cum. Cost (US\$)</i>
Tashkent	0	0	0	0	0	0
Tashkent - Alat/Farab (Turkmenistan)	650	650	1	1	750	750
Alat/Farab		650	4	5	1 000	1 750
Alat/Farab – Sarakhs (Islamic Republic of Iran)	480	1 130	2	7	500	2 250
Sarakhs		1 130	1	8		2 250
Sarakhs – Barzargan (Turkey)	1 780	2 910	4	12	1 800	4 050
Barzargan		2 910	0.5	12.5		4 050
Barzargan – Kapikule	1 940	4 850	4	16.5	2 000	6 050
Kapikule		4 850	0.5	17		6 050
Kapikule – Berlin (Germany)	2 150	7 000	3	20	1 000	7 050

Source: Data collected by ESCAP staff. (Cum. = cumulative).

Figure VI.1. Transport time related to distance for road transport between Central Asia and Europe, northern and southern routes

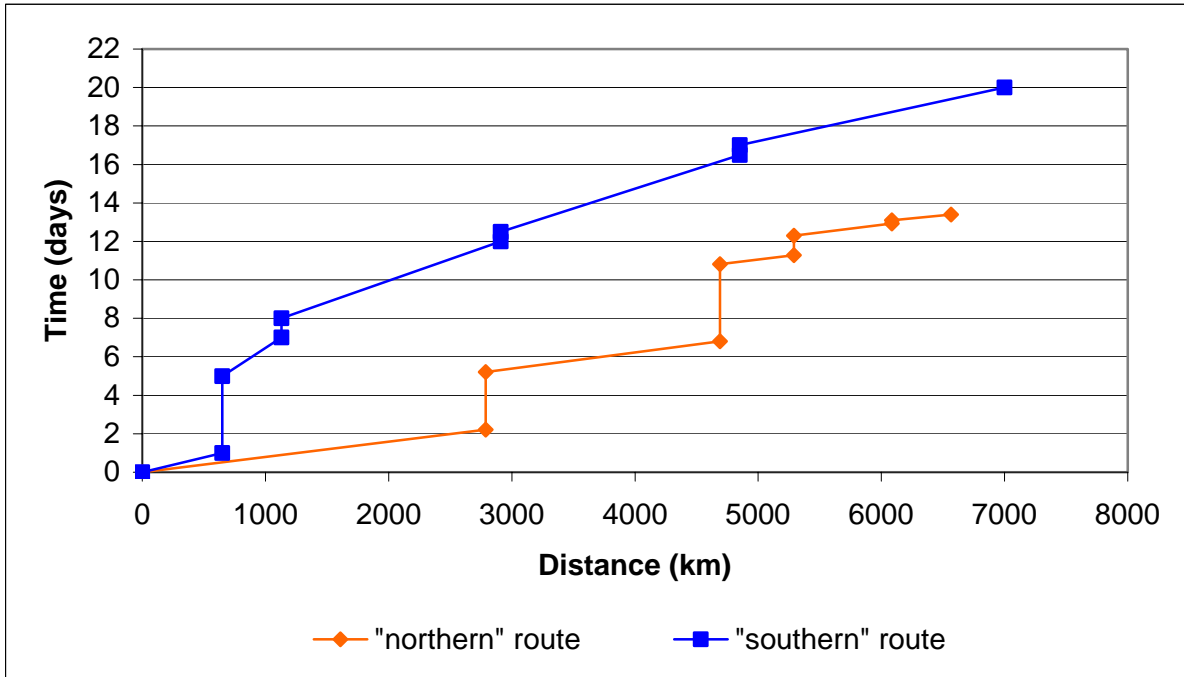
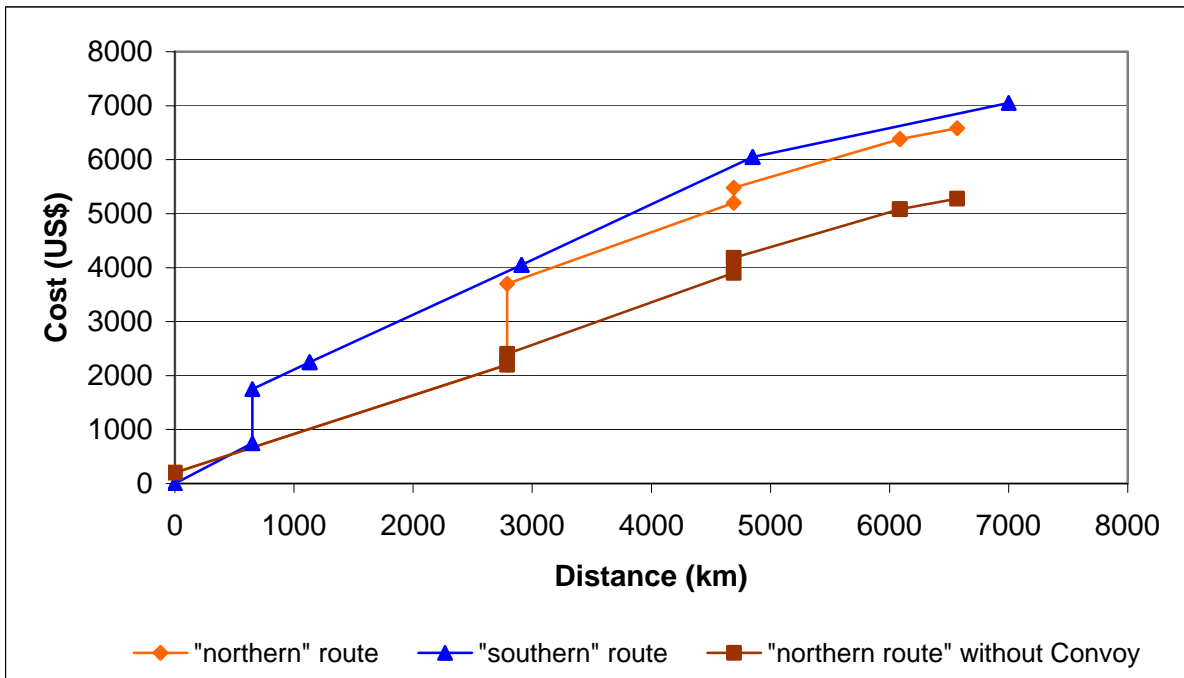


Figure VI.2. Transport costs related to distance for road transport between Central Asia and Europe, northern and southern routes



Overall costs for transport between Central Asian and European countries are reported to be in the range of US\$ 6,000 to US\$ 10,000 depending on the nationality of the truck operator and the route being taken. The contract price for a European trucker, from Germany for example, is reported to be US\$ 8,000-10,000. For Kazakh trucks, the rate is US\$ 6,000-7,000 for origin or destination in Kazakhstan, and for Uzbek trucks US\$ 7,000-8,000 for origin or destination in Uzbekistan. The rates are applicable to a standard European 12-metre semi-trailer. The prices quoted represent the contract price for a customer and include all applicable transport costs, fees and charges incurred during the trip. Due to the trade imbalance, which affects transport volumes, the contract price also includes some charge for the empty return journey. The major fees and charges reported on different routes are summarized in box VI.3.

Box VI.3. Transit fees and charges

Northern route

Russian customs operates a “customs convoy” and its official charge per truck is said to be US\$ 200, but the total costs for the convoy per truck is reported to be US\$ 1,500 (including rent sought by the convoy operators).

Belarus imposes a number of charges such as entry charge, customs stamp charges, compulsory insurance despite the Green Card, ecological fees, local levies, parking fees, road fee for the main trunk route and so on, amounting to about US\$ 300 per journey (IRU report).

Southern route

Turkmenistan imposes a variety of different charges and levies, reported to range from US\$ 650 to US\$ 1,000 depending on several factors.

Figure VI.2. above shows the cost advantage of the northern over the southern route, even including the additional cost for the convoy through the Russian Federation. Considering the significant level of transit fees as they occur in Belarus, Russian Federation and Turkmenistan, transport costs could be reduced by almost 30 per cent on the northern route and about 10 per cent on the southern route if transit fees and rents could be eliminated through policy measures.

Further potential for transport cost reduction lies with possible reductions of transit time, since transport efficiency and utilization of equipment will increase. Preferential treatment of Central Asian trucks in the countries of Central Asia, as intended by the Memorandum of Understanding for road transport in the United Nations Special Programme for the Economies of Central Asia (SPECA) region, and accompanying policy measures at the national level to ensure a reduction in rent seeking behaviour along transport routes, would open up the benefits of the northern route to all truck operators in Central Asia.

2. Rail transport routes

The length of railway routes which connect Central Asian countries with major seaports on the Persian Gulf, Mediterranean Sea, Black Sea, Baltic Sea and the Pacific ranges between 3,000 kilometres and 6,000 kilometres depending on origin or destination. Of the extensive railway network, a number of important corridors can be identified. These run between Central Asia and:

- Overland routes to Western Europe via the Russian Federation (container, bulk cargo);

Overland routes to Western Europe via the TRACECA routes (container, bulk cargo);

- Baltic ports through Kazakhstan, Russian Federation and Baltic states (container, bulk cargo);
- Turkey (and other Mediterranean and European ports) through Kazakhstan and Russian Federation via the port of Novorossiysk on the Black Sea (container);
- Pacific ports in China and Russian Far East (container).

The distances with respect to Almaty and Tashkent as points of reference are shown in table VI.4.

Table VI.4. Distances of railway routes between Central Asia and major seaports

<i>From</i>	<i>Routing</i>	<i>Distance (km)</i>
Almaty	– Drushba-Shanghai (Pacific)	5,370
	– Vladivostok (Pacific)	7,850
	– Novorossiysk (Black Sea)	4,630
	– Aktau-Baku-Poti (Black Sea)	4,600*
	– Riga (Baltic Sea)	5,350
	– Bandar Abbas (Persian Gulf)	4,800 [3770**]
	– Mersin (Mediterranean Sea)	5,421
Tashkent	– Drushba-Shanghai (Pacific)	6,320
	– Vladivostok (Pacific)	8,800
	– Novorossiysk (Black Sea)	3,950
	– Aktau-Baku-Poti (Black Sea)	3,900*
	– Riga (Baltic Sea)	5,500
	– Bandar Abbas (Persian Gulf)	3,800 [2770**]
	– Mersin (Mediterranean Sea)	4,421

Notes: * Include distance across Caspian Sea (450 km); ** After commissioning of Mashad-Bafq section in Islamic Republic of Iran.

The railway organizations in Central Asia in cooperation with the railways in China, Russian Federation and Ukraine transport substantial cargo volumes. For example, Kazakhstan railway transported 3.9 million tonnes of freight during the first 11 months of 2002, of which 7 per cent was reported to be containerized. Whether export of cotton and oil products, or import and transit of humanitarian goods, and containerized project cargo for newly established industries, rail transport is perceived as being efficient and achieving acceptable performance levels. For example, containerized shipments from the Republic of Korea to Uzbekistan were delivered from ports in China to the Kazakh border at

Drushba/Alashankou within seven days by block trains plus a further two days to reach the destination.

Rail transport competes with the road transport sector, where transport operators arrange unit shipments for the import of consumer goods using one or more covered wagons. In this regard, rail transport offers competitive alternatives in terms of price. For example, a consignment from Istanbul (Kapikule) to Almaty or Tashkent loaded in a CIS wagon with a capacity of 53 tonnes costs about US\$ 7,500, compared with a truck capacity of about 30 tonnes and reported transport costs of about US\$ 6,000. However, the transit time of conventional rail transport, which varies between 30 to 35 days for a single wagon, is relatively less efficient. Nevertheless, the reliability of rail transport is reported to be high, as the same sealed wagon can be used and transshipments between wagons at break-of-gauge points can be avoided. In cases where the cargo has been transferred between wagons of different gauge (along the land route from Turkey via Moldova, for example), pilferage has occurred.

Existing break-of-gauge points at Drushba/Alashankou (China/Kazakhstan), Sarakhs (Turkmenistan/Islamic Republic of Iran) and Brest (Belarus/Poland) are certainly operational hindrances, but do not cause exceptional delays compared with existing institutional barriers, which represent the main reasons for waiting times and delays at border crossing points. Reported transit times for railway transport routes between destinations in Central Asia and various ports vary between 9 and 35 days. Table VI.5 indicates transit times for container shipments on selected routes. Different types of railway operations for transport to Central Asia have achieved different transit speeds, with commercially organized block trains achieving speeds in excess of 700 kilometres per day. The potential for realizing transit times of 3-7 days for the routes indicated in table VI.6 could become a reality, once commercially organized block train operations become more widespread.

Table VI.5. Transit times for containerized shipments transported by rail

<i>Routing</i>	<i>Transit time</i>
Ports in China-Alashankou/Drushba-Tashkent (container block trains carrying Daewoo shipments)	9 days
Ports in China-Alashankou/Drushba-Almaty (regular railway transport)	15 – 23 days (12 – 18 days to China border, 2-3 days waiting time at the border)
Novorossiysk-Almaty (single container shipment)	14 days
Kapikule (Turkey)-Varna (Bulgaria)-Ferry-Ilichevsk (Russian Federation)-Kazakhstan-Tashkent/Uzbekistan (single covered CIS wagon or 5-6 covered CIS wagons)	30 – 35 days (single wagon) 20 – 25 days (5-6 wagons)
Tashkent/Uzbekistan-Turkmenistan-Islamic Republic of Iran-Istanbul/Turkey	Approximately 20 days
European country-Almaty/Kazakhstan	30 – 35 days
Brest/Poland-Belarus-Russian Federation-Kazakhstan border	15 – 16 days (+/- 5days)

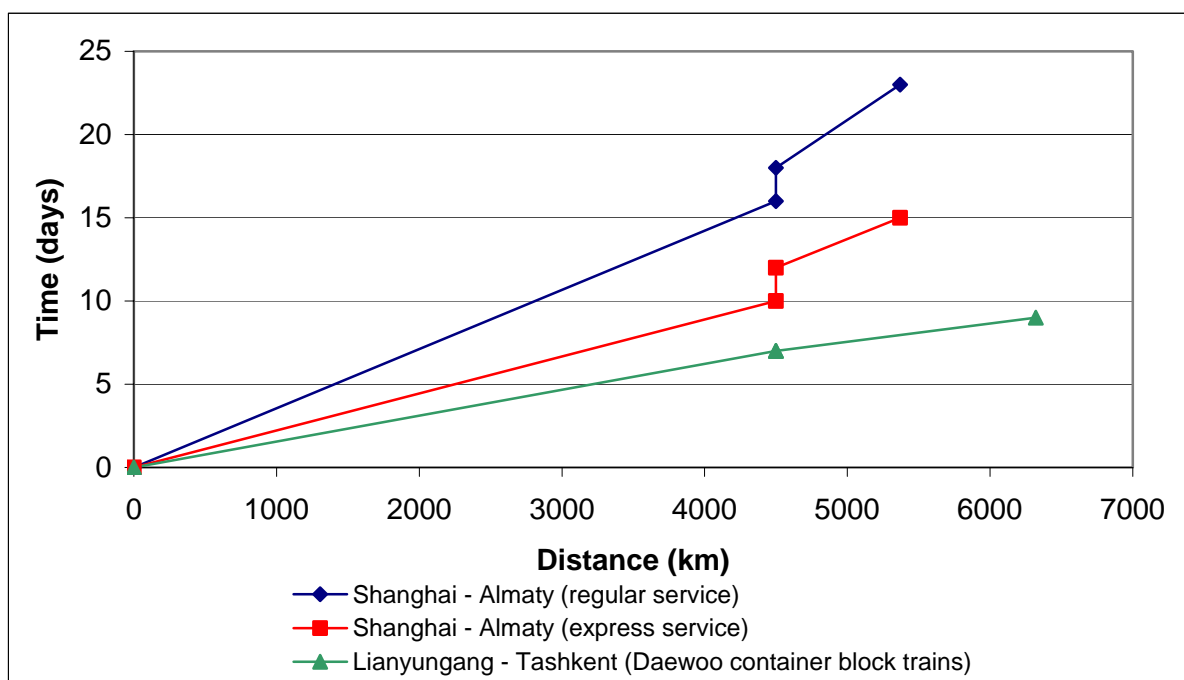
Source: Data collected by ESCAP staff.

(a) Ports in China-Central Asia routes

Minimum and maximum transit times, of 15 days and 23 days respectively, for regular and express rail services from ports in China to Kazakhstan are illustrated in figure VI.3. The significant variation of about eight days is clearly reflected in the figure, which shows that the transport operations of the railways in both China and Kazakhstan have a bearing on total transit time. Freight forwarders have reported that the transfer time at the border between China and Kazakhstan is 2-3 days, which includes break-of-gauge handling and customs documentation and proceedings. Meanwhile, data on the container block trains established for shipments from Daewoo Corporation in Republic of Korea via the Chinese port of Lianyungang, just north of Shanghai, reveal that a transit time of nine days is possible.³¹ This suggests that significant reductions in transit time can be achieved if a high level of priority is given to the transit service.

In terms of transportation costs, the quotation obtained for transporting a 20-foot container from Shanghai to Almaty via Drushba/Alashankou was US\$ 1,522, including port charges of approximately US\$180. It should be noted that this quotation also includes a portion for the transport of the empty container back to the port or depot of the shipping line.

Figure VI.3. Estimated cumulative transit times necessary for the import of containerized cargo by rail from ports in China to Central Asia



³¹ This figure does not show the time needed for the break-of-gauge at the border.

Table VI.6. Cumulative times for three types of railway services between ports of China and Central Asia

	<i>Distance (km)</i>	<i>Cum. distance (km)</i>	<i>Cum. time – regular (hours)</i>	<i>Cum. time - express (hours)</i>	<i>Cum. time – block (hours)</i>
Shanghai	0	0	0	0	0
Shanghai - Alashankou/Drushba	4 500	4 500	16	10	7
Alashankou/Drushba (border)		4 500	18	12	7
A. Alashankou/Drushba – Almaty	870	5 370	23	15	
B. Alashankou/Drushba – Tashkent	1 820	6 320			9

Source: Data collected by ESCAP staff. (Cum. = cumulative).

(b) Novorossiysk (Russian Federation) and Turkey-Central Asia routes

Two railway-based routes leading to Central Asia from the Mediterranean Sea were examined:

- Istanbul-Kazakhstan via the Black Sea port of Novorossiysk (Russian Federation);
- Kapikule (Turkey)-Uzbekistan via Varna (Bulgaria), Iyichevsk (Ukraine), Russian Federation and Kazakhstan.

A detailed breakdown of distance and time for each route is shown in Table VI.7. The route Istanbul – Novorossiysk – Almaty describes the movement of intermodal containers which can be loaded and unloaded directly between the feeder vessels and railways. In the case of the route Kapikule – Tashkent via Varna (Bulgaria), Iyichevsk (Ukraine), Russian Federation and Kazakshtan, only an overall estimate of both time and costs for a covered CIS-wagon were available. Both routes involve a ferry crossing (Istanbul – Novorossiysk and Varna – Iyichevsk), which require waiting times of up to a week in the case of the weekly feeder vessel service between Istanbul – Novorossiysk, and 3 –4 days in the case of the ferry between Varna and Ilyichevsk.

Using available data, a comparison of transit time is shown in Figure VI.4. The most significant factor explaining the variations of transit time within the route from Kapikule to Almaty via Varna was whether the container was moving in a single wagon shipment or in a multiple wagon shipment of 5-6 wagons. A considerable gain could be realized by consolidating the shipment in more than one wagon. The waiting time for the ferry in Varna (3-4 days) also added to the total time, making this route less attractive than the route from Istanbul to Almaty via Novorossiysk. If average train speeds could be raised to match the container block trains instituted for shipments from Daewoo, the transit time between Novorossiysk and Almaty could potentially be reduced to about seven days.

Figure VI.4. Estimated cumulative transit time required for the import of containerized cargo by rail from Istanbul to Almaty via Novorossiysk and via Varna

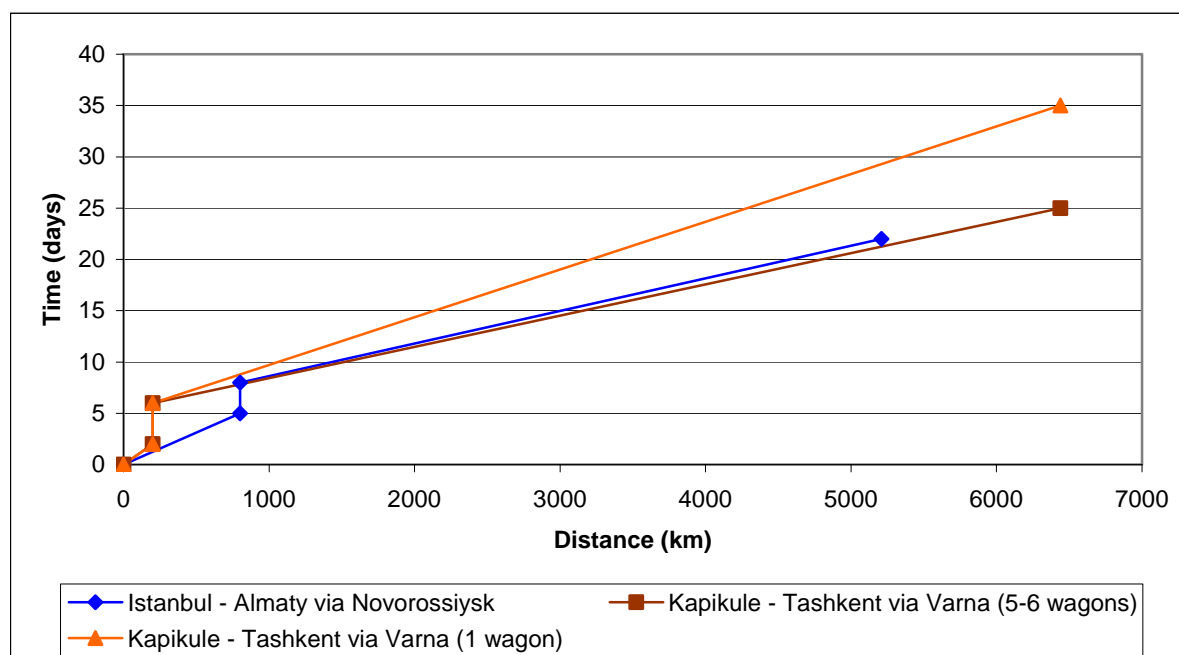


Table VI.7. Comparison of distances and times for Turkey – Central Asia railway route via Novorossiysk and via Varna

<i>Via Novorossiysk</i>	<i>Mode</i>	<i>Distance (km)</i>	<i>Cum. distance (km)</i>	<i>Time (days)</i>	<i>Cum. time (days)</i>
Istanbul		0	0	0	0
Istanbul- Novorossiysk (Russian Federation)	ferry	800	800	5	5
Novorossiysk			800	3	8
Novorossiysk – Volgograd – Astrakhan (Kazakhstan)	rail	1385	2185	14	22
Astrakhan – Almaty	rail	3025	5210		
<i>Via Varna</i>		<i>Distance (km)</i>	<i>Cum. distance (km)</i>	<i>Time (days) - 5-6 wagons</i>	<i>Time (days) - 1 wagon</i>
Kapikule (Turkey)		0	0	0	0
Kapikule-Varna (Bulgaria)	rail	200	200	↓	↓
Varna			200		
Varna – Iyichevsk (Ukraine)	ferry	400	600		
Iyichevsk – Almaty (via Russian Federation)	rail	3580	4180		
Almaty – Tashkent	rail	2260	6440	20-25	30-35

Source: Data collected by ESCAP staff. (Cum. = cumulative).

Due to differences in the type of unit being transported in each route, it is difficult to compare the costs. According to transport operators in Kazakhstan, the cost of transportation by rail between Istanbul and Almaty is in the US\$1,435 to US\$ 2,000 range for a 20-foot container, and is US\$ 2,385 for a 40-foot container. According to Uzbek transport operators, the cost of a wagon between Kapikule and Tashkent is in the range of US\$7,500 - \$8,000, depending on the commodity. Table VI.8 below shows the various quotes for costs of transport by rail and compares them with the cost of container transport from the Port of Mersin (Turkey) to Tashkent by road.³² It appears that the ferry/rail option of Istanbul – Novorossiysk – Almaty has a significant cost advantage over the other routes, even taking into account the fact that the quote is for up to Almaty. For both rail and road, the transport costs also include a portion for the empty return of the container to the depot. A reduction in costs would be possible if the import and export of container transport was better balanced.

Table VI.8. Comparison of costs between Turkey and Kazakhstan/Uzbekistan, by ferry/rail and road

<i>Route</i>	<i>Modes</i>	<i>Distance (km)</i>	<i>Cost (US\$)</i>
Istanbul – Novorossiysk – Volgograd – Astrakhan – Almaty	Ferry/rail	5 210	1 435 - 2 000 (20 foot container) 2 385 (40 foot container)
Kapikule – Varna – Iyichevsk (Ukraine) – Russian Federation – Kazakhstan – Tashkent (Uzbekistan)	Rail / ferry / rail	6 440	7 500 – 8 000 (per wagon, commodity based tariff)
Mersin – Bazargan (Is. Rep. of Iran) – Tehran – Sarakhs (Turkmenistan) – Farab – Alat (Uzbekistan) – Tashkent	Road	4 540	4 000 (TEU)

Source: Data collected by ESCAP staff.

³² Data for time taken for the road transport between Mersin (Turkey) and Tashkent was not available.

Appendix Table VI.1. Status of selected ESCAP member countries' accession to international conventions listed in Commission resolution 48/11, as of October 2002

<i>Country</i>	<i>Convention on Road Traffic (1968)</i>	<i>Convention on Road Signs and Signals (1968)</i>	<i>Customs Convention on the International Transport of Goods under Cover of TIR Carnets (1975)</i>	<i>Customs Convention on the Temporary Importation of Commercial Road Vehicles (1956)</i>	<i>Customs Convention on Containers (1972)</i>	<i>International Convention on the Harmonization of Frontier Controls of Goods (1982)</i>	<i>Convention on the Contract for the International Carriage of Goods by Road (CMR) (1956)</i>
Afghanistan			x	x			
Armenia			x			x	
Azerbaijan	x		x	x		x	
China					x		
Georgia	x	x	x		x	x	x
Islamic Rep. of Iran	x	x	x				x
Kazakhstan	x	x	x				x
Kyrgyzstan			x	x		x	x
Pakistan	x	x					
Russian Federation	x	x	x		x	x	x
Tajikistan	x	x	x				x
Turkey			x		x		x
Turkmenistan	x	x	x				x
Uzbekistan	x	x	x	x	x	x	x

CHAPTER VII. CASE STUDY OF LAO PEOPLE'S DEMOCRATIC REPUBLIC

A. Country profile

Lao People's Democratic Republic, with a surface area of 236,800 square kilometres, is the sole landlocked country in South-East Asia, sharing borders with Viet Nam to the east, Cambodia to the south, Thailand to the west, and Myanmar and China to the north. Rivers and mountains dominate much of the landscape and the Mekong River, which runs through the country from north to south, defining its border with Myanmar and partially with Thailand, is used for the transportation of goods and people and also for fishing. However, many falls and rapids impede the use of the river as a communications artery. Most of the country consists of plateau and mountains and only around 10 per cent of the land is arable, much of it in the Mekong river valley. The two main agricultural centres are around the two most populated cities, Vientiane and Savannakhet.

Lao People's Democratic Republic is also one of three least developed countries in South-East Asia. The country has limited infrastructure, with no railways, a rudimentary road system, poor external and internal telecommunications, and electricity available in only limited areas. Developing the transport infrastructure to provide improved access to markets and economic opportunities and integrate the rural population into the national economy is thought to be key to sustainable economic growth and poverty reduction in the future. The population of Lao People's Democratic Republic was estimated at 5.78 million in 2002 and its population density low. Nearly 80 per cent of the population are engaged in subsistence agriculture in rural areas, and around 45 per cent of the total population currently live below the national poverty line.

The country has, however, made good progress in poverty reduction. Although annual population growth has been around 2.3 per cent in recent years, GDP per capita has been growing at around 3.6 per cent per year. The rate of poverty reduction during the 1990s is estimated at around 4 per cent per annum, even though income inequality has risen somewhat during this period.³³

Lao People's Democratic Republic is endowed with vast natural forest and mineral resources and potential for hydroelectric power. Agriculture contributes over 50 per cent of GDP but much of the recent impetus from growth has come from manufacturing and services. With the introduction of the New Economic Mechanism (NEM) in 1986, the Government has been transforming the economy from a centrally planned to a market-oriented system. This has permitted a small private sector to emerge in industries such as garment manufacturing and tourism.

Lao People's Democratic Republic has traditionally been a closed economy where trade has been largely informal in nature along its borders with Thailand, Viet Nam and China. As a landlocked and least developed country, it is very dependent on imports of industrial products and other commodities from its neighbours, as well as the rest of the world. At the same time, its exports suffer from high transaction and transport costs, offsetting the country's relative competitiveness in terms of low labour costs and natural resource endowments. Large trade deficits have become chronic and in 2002 reached US\$

³³ ESCAP and United Nations Development Programme, *Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenges of Poverty Reduction* (United Nations publication, Sales No. E.03.II.F.29), pp. 40-46.

285 million. Although tourism receipts were increasing before the recent global uncertainties took a toll of the sector, the current account deficit has hovered in the region of 7-8 per cent of GDP annually.

Timber and electricity are the two leading exports of the country. Exports of timber and wood products, which used to dominate exports in the early-1990s, have had a share of about 25-30 per cent by value (in US dollars) of total exports recently. Exports of electricity have, on the other hand, seen phenomenal growth and now also account for approximately 30 per cent of total exports by value. Garment exports have also grown rapidly in the late 1990s as the European Union (EU) reinstated and further expanded preferential access to these exports from Lao People's Democratic Republic; garments now account for around 27 per cent of total exports. The Government would like to see greater export diversification, as the continued reliance on timber and wood products is environmentally unsustainable. The absence of normal trade relations with the United States of America has, however, limited the scope of this.³⁴ The other principal export commodity is coffee.

Data on imports into the Lao People's Democratic Republic are not always accurate owing to poor recording of the official and unofficial cross-border trade. However, it appears that imports have been gradually declining in recent years, in line with the decline in foreign direct investment in the hydropower sector that was mainly used to purchase imported capital goods. This is reflected in the large reductions in the imports of vehicles, machinery and construction equipment. The share of fuel in the total import bill has, however, been rising, in response to an increase in the cost of petroleum products and to the growing number of motor vehicles in the country. Cement, along with inputs for the garment industry and motorcycle parts are the other principal imports.

Lao People's Democratic Republic has reoriented its trade towards its Asian neighbours, following the collapse of the former Soviet Union. Thailand is the Lao People's Democratic Republic's largest trading partner, with a share averaging around 53 per cent of total imports and 14 per cent of total exports in terms of value (in US dollars) in recent years. Viet Nam is the second most important trading partner, and the destination of approximately 42 per cent of exports and the source of around 27 per cent of imports. In August 2002, following an agreement to facilitate trade, Viet Nam lowered tariffs by around 50 per cent on 27 items commonly imported from the Lao People's Democratic Republic, among which were agricultural and wood products, industrial goods and handicrafts. Imports from China have been increasing steadily, and the country now accounts for approximately 5 per cent of total imports into Lao People's Democratic Republic. Other Asian countries are also important sources for imports, but markets in the EU are the principal export destinations after Thailand and Viet Nam.

Lao People's Democratic Republic has had a history of controlling imports and import licenses are needed to bring goods into the country. Quotas have also been placed on certain imported commodities. More recently, import controls have been partially liberalized and made more consistent with international practices to improve access to imported inputs for domestic producers. Only six product groups were subject to quantitative restrictions in 2002 and two of these were due to be removed from the list by the end of the year. Commitments made under the Association of Southeast Asian Nations (ASEAN) Free Trade Area (AFTA) are being honoured, and Lao People's Democratic Republic is on track to fulfil

³⁴ The two countries initialled a bilateral trade agreement in 1997, which has yet to be ratified. Lao People's Democratic Republic is still considered to be a "non-market" economy by the United States.

these commitments by 2008. The agreement on closer economic cooperation between ASEAN and China, due to come into force in July 2003, is likely to increase trade between China and Lao People's Democratic Republic. Agricultural commodities included in the "early harvest" list will benefit from an early date. The process for the accession of Lao People's Democratic Republic to the World Trade Organization (WTO) has also begun. The Government hopes to leverage Lao People's Democratic Republic's strategic position in the centre of the Mekong region to make the country into a land bridge for its neighbours. To this end, it would like to promote transit trade, as well as re-exports, and to set up duty-free zones in anticipation of its greater integration into the subregional and regional economies.

These liberalization measures, together with reforms under the New Economic Mechanism, are likely to result in the implementation of normal trade relations with the United States of America in the near future. The overall outlook for exports, and trade in general, is likely to be positive, notwithstanding the scheduled phasing out of the Multifibre Arrangement in January 2005, which will affect garment exports.

B. Transit transport infrastructure and facilitation

1. Transit transport infrastructure

(a) Land transport

Road transportation is the dominant transport mode in Lao People's Democratic Republic, carrying an estimated 90 per cent of all traffic.³⁵ Nevertheless, around two fifths of the population still live more than six kilometres from the nearest road and more than 25 per cent of all district centres do not have year-round road access. Many roads have become run down and are often impassable during the rainy season. The Government and donors have given high priority to upgrading the road network during the last decade, in terms of length and spread as well as improved road quality. The total road network is now over 32,000 kilometres and some 53 per cent of national roads and 14 per cent of all roads are paved (table VII.1). However, maintenance of existing assets has not always received consistent attention.

Table VII.1. Lao People's Democratic Republic road network, 2002

<i>Surface type</i>	<i>Road class</i>			
	<i>National (km)</i>	<i>Provincial (km)</i>	<i>Rural (km)</i>	<i>Total (km)</i>
Paved	3 830	338	423	4 592
Gravel	2 118	3 947	3 595	9 660
Earth	1 212	4 666	12 493	18 371
Total	7 160	8 951	16 511	32 624

Source: Road and Bridge Department, MCTPC, Government of Lao People's Democratic Republic.

Initial investment has concentrated on rehabilitating and improving the arterial road network, establishing National Route 13 as the spine of the national road system running north-south from the border with China to the border with Cambodia, and also developing the critical east-west links with Thailand and Viet Nam. Developing the national road network further into provincial and rural areas is viewed as being the vital next step to ensure that the social and economic benefits of arterial road development are transmitted to these areas. It is

³⁵ Ministry of Communications, Transport, Posts and Construction, Government of the Lao People's Democratic Republic, "Country Report on Asian Highway Network Development", October 2001.

estimated that of the 220,500 vehicles (including motorcycles) operating in the country, 6 per cent are trucks and buses.³⁶

There has been a major reorientation in the routes used for the transit cargo of Lao People's Democratic Republic, in line with the reorientation in its trade. Before the introduction of the New Economic Mechanism, international trade was generally conducted with former communist countries and the only access to the sea was through Viet Nam. Now, it has been estimated that around 95 per cent of Lao People's Democratic Republic's transit trade moves through the ports in Thailand designated to handle this traffic, while the remainder moves through ports in Viet Nam. Thailand is considered to be the most convenient transit corridor, notwithstanding high inland freight charges, with the majority of traffic passing over the Friendship Bridge between Thanaleng, Lao People's Democratic Republic, and Nong Khai, Thailand, across the Mekong river. Under the bilateral agreement between Lao PDR and Thailand, there are a total of five international border points between Lao PDR and Thailand (see Section 2.a. below).

Despite access to the ports of Viet Nam, the difficult terrain and inadequate infrastructure, as well as a number of other procedural and administrative barriers, hamper transit traffic. Transit traffic to and from Lao People's Democratic Republic can pass through any port in Viet Nam, but capacity constraints limit the potential of these ports to handle the traffic. Unlike ports in Thailand, which attract some direct calls, ports in Viet Nam will continue to operate as feeder ports for the foreseeable future. As sailings from these ports are less frequent, and the procedures for using them more difficult, importers of goods from Lao People's Democratic Republic continue to nominate vessels sailing from Thai gateways to carry their cargo.

The Government of Lao People's Democratic Republic has expressed its interest in extending rail links from Vientiane to Nong Khai, thereby connecting directly to the railway network in Thailand. Towards this end, Thailand has provided some assistance for the detailed design of a 3.5-kilometre rail link from the middle of the Friendship Bridge to Thanaleng, while the Republic of Korea has granted technical assistance for the preliminary design of a 12.5-kilometre rail link from the Friendship Bridge to Vientiane. However, the project is still on hold for lack of funds. Meanwhile, under the ASEAN-backed Singapore-Kunming Rail Link Project, a spur line has been proposed linking Vientiane with the northern Vietnam city of Ha Tinh. The government of Vietnam has conducted a feasibility study on this link, but again, the actual realization of such a link will depend on the willingness of donors and neighbouring countries to finance it. In addition, the demand for a railway in Lao People's Democratic Republic is still considered to be relatively low.

(b) Inland water transport

The Mekong River flows for 1,865 kilometres along the length of Lao People's Democratic Republic from north to south and is an important means of transport, particularly for mountainous areas inaccessible by road. Trade is generally conducted along three stretches of the river: Huoixai-Luang Prabang; Luang Prabang-Vientiane; and Vientiane-Savannakhet. The Quadripartite Agreement on Commercial Navigation among China, Lao

³⁶ K. Bouaphanh and S. Kommasith, "Review of the Vientiane Plan of Action on Measures designed to Improve Transit Transport Systems of the Lao People's Democratic Republic", paper presented at the United Nations Conference on Trade and Development, Second Specific Consultative Meeting on the Transit Transport Systems of the Lao People's Democratic Republic, 15-16 January 2003, Vientiane (UNCTAD/LDC/Misc.88).

People's Democratic Republic, Myanmar and Thailand was signed in April 2000, and six common technical rules and regulations were signed by the four countries in March 2001. Commercial navigation on the Lancang-Mekong River was officially inaugurated in Jinghong, China, in June 2001.

With this agreement, and the zero tariff agreement signed between China and Thailand on fruit and vegetable imports (June 2003), it is expected that freight carried by IWT between these countries will increase significantly over the next few years. In particular, the route through the Golden Triangle area, where Lao PDR, Myanmar, Thailand and China share borders, should stimulate economic activity and transit transport volumes. To capture this opportunity, Lao PDR has set up a new economic development zone near this area, which consists of the construction of the Ban Mom Port, new urban area development and bank protection.

(c) *Air transport*

There are three international airports in Lao People's Democratic Republic, in Vientiane, Luang Prabang and Pakse, with Watty International Airport in Vientiane being the main entry point for international tourists. In addition, there are nine domestic airfields across the country. While air transport development has contributed significantly to the development of tourism in the country, it has yet to play a significant role in the movement of freight owing to high transport costs and low value of exports. Exporters use air transport in emergencies, when production delays could cause goods to miss shipping schedules. Higher value food products, mainly meat, are also moved by air.

(d) *Storage facilities*

Warehouses exist for cargo in transit for Lao People's Democratic Republic at both Bangkok and Danang ports, and at Thanaleng. However, there are no warehouse facilities at the border with Viet Nam. A feasibility study for the establishment of dry ports in Vientiane and Savannakhet was completed in 1995, but these have yet to be developed.

2. Legal framework

(a) *Bilateral agreements between Lao People's Democratic Republic and Thailand*

The movement of goods in transit between Thailand and Lao People's Democratic Republic is based on an Agreement on Transit Trade, signed in June 1978. The purpose of the Agreement was to facilitate the movement of exports and imports of either country in transit to and from a third country, in accordance with the Convention and Statute of Freedom of Transit, Barcelona, 20 April 1921.³⁷ Carriage of goods across the border can be done only through designated and licensed road hauliers, and the Agreement on Transit Trade provided the framework for both countries to select transport companies eligible to carry transit trade, with each country holding five licences. Of the five operators currently licensed for transit cargo, four are Thai companies and one is a Thai-Lao joint venture.³⁸ The Agreement also allows cargo in transit to be transferred to a dedicated warehouse following its arrival at

³⁷ Thailand is not a signatory to the Barcelona Convention, therefore not bound by its requirements.

³⁸ The volume of traffic does not justify the presence of more operators at present. However, current license holders can sub-contract or lease their licenses on an ad hoc basis.

Bangkok Port and the clearance of import procedures. This dedicated warehouse is in the vicinity of the port, opposite the Customs Department offices.

The Subsidiary Agreement on Road Transportation designates 10 official border-crossing points for the import and export of goods in transit.³⁹ However, cigarette and liquor products must transit through Bangkok Port and Nong Khai Customs House. There are five international checkpoints on the border between Thailand and Lao People's Democratic Republic, with Nong Khai-Thanaleng being the dominant border crossing point for Lao transit cargo.⁴⁰

A new transit agreement was negotiated in 1999 and the Subsidiary Agreement was signed in 2001. However, there are still some pending issues which need to be resolved before the agreement is implemented in full. The new transit agreement should benefit Lao exporters by eliminating the need for transshipment at Nong Khai or Mukdahan, reducing transit time by the one or two hours required for the physical transfer and the paperwork. It should also reduce the damage and theft of cargo that occurs during the transshipment, as the new agreement removes the need for customs checks for properly sealed cargo, as well as the unofficial payments made to Lao and Thai customs officials. The transit agreement will have less impact on Lao importers, who will still face delays and informal payments associated with clearing customs through Thanaleng.

The new agreement will also allow certified trucks from each country to deliver to or pick up cargo from the other. Thai trucks will be able to go into any province in Lao People's Democratic Republic, but a ceiling on the total number of operators will remain in force.

(b) Bilateral agreement between Lao People's Democratic Republic and Viet Nam

Transit trade between Lao People's Democratic Republic and Viet Nam can cross the border at eight designated points under a 1991 Agreement between the two countries.⁴¹ Under this bilateral protocol, all transit traffic through Viet Nam must go through these official border crossings. There are no restrictions on the choice of ports in Viet Nam for landing transit cargo bound for Lao People's Democratic Republic and, at present, this cargo passes through Danang, Haiphong, Ho Chi Minh and Vinh. An Agreement on the use of the Port of Vung Ang, near Vinh, to handle Lao transit cargo was signed by the Government of Lao People's Democratic Republic and the Government of Vietnam on 20 July 2001.

The bilateral protocol relates to the issue of transit permits or authorization for each shipment, but does not cover the issue of the movement of vehicles. A transit permit used to be necessary for all goods in transit through Viet Nam, as transit quotas governed the transport of such goods. Beginning in 1994, these quotas have been gradually removed and, at present, transit permits are needed only for certain restricted items such as dangerous

³⁹ These are Bangkok Port; Bangkok International Airport Customs Bureau; Laem Chabang Customs House (CH); Mab Ta Pud CH; Nong Khai CH; Nakorn Phanom CH; Mukdaharn CH; Phiboonmungsaharn CH; Chiangsan CH; Chiang Kong CH; Bueng Karn CH; Thalee CH; Thongchang CH. Ministry of Transport, Government of Thailand, "Thailand Country Paper", presented at the ESCAP Subregional Seminar on International Transit Transport under TIR System, Kunming, 23-25 September 2002.

⁴⁰ The checkpoints are Nong Khai-Thanaleng; Chiang Klang-Houeyxay; Nakhon Phanom-Takhek; Mukhdahan-Savannakhet; and Chongmek-Vangtao/Pakse.

⁴¹ The designated points are Sob Houn-Dae Chang on Route 42; Sob Bo-Pa Hang on Route 43; Ban Leung-Na Mao on Route 27; Keo Neua-Kao Cheo on Route 8; Nam Kan-Nam Kan on Route 7; Rung Khane-Cha Lo on Route 12; Lao Bao-Dansavanh on Route 9; and Yang Yeun-Bai on Route 18.

goods or ammunition. Vietnamese vehicles are permitted to enter the territory of Lao People's Democratic Republic provided that an international transport permit is granted to that vehicle by a Vietnamese authority, and vice versa. In 2001 and 2002, the number of trucks which were issued such permits by the Vietnamese authorities were 3211 and 2326 respectively.⁴²

(c) *Bilateral agreement between Lao People's Democratic Republic and Cambodia*

There is a transit agreement with Cambodia that has been signed but has yet to be implemented. The Government of Cambodia is hoping to construct roads connecting the port at Sihanoukville to Lao People's Democratic Republic within the next five years. These roads will offer more options to traders from Lao People's Democratic Republic in terms of transit transport routes and will also facilitate trade between the two countries.

(d) *ASEAN Agreements*

ASEAN Economic Ministers signed three agreements in December 1998 in Hanoi, Viet Nam, to hasten economic integration of ASEAN member countries, in line with the Hanoi Plan of Action. Two of these agreements, the Framework Agreement on Mutual Recognition Arrangements and the Framework Agreement on the Facilitation of Goods in Transit should simplify and speed-up trade among ASEAN members, thus supporting an expansion in this trade.

The key objectives of the agreement facilitating transit trade are:

- To facilitate transportation of goods in transit, to support the implementation of AFTA, and to further integrate the region's economies;
- To simplify and harmonize transport, trade and customs regulations and requirements for the purpose of facilitating goods in transit; and
- To establish an effective, efficient, integrated and harmonized transit transport system in ASEAN.

A number of other ASEAN agreements relating to international transport have also been signed, and two are currently under negotiation: the ASEAN Framework Agreement on the Facilitation of Inter-State Transport and the ASEAN Framework Agreement on Multimodal Transport. The latter Agreement will lay down broad principles on minimum standards for registration and liability limits of ASEAN multimodal transport operators.

(e) *Greater Mekong Subregion agreement*

Trade within the Greater Mekong Subregion (GMS) has benefited from improvements in infrastructure, particularly transport, as well as cooperation in trade facilitation. The GMS countries have chosen to focus on trade facilitation to establish an attractive trade environment quickly in the subregion so as to ensure that their investment in physical infrastructure has clear economic payoffs. The Agreement for the Facilitation of the Cross-

⁴² Hoc, Dang Thi, Deputy Director General, International Relations Department, Ministry of Transport, Government of Vietnam, "Report on Transit Transport Issues in Vietnam", 2003.

border Transport of Goods and People is to be implemented throughout the subregion by 2005. Lao People's Democratic Republic, Thailand and Viet Nam signed a trilateral agreement in 1999 to which Cambodia and China acceded in 2001 and 2002 respectively and Myanmar will accede in due course. The Asian Development Bank is providing on-going technical and financial assistance to this project, which is part of the overall programme of economic development and integration within the GMS.

The GMS agreement has been designed to harmonize individual bilateral agreements among the member countries. Priority is being given to customs cooperation as a means to ease trade barriers and single-stop customs inspection procedures are being pilot-tested at various checkpoints along economic corridors currently being developed in the subregion, including at Donsavanh-Lao Bao and Mukdahan-Savannakhet.

(f) *National legislation*

National legislation relating to transit transport includes road standards. Regulation 571/MCTPC passed in 1997 regulates the maximum permissible gross weight as 30 tonnes and maximum permissible axle load of vehicles at 8.2 tonnes. This regulation has been replaced by the Regulation 849/MCTPC passed on 5 March 2002 to increase the maximum axle load to 9.1 tonnes, in line with neighbouring countries.

Domestic legislation on the establishment of a freight forwarders association is relatively recent, and the Lao International Freight Forwarders Association, which comprises 12 members, was officially recognized in January 2003. The country is not as yet a member of the International Federation of Freight Forwarders Associations. Transport companies serving third country trade are mostly trucking companies that also provide some warehousing and consolidation. These companies arrange for the movement of cargo to and from Nong Khai and Mukdahan, where it is transhipped to and from Thai trucking companies.

3. Transit transport procedures

Lao People's Democratic Republic, like many other countries, has a number of parallel procedures relating to the trade, customs, and transport processes for transit cargo, although the Government is seeking to simplify some of these administrative procedures. According to customs officials, the procedure for customs clearance in Lao People's Democratic Republic consists of four steps:

- Document check for errors;
- Approval of documents and designation of staff for cargo inspection;
- Input of data into the statistics database; and
- Physical inspection of the goods.

If all the documents are in order, cargo can be cleared within half a day. The main source of delay stems from the long time needed for the granting of import and export licenses, estimated to be about two weeks for imports and 4-7 days for exports. The Ministry of Commerce has established single-window customs services at seven border checkpoints in order to facilitate trade and, depending on the commodity being exported, a

licence is generally no longer required for exports. However, little use is made of information and communications technology in customs work so far due to a lack of funding.

At present, very few containers are transported to and from Lao People's Democratic Republic owing to the high cost of repositioning empty boxes and the reluctance of the shipping lines to allow boxes to travel to Vientiane. Instead, cargo is stuffed and unstuffed in Bangkok or occasionally in Nong Khai. While the amount of cargo shipped in containers is expected to increase, the rate of growth will depend on the development of inland clearance depots or dry ports at the border crossing points of Nong Khai-Vientiane and Mukhdahan-Savannakhet. Container unstuffing services are also currently being offered in Vientiane after customs clearance at Thanaleng.

On the Thai side, the documents required for customs clearance are:

- Letter of authorization from the agent of the foreign consignee;
- Through bill of lading;
- Invoice; and
- Other documents stating that the port of embarkation and port of disembarkation are located overseas.

Customs clearance can be completed in half a day but, in the case of exports to third countries, the shipping line must receive goods at least 24 hours before the scheduled departure time of the vessel. In the case of a full container of goods in transit to a third country, customs officials will inspect the markings and numbers on the container, as well as the number of packages inside it. If everything is in accordance with the documents presented, a customs officer will seal the container doors before releasing it to its destination. Upon completion of the inspection, the documents will be returned to the transit transport operator or his agent, who will then submit them to customs officials at the port of disembarkation. Customs officials are expected to inform their counterparts at the port of disembarkation of the shipment in advance of its arrival.⁴³

In February 1999, customs officials on either side of the Friendship Bridge at Nong Khai and at Thanaleng agreed to harmonize working hours, and the border crossing is currently open every day from 0600 to 2200 hours. However, trucks can cross the border only until 1600 hours. A toll, of around US\$ 5 for a ten-wheel truck and US\$ 8 per trailer, is imposed on both sides of the bridge. A Lao customs official will escort trucks from the bridge to the customs warehouse at Thanaleng. The inspection of imported goods is at the discretion of the customs officers, with the decision being based on their previous knowledge of the importer as well as the nature of the goods being imported. Under legislation in the Lao People's Democratic Republic, the importer has ten days in which to clear the cargo without having to pay storage charges.

The majority of exports from Lao People's Democratic Republic destined for third countries are sold f.o.b. Bangkok, with the buyer nominating the vessel. In some cases, sales are ex-factory and the buyer nominates the freight forwarder. The goods are either

⁴³ Ministry of Transport, Government of Thailand, "Thailand Country Report", presented at the ESCAP Subregional Seminar on International Transit Transport under TIR System, Kunming, 23-25 September 2002.

transported directly from the Lao factory using Thai trucks or transshipped at Nong Khai or Mukdahan from Lao to Thai trucks. Imports from third countries destined for Lao People's Democratic Republic are generally purchased c.i.f. Bangkok and are initially stored in transit warehouses before being transported on Thai trucks to Nong Khai and then to the customs warehouse at Thanaleng. From there, the imports continue on Thai or Lao trucks to their destination but Thai trucks need a special permit to enter the Vientiane area.

4. Coordination of trade and transport facilitation

At the national level, the Government of Lao People's Democratic Republic established a National Transport Facilitation Committee in 1997. This Committee was renamed the National Transport Committee in January 2001 to conform with the Road Transport Law. All stakeholders are represented in this committee, which is charged with formulating transport and transit policies for the country. The Ministry of Commerce takes the lead role in the area of trade facilitation, along with the Customs Department, Ministry of Finance, and the Ministry of Communications, Transport, Post and Construction.

With regard to bilateral discussions, meetings are held between the transport officials of the Government of Lao People's Democratic Republic and the Governments of Thailand and Viet Nam at least twice a year to review the implementation of their respective agreements. Furthermore, under Article 29 of the GMS Agreement on the Facilitation of the Cross-Border Movement of Goods and People, contracting parties are to establish National Transport Facilitation Committees, which will serve as the national focal points for the Joint Committee that will administer the implementation of the Agreement. This mechanism is likely to contribute to closer cooperation on transit transport issues.

C. Analysis of selected corridors

Two corridors were selected for the application of the ESCAP time/cost methodology to exports, Vientiane to Bangkok Port and Vientiane to Danang Port. The findings are presented below.

(a) Exports via Bangkok Port

Table VII.2 and Figures VII.1. and 2. present the findings on transit times and costs associated with the export of garments from the Lao People's Democratic Republic, based on industry sources. This route carries the vast majority of all transit trade to and from Lao People's Democratic Republic. The garments are transported in cartons from the factory on either Lao or Thai trucks. They are inspected at Nong Khai, where they may be transshipped to Thai trucks for transportation to Bangkok Port where they are stuffed into containers to await shipping. The journey time can range from just under 18 hours to just over 31 hours. In terms of time, the border crossing between Thanaleng and Nong Khai, as well as the Nong Khai-Bangkok Port leg appear to be critical areas where delays may occur. In terms of cost, transportation between Vientiane and Thanaleng (where the Laotian transit warehouse is located) is the most expensive inland leg.

Table VII.2: Estimated time and costs required for the export of garments by road from Vientiane to Bangkok Port

Leg	Distance (km)	Cum. Dis. (km)	Transit time (hrs)				Cost per TEU (US\$)	Cum. Cost per TEU (US\$)
			Minimum	Cum. Min.	Maximum	Cum. Max.		
Vientiane-Thanaleng	15	15	0.5	0.5	1.0	1.0	116	116
Thanaleng-Nong Khai	5	20	0.17	5.67	0.25	11.25		
Border formalities			2.0		4.0			
Transshipment in Nong Khai			3.0		6.0			
Transit charge							20	221
Customs								
Lao People's Democratic Republic							13	234
Thailand							13	247
Nong Khai-Bangkok Port	650	670	12.0	17.67	20.0	31.25	306	553
Bangkok Port								
Container stevedorage							21	574
Container wharfage							22	596
Lift on/off charges							17	613
Terminal handling charges							68	681
Bill of lading charges							13	694
Customs							6	700
Total		670	17.67		31.25		700	

Source: Data collected by ESCAP staff. (Cum. = cumulative).

Figure VII.1. Estimated cumulative time required for the export of garments by road from Vientiane to Bangkok Port

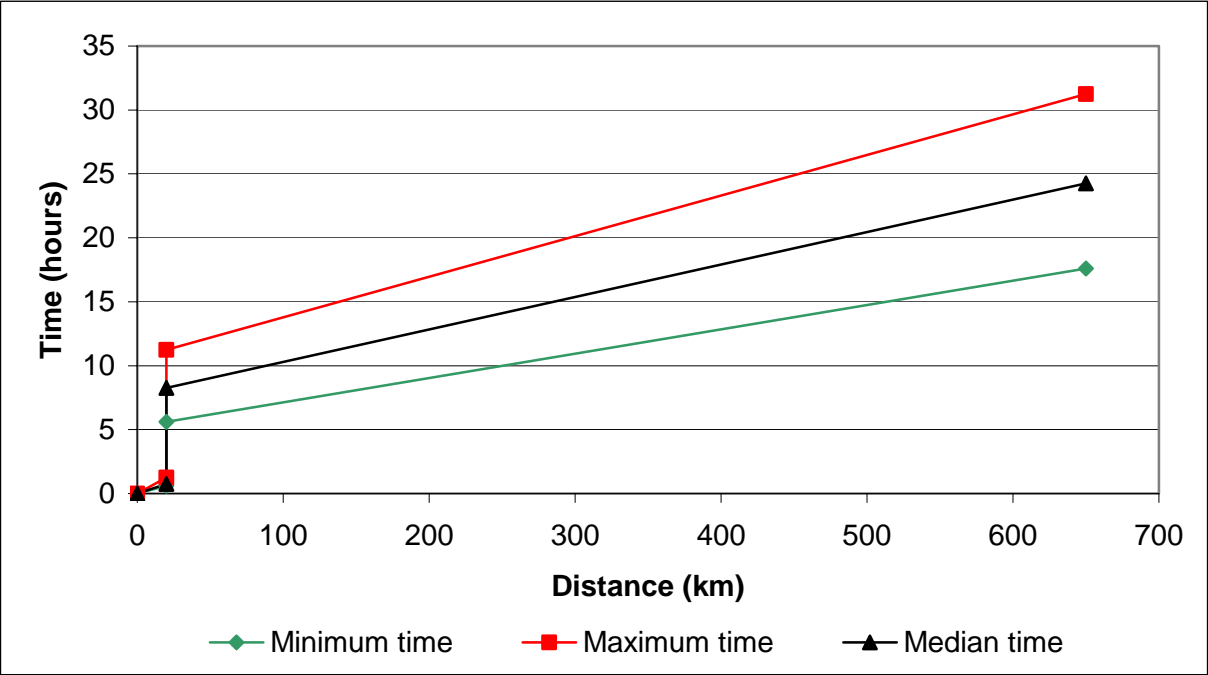
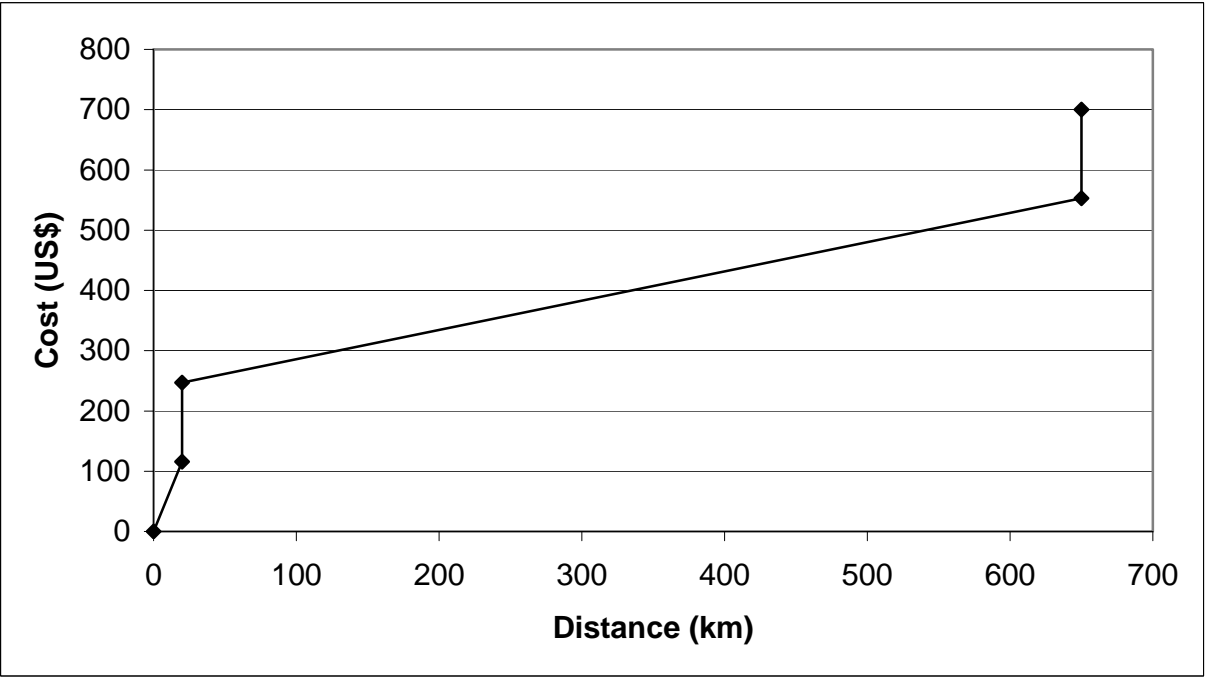


Figure VII.2. Estimated cumulative costs required for the export of garments by road from Vientiane to Bangkok Port* (Per TEU)



* Note: In this graph, Vientiane – Nong Khai is shown as one leg, i.e. Vientiane – Thanaleng and Thanaleng - Nong Khai.

The offering of financial incentives for speedier and accurate customs processing is said to increase reliability of this route. “Tea money” must also be paid at Bangkok port for port and Thai customs-related services. The breakdown of non-transport related costs involved in the movement of transit cargo between Vientiane and Bangkok Port, given in table VII.2, is illustrated in figures VII.3 and VII.4.

Figure VII.3. Breakdown of non-transport related costs at the Thanaleng-Nong Khai border crossing

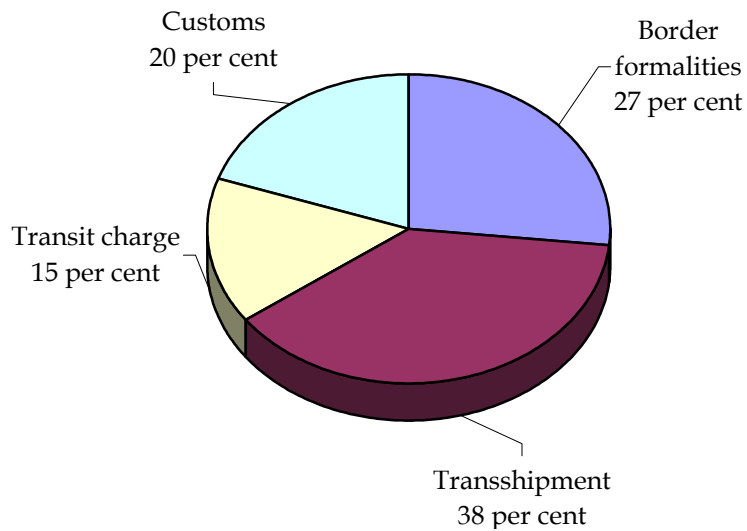
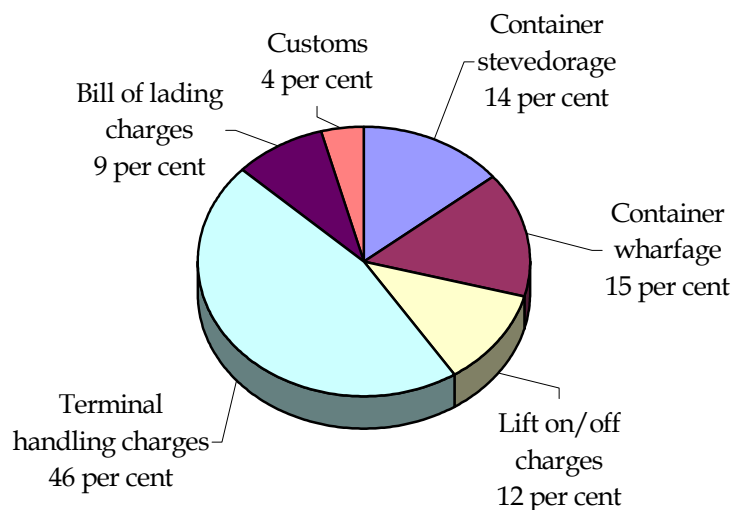


Figure VII.4. Breakdown of non-transport related costs at Bangkok Port



It is interesting to note that 38 per cent of the non-transport related costs incurred at the Thanaleng-Nong Khai border crossing relate to the transshipment of the cargo in Nong Khai. The lack of dedicated container-handling facilities renders this cost relatively high. Bridge crossing fees are marginal compared with other border crossing charges. Non-transport related costs levied at Bangkok Port are quite substantial, with terminal handling charges amounting to approximately 46 per cent of the total.

(b) Imports through Bangkok Port

Transit and transport costs associated with goods imported through Bangkok Port and in transit to Lao People's Democratic Republic are likely to be higher than those for exports, as these imports are subject to considerable delays, both at the port and at the border crossing point. After the goods are released from Bangkok Port they are moved to the dedicated warehouse for transit cargo where the goods will have to stay at least two or three days awaiting transit documents. During this period, additional storage costs are incurred. At the border crossing, goods can be stuck in Thanaleng for more than a month owing to problems associated with customs clearance.

It was estimated that shippers have to pay about US\$162 per TEU for imports, which is more expensive than for exports. A major problem with going through Bangkok Port is that Thai customs officials systematically open all containers in transit to check if the goods are in conformity with the packing list. This frequently leads to pilferage. In terms of the cost structure of transit transport for imports, trucking rates are higher than for exports, as trucks going to Thanaleng generally return to Thailand empty. These trucks can wait in Nong Khai for cargo but with the low export volumes of Lao People's Democratic Republic, the majority of trucks go back immediately. The cost per TEU from Bangkok Port to Thanaleng is estimated as being around US\$ 1,200-1,500 for transport alone, almost double the cost of transit transport for exports.

(c) Exports via Danang Port

While concrete steps are being taken to improve the route from Vientiane to Danang Port in Viet Nam, the route is still underutilized owing to a number of problems. One of these is the poor condition of the main east-west road, Route 9, in Lao People's Democratic Republic.⁴⁴ Another major problem is the perception that the reliability of this transit corridor is low, because of the existence of many unpredictable factors and continuing discrepancies between ministerial agencies' strategies relating to transit cargo. The findings relating to transit time and costs are shown in table VII.3 and plotted in figures VII.5 and VII.6.

Transit costs associated with the route through Danang Port are higher (US\$ 1,653.2 per TEU) as compared with the transit costs through Bangkok Port (US\$ 700) and the transit time is much longer (a maximum transit time of 75 hours compared with 31.25 hours). This is quite representative of trading routes where transit freight flows are marginal. Currently there are only four-scheduled feeder ships, with a capacity of 300-350 TEUs, calling at Danang Port per week from Singapore.

⁴⁴ The Lao Bao-Danang route has been selected by the Asian Development Bank as an economic corridor for northeast Thailand, southern Lao People's Democratic Republic and central Viet Nam, with infrastructure investment and the upgrading of the port facilities at Danang.

Table VII.3. Estimated time and costs required for the export of garments by road from Vientiane to Danang Port

<i>Leg</i>	<i>Distance (km)</i>	<i>Cum. Distance (km)</i>	<i>Time (hours)</i>	<i>Cum. time (hours)</i>	<i>Cost per TEU (US\$)</i>	<i>Cum. Cost per TEU (US\$)</i>
Vientiane-Savannakhet	469	469	24	24	670.00	670.00
Savannakhet-Dansavanh	263	732	24	48	370.00	1040.00
Dansavanh-Lao Bao	1	733	1-3	51		
Document charges	-				100.00	1140.00
Lao Bao-Danang Port	327	1060	24	75	460.00	1600.00
Danang Port charges						
Handling	-				50.00	
Storage	-				3.20	1653.20
Total	1 060		73-75		1 653.20	

Source: Data collected by ESCAP staff. (Cum. = cumulative).

An appraisal of the inland leg from Vientiane to Danang Port shows that border crossing costs represent around 6 per cent of the total inland transport cost. The trucking rate for this route is estimated at US\$ 1.4 per TEU per kilometre. A breakdown of non-transport related costs associated with this route shows that some 65% of the non-transport charges is due to document charges at the border, while handling and storage charges account for about 33% and 2% of the total non-transport charges respectively.

(d) Imports through Danang Port

Cost and time estimates for transit transport through Viet Nam to Lao People's Democratic Republic appear to be the same for both imports and exports. However, the transit time for imports between Danang Port and Vientiane is subject to unpredictable delays, which can occasionally be as long as a month. Delays tend to occur at the port itself and are related to the time needed for the arrival of all transit documents and permits. The border crossing at Lao Bao-Dansavanh is not seen to be a problem, as most of the formalities will have been completed at Danang Port for transit cargo. The reliability of this corridor is, however, considered to be quite low, with the main problems being the poor infrastructure, bureaucracy and pilferage. In general, this route is not used by private importers and is used primarily for Government cargo.

Figure VII.5. Estimated cumulative time required for the export of garments by road from Vientiane to Danang Port

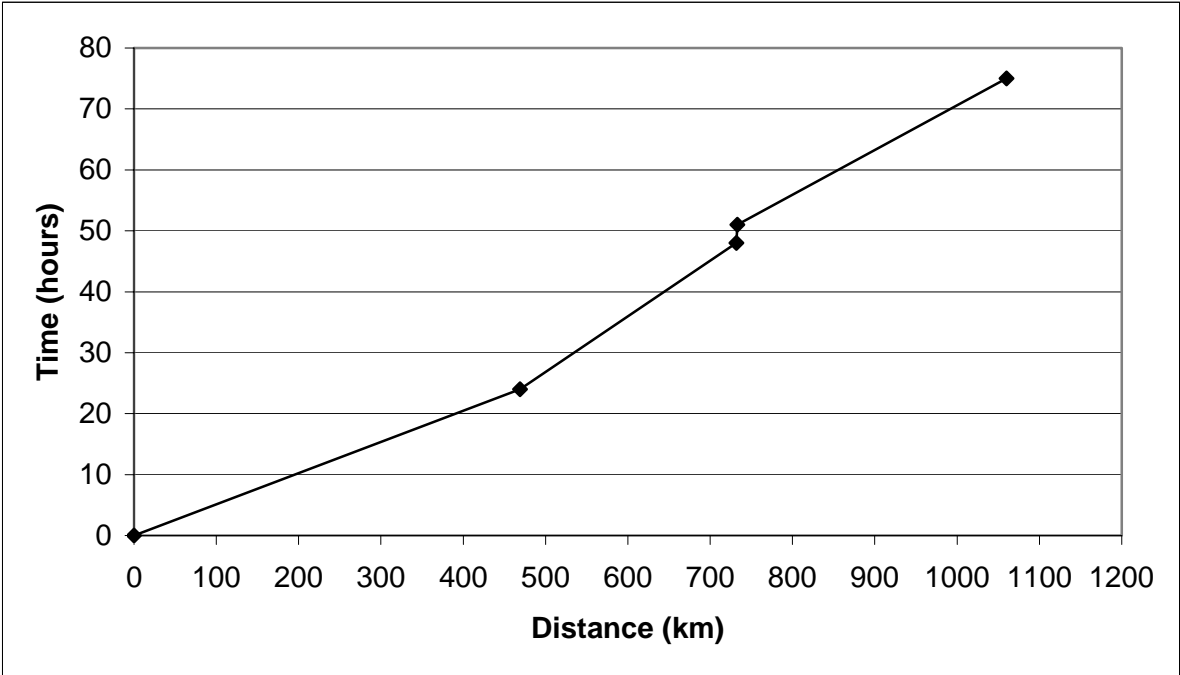
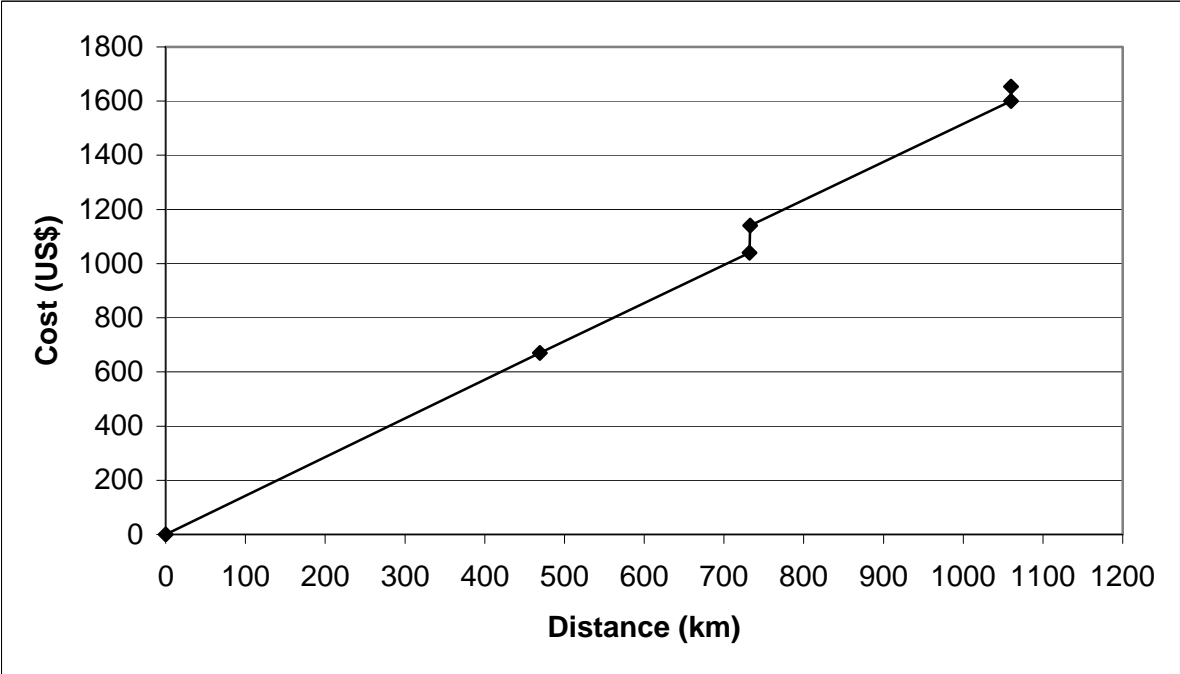


Figure VII.6. Estimated cumulative costs required for the export of garments by road from Vientiane to Danang Port (Per TEU)



CHAPTER VIII. CASE STUDY OF MONGOLIA

A. Country profile

Mongolia is one of the largest landlocked countries in the world, with a territory extending over 1.6 million square kilometres on a plateau 1,580 metres above sea level. It is bordered by China on three sides, to the east, south and west and by the Russian Federation to the north. The land is principally steppe and semi-desert, with the Gobi desert to the southeast and mountains to the west and southwest. Over 80 per cent of the territory is pastureland and 8.0 per cent is forest. The country is rich in a variety of mineral resources and has substantial livestock herds, ranking first in per capita ownership of livestock in the world. However, agricultural activity is restricted by the severity of the continental climate, the shortness of the growing season, the scarcity of water and poor land quality due to desertification and overgrazing.

Mongolia is a sparsely populated country, with a population of around 2.6 million in 1999, giving it a population density of less than 2 persons per square kilometre. However, around 63 per cent of the population live in urban areas, while 15 per cent of the rural population still live in semi-nomadic conditions. Migration to the cities from rural areas continues to be a significant trend. Infrastructure, including transport, is poor. The few roads are badly maintained, and Mongolians remain heavily dependent on the railway for transportation. Most roads are either gravel or earth, becoming impassable in winter and during rains and floods. Pastureland is frequently destroyed by the creation of new earth track roads as existing roads become blocked, occasionally by vehicles in transit. As population growth and rural-urban migration continue, the transportation infrastructure is currently struggling to handle the increase in cargo and passenger traffic. The construction of new roads and the maintenance of existing ones are being given high priority by both the Government and donors, as greater integration into the national economy and improved access to economic opportunities are considered key to poverty reduction and human development, particularly in rural areas.

Mongolia, which used to be received financial and technical assistance from the former Soviet Union, has embarked on economic reforms to transform itself from a centrally planned to a market economy. In the aftermath of the collapse of the Soviet Union, GDP per capita contracted at the rate of 4 per cent annually between 1990 and 1995. Economic growth replaced contraction starting in 1994, and notwithstanding annual population growth of 1.6 per cent, GDP per capita grew at 1.6 per cent per annum between 1996 and 2000.⁴⁵ The country remains poor, however, with some 35 per cent of the population below the national poverty line and 23 per cent in extreme poverty. Income inequality also appears to be widening, in particular between the rural and urban populations.⁴⁶

Economic growth has been constrained by the lack of diversification in the economy, which remains dependent on mineral resources and animal husbandry. Although agricultural production accounts for one third of total output in the economy, Mongolia is not self-sufficient in food, and agricultural activities are highly vulnerable to severe weather

⁴⁵ ESCAP and the United Nations Development Programme, *Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenges of Poverty Reduction* (United Nations publication, Sales No. E.03.II.F.29).

⁴⁶ ESCAP, *Economic and Social Survey of Asia and the Pacific 2003* (United Nations publication, Sales No. E.03.II.F.II).

conditions and other shocks. The harsh winters of 2000 and 2001 and a major drought caused large losses in animal herds and a significant decline in the output of the livestock sector. On a brighter note, the services sector has been contributing a greater share to overall GDP, and manufacturing, in particular textiles and food processing, has been expanding at double-digit rates recently.

Compared to other countries in transition, Mongolia has achieved tangible results in trade liberalization. Mongolia's accession to the WTO in January 1997 highlights its relative success in pursuing economic reforms and developing a new trade regime in line with international trading principles. However, because of the undiversified nature of its output, Mongolia has difficulty in expanding exports and has to rely on imports from neighbouring countries and the rest of the world to meet the needs of its citizens. The ratio of exports and imports of goods and services to GDP has been around 65 per cent and 81 per cent respectively in recent years. Trade deficits have been chronic and, notwithstanding increased revenues from tourism and other invisible earnings from, for example, the granting of over flight rights, the current account deficit has been around 15 per cent of GDP on average in recent years.

Mongolia's export receipts depend heavily on global demand conditions and the terms of trade commanded by its principal export commodities, copper, gold, and cashmere products, as well as hides and skins, meat and other animal products. The outlook for copper exports has worsened markedly as the global slowdown in high-tech industries depressed world copper prices. There are signs that this trend may be reversing, and the increase in the price of gold is another encouraging development. The demand for finished cashmere in major industrial countries has, however, been slowing. Mongolia and China have agreed to set up a joint Cashmere Council for research into the quality and pricing of cashmere, as most of the raw cashmere exported by Mongolia goes to China officially and unofficially. Exports of meat products face periodic import bans in neighbouring countries owing to animal health problems. However, there have been substantial increases in meat exports to markets in Asia and the Middle East, as well as to the Russian Federation, in recent years and this sector has strong potential for future growth.

Imports into Mongolia have been growing very rapidly, owing to higher imports of food, textiles, machinery and equipment and spare parts. Oil and oil products are other major imports and the recent increase in the price of oil has caused these imports to balloon.

Like other landlocked countries, Mongolia's most important trading partners are its two giant neighbours, the Russian Federation and China, although the United States of America has recently become a major export market. China's share of exports from Mongolia has been around 48 per cent by value (in US dollars) and its share of imports into that country has been around 20 per cent in recent years. The Russian Federation receives a negligible share of Mongolia's exports but has been the origin of around 34 per cent of Mongolia's imports on average in the past few years. The United States of America has seen its share in Mongolia's exports increase from around 6-8 per cent in the mid-1990s to around 30 per cent more recently. Republic of Korea and Japan are other major import sources.

B. Transit transport infrastructure and facilitation

1. Transit transport infrastructure

The transport network in Mongolia consists of four subsectors, road, railway, air and water. Conditions specific to the country have predetermined that the first two play dominant roles. Air transport is, however, vital for access to the remote regions and a small fleet of cargo boats operates on some lakes and rivers. In 2001, of the 98.5 million passengers carried by the transport network in Mongolia, 96 per cent travelled by road and just under 4 per cent by railway.⁴⁷ Air transport had a negligible share. However, in terms of passenger turnover⁴⁸, the share of road transport was only 19 per cent in 2001, while the shares of railway and air transport were 54 per cent and 27 per cent respectively. Not surprisingly, passengers travelling longer distances choose the latter two modes of transport, given the sheer size of the country and the poor state of the road network. In terms of total freight carried in 2001, 86 per cent was carried by the railway and nearly 14 per cent by road. The share of the railway sector increases to 97 per cent when freight turnover⁴⁹ is considered, with the road transport share falling to only 2 per cent.

Thus, the railway appears to be the backbone of Mongolia's transport network, with roads being used by people living in and around conurbations. However, there is no doubt that if there was even a rudimentary network of properly maintained roads of international standard, the flexibility afforded by road transport would attract more traffic. The total number of registered vehicles in 2001 was just over 93,000 and, of these, 57 per cent were passenger automobiles and 27 per cent were trucks.

(a) Road transport

The total road network in Mongolia is 49,250 kilometres in length, with 11,063 kilometres of state roads and 38,187 kilometres of local roads.⁵⁰ Of the total state road network, 13 per cent are paved, while 30 per cent are gravel or formed earth roads and 57 per cent are earth tracks.⁵¹ There are few paved roads beyond the vicinity of the major cities.

The relatively poor road network limits road transport within Mongolia. The road transport network is currently being refurbished with external assistance and with the construction of an east-west arterial road that began in 2001. This east-west arterial road and five other vertical arterial roads are part of the Millennium Road Project approved by the Mongolian Parliament in January 2001 and supported by donors. The purpose of this project is not only to improve road transport in Mongolia but also to construct additional road links with Russian Federation and China.

⁴⁷ From the web site of the National Statistical Office, Mongolia, accessible at http://www.nso.mn/yearbook/2001/sect_12.pdf (26 June 2003).

⁴⁸ Defined as the number of passengers carried multiplied by the distance travelled.

⁴⁹ Defined as freight carried multiplied by the distance travelled.

⁵⁰ State roads connect Ulaanbaatar with the provincial centres, important towns and border crossings designated as such by Government resolutions. Local roads connect provincial centres with other provincial centres.

⁵¹ See World Bank Country Brief on Mongolia, available at <http://www.worldbank.org/eap/eap.nsf/Countries/Mongolia/075015C0507B45BD85256C7000653113?OpenDocument> (26 June 2003).

(b) *Rail transport*

Mongolian imports and exports are primarily carried by rail, both within the country and to and from neighbouring countries. The total length of railway is just over 1,800 kilometres, most of it consisting of the trunk line between Sukhbaatar on the Russian border, through Ulaanbaatar, to Zamiin Uud on the Chinese border, a distance of around 1,400 kilometres. It also serves the three largest agglomerations in Mongolia, namely Ulaanbaatar, Darkhan and Erdenet. It is in reasonably good condition and is a transit route for cargo moving between China and the Russian Federation via Mongolia. Mongolian Railway is a Mongolian-Russian joint venture, owned 50 per cent by each side. Railroad tracks in Mongolia and the Russian Federation are broad gauge (1,520-mm) while Chinese rail lines use the standard gauge (1,435-mm). There have been some discussions on overcoming break-of-gauge problems between the three countries.

Rail carries the bulk of Mongolian cargo tonnage, and spur rail lines connect to major coalmines and the copper mine at Erdenet. Of the 10.1 million tons of freight carried by railway in 2001, 62 per cent was local freight and 38 per cent international, of which some 56 per cent is estimated to have been transit traffic. Wood and wood products, crude oil and fertilizer are the most important goods in transit between the Russian Federation and China carried by Mongolian Railway.⁵² Through traffic between China and Russia has been estimated at 50,000 tons per month but more detailed data are lacking.

Zamiin Uud is linked with Erenhot on the Chinese side of the border and from there to the port of Tianjin, a distance of some 995 kilometers. The route through Russian Federation passes from Sukhbaatar to Naushkhi on the Russian side of the border and on to ports on the Sea of Japan, the Baltic Sea and the Black Sea. The distances through Russian Federation are very much longer; for example, the distance from Naushkhi to Vanino is 3,845 kilometres and to Nakhodka is 5,600 kilometres. Both these ports are on the Sea of Japan.

(c) *Air transportation*

The air transport system of Mongolia is relatively well developed for both domestic and international passenger air travel but airfreight has not had a significant role in transit traffic so far and the airfreight option was not examined in this case study. Today, however, airfreight is growing in importance and if Mongolia is able to diversify its exports to include high-value, low-bulk items, air transport will become not only feasible but also essential. Mongolia has direct flights to Beijing and Hot Hot in China; Berlin and Frankfurt in Germany; Seoul in the Republic of Korea; and Moscow and Irkutsk in Russian Federation.

2. Legal framework

(a) *Bilateral agreements*

Mongolia has a transit transport agreement with the Russian Federation, dating from 1992, and a road transport agreement, which was signed in February 1996 and permits trucks from one country to transport goods into the other. It also has transit and road transport agreements with China, also dating from 1991. In practice, however, trucks from Mongolia are prohibited from entering China, while Chinese trucks are permitted to travel up to the nearest Mongolian border town.

⁵² ESCAP, Report on advisory services to Mongolia on land transport development policy, 5-17 December 2002.

Policy makers from Mongolia have tended to focus on transit transport by rail from the Russian Federation via Mongolia to China and vice-versa. However, they have continued to see Mongolia as a “landlocked” country, whose geographic situation is an impediment to efficient logistics, rather than as being “land-linked” and potentially able to develop an integrated logistics platform that could serve its own and its neighbours’ logistics needs efficiently. Some consideration has been given to access to European markets for exports from Mongolia by rail transport, but issues related to seaport access and its implications have not yet been given the attention they deserve.

(b) *Trilateral agreement*

China, Mongolia and the Russian Federation are currently negotiating a proposed draft framework agreement on transit transport, with the United Nations Conference on Trade and Development (UNCTAD) acting as a facilitator.⁵³ The agreement will provide a legal framework for efficient transit systems to and through Mongolia. In particular, it will guarantee freedom of transit by all modes of transport and promote simplification, harmonization and standardization of customs, administrative procedures and documentation.

The Mongolian Ministry of Foreign Affairs has taken the lead in the negotiations on the draft framework agreement but the involvement of the Ministry of Infrastructure is considered to be critical to their success. The draft framework agreement is not of itself problematic and most major issues have been settled during the negotiating meetings held in Irkutsk, Russian Federation and Ulaanbaatar.⁵⁴ However, differences in the interpretation of some clauses remain and major hurdles, such as the negotiation of appendices on issues such as border controls, still lie ahead.

(c) *Multilateral conventions*

Mongolia is a signatory to the Convention on Transit Trade of Land-locked States, signed on 8 July 1965 in New York. This Convention recognizes that the transit trade of landlocked countries, comprising one fifth of the nations of the world, is of the utmost importance to economic cooperation and the expansion of international trade. The difficulty for Mongolia is that China has not acceded to this convention and is, therefore, not bound by its principles.

Mongolia acceded to the Customs Convention on the International Transport of Goods under Cover of TIR Carnets on 1 October 2002.⁵⁵ This Convention entered into force in Mongolia on 1 April 2003. The International Road Transport Union is in the process of authorizing the National Road Transport Association of Mongolia as an issuing association and a guaranteeing association for the purposes of the Mongolian customs authorities. If the authorization process is not delayed, the TIR procedure can be expected to be used in

⁵³ UNCTAD, “Draft transit framework agreement between the People’s Republic of China, Mongolia and the Russian Federation” (UNCTAD/LDC/Misc.47/Add.3).

⁵⁴ UNCTAD, “Report of the third negotiating meeting on the draft transit framework agreement between the People’s Republic of China, Mongolia and the Russian Federation” (UNCTAD/LDC/Misc.81).

⁵⁵ The Customs Convention on the International Transport of Goods under Cover of TIR Carnets was elaborated under the aegis of the United Nations Economic Commission for Europe (UNECE).

Mongolia as from June 2003. Russia is also a member of the TIR Convention⁵⁶ but not China.

3. Coordination of trade and transport facilitation

Discussions are currently ongoing within the Government of Mongolia on the establishment of a national transport and transit committee to deal with all the issues involved in the coordination of trade and transport facilitation.

C. Analysis of selected corridors

The only Chinese seaport currently used for Mongolian transit traffic is the new port of Xingang, operated by the Port of Tianjin Authority. This is a large, well equipped and well run port with plans for phased expansion through 2010. Mongolia can use at least six Russian seaports: Vladivostok, Nakhodka, Vanino and Vostochny on the Sea of Japan; St.Petersburg on the Baltic Sea; and Novorossisk on the Black Sea. All these ports have adequate facilities and rail connections with the ports are also adequate.

The analysis in this report has focused on four alternative transit corridors: via Tianjin in China, by rail or by a combination of road and rail; via Vladivostok/Vostochny in the Russian Federation, by rail; and via Belarus, an overland rail route to Western Europe (table VIII.1). Due to the limited time available for the conduct of the study, transit routes via St Petersburg and Novorossik have not been included. The main emphasis was on import transit routes, with some reference to export routes where data was available.

Table VIII.1. Selected routes for imports in transit to Ulaanbaatar, Mongolia

<i>Route</i>	<i>Origin</i>	<i>Mode</i>	<i>Border crossing</i>	<i>Onward mode</i>
1	Tianjin Port (China)	Rail	Erenhot-Zamiin Uud	Rail
2	Tianjin Port (China)	Road	Erenhot-Zamiin Uud	Rail
3	Vladivostok/Vostochny Port (Russian Federation)	Rail	Naushkhi-Sukhbaatar	Rail
4	Brest dry port (Belarus)	Rail	Naushkhi-Sukhbaatar	Rail

(a) *Route 1: Tianjin Port-Ulaanbaatar, all rail*

The estimated time and costs associated with this route are shown in table VIII.2 and plotted in figures VIII.1. and VIII.2. The major part of Mongolian transit traffic is carried by rail through this corridor. Tianjin Port is the closest seaport to Mongolia and is the designated port for goods in transit to Mongolia according to the transit agreement between

⁵⁶ Russia was temporarily suspended from the TIR convention in November 2002. However, on 17 December 2002, the International Road Transport Union and the customs authorities of the Russian Federation signed a cooperation agreement that will allow the continuation of the guarantee coverage of TIR transport operations in the Russian Federation. As a result of the cooperation agreement, the suspension has been cancelled and Russian as well as international transport operators are able to continue to carry out TIR transport operations in the Russian Federation. Russian transport operators are also allowed to continue to perform TIR transport operations in other countries.

China and Mongolia. The total distance from Ulaanbaatar to the port of Tianjin is estimated at around 1,700 kilometres. This transit corridor has been in operation since 11 September 1989. Transit traffic through this corridor has fluctuated greatly since its opening, but the average annual rate of growth in this traffic between 1991 and 2001 is estimated at 27 per cent. In 2001, a total of 15,732 TEU transited via Tianjin port to and from Ulaanbaatar.⁵⁷ Statistics gathered from industry sources suggest that the volume of imported containers was within the 4,800-6,000 TEU range in 2001.

Table VIII.2. Estimated time and costs required for the import of containerized cargo by rail from Tainjin Port to Ulaanbaatar (Per TEU)

Leg	Mode	Distance (km)	Cum. distance (km)	Time (days)				Cost (US\$)*	Cum. cost (US\$)
				Min.	Cum. Min.	Max.	Cum. Max.		
Port charges in Tianjin								80	80
Tianjin-Erenhot	rail	990	990	1	1	3	3	500	580
Document charges								13	
Transit charges					2		8	30	873
Erenhot-Zamiin Uud (border crossing)		14	1 004	1		5		250	
Zamiin Uud-Ulaanbaatar	rail	710	1 714	1	3	3	11	150	1 023
Ulaanbaatar-warehouse	road	10	1 724	0.5	3.5	1	12	20	1 043
Total		1 724		3.5		12			
Return of empty container: Warehouse-Ulaanbaatar	road							20	
Ulaanbaatar-Zamiin Uud	rail		3 418	n/a	n/a	n/a	n/a	70	1 480
Zamiin Uud-Erenhot (border crossing)								117	
Erenhot-Tianjin Port	rail							230	
Total (incl. return)		3 418						1 480	

* Cost refers to a container owned by the carrier. Source: Data collected by ESCAP staff. (Cum. = cumulative).

Export transit traffic via China is minimal compared to import traffic. While containerized imports are estimated to account for 80 per cent of total imports, containerized exports are only some 3-5 per cent of total exports. The containerization of exports has been and the principal exports shipped using this method are garments, crude wool, animal skins and cashmere. However, for the time being, containers used to ship imports to Ulaanbaatar generally return empty to Tianjin Port.

The International Freight Forwarding Centre (IFFC) is the forwarding arm of Mongolian Railway that arranges transit rail services. The IFFC is 100 per cent owned by Mongolian railway but managed independently. The IFFC recently introduced a block train service between Tianjin Port and Ulaanbaatar that has been in operation since 28 May 2002. The "Friendship Express" is provided twice weekly with a guaranteed transit time of just over

⁵⁷ *Future Development of Sea Transportation Corridors in North East Asia*, paper presented at the 3rd Northeast Asia Port Director-General Meeting, September 12-18, 2002, China.

three days. Additional services may be introduced when container traffic increases. For goods not able to be transported on the Friendship Express, the average transit time is seven days for exports or imports, with an average of three days of rail transportation in each country and one day for the border crossing between Erenhot and Zamiin Uud, including transloading.

Figure VIII.1. Estimated cumulative time required for the import of containerized cargo by rail from Tianjin Port to Ulaanbaatar (up to warehouse)

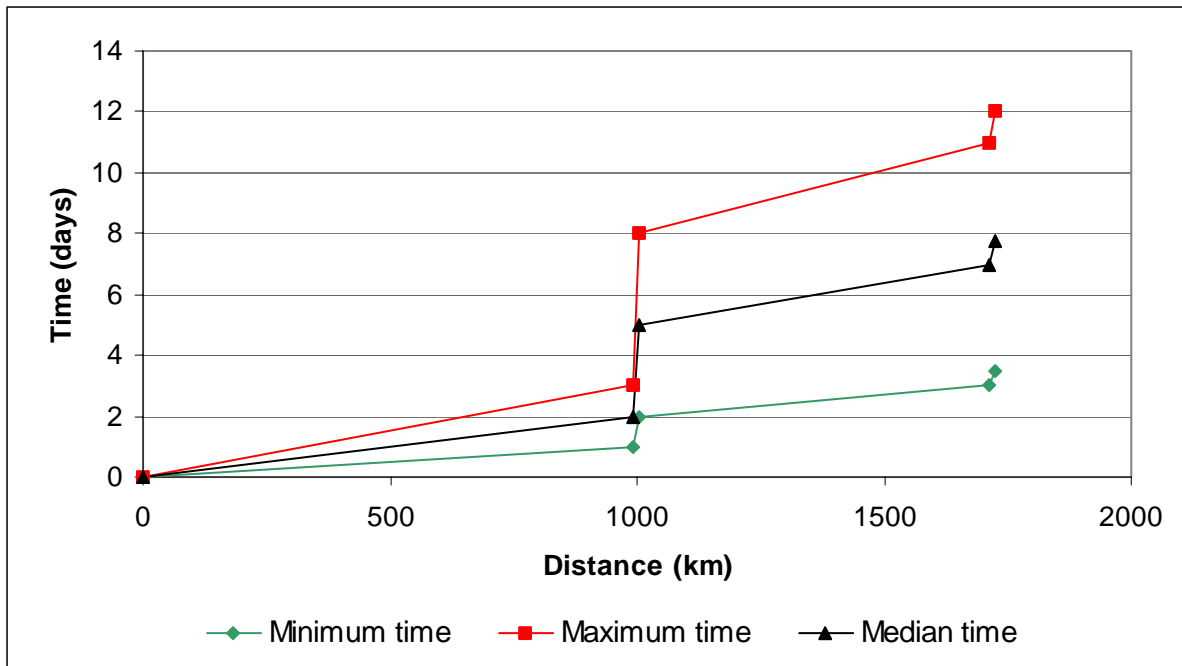


Figure VIII.2. Estimated cumulative costs required for the import of containerized cargo by rail from Tianjin Port to Ulaanbaatar, including cost of empty return (Per TEU)

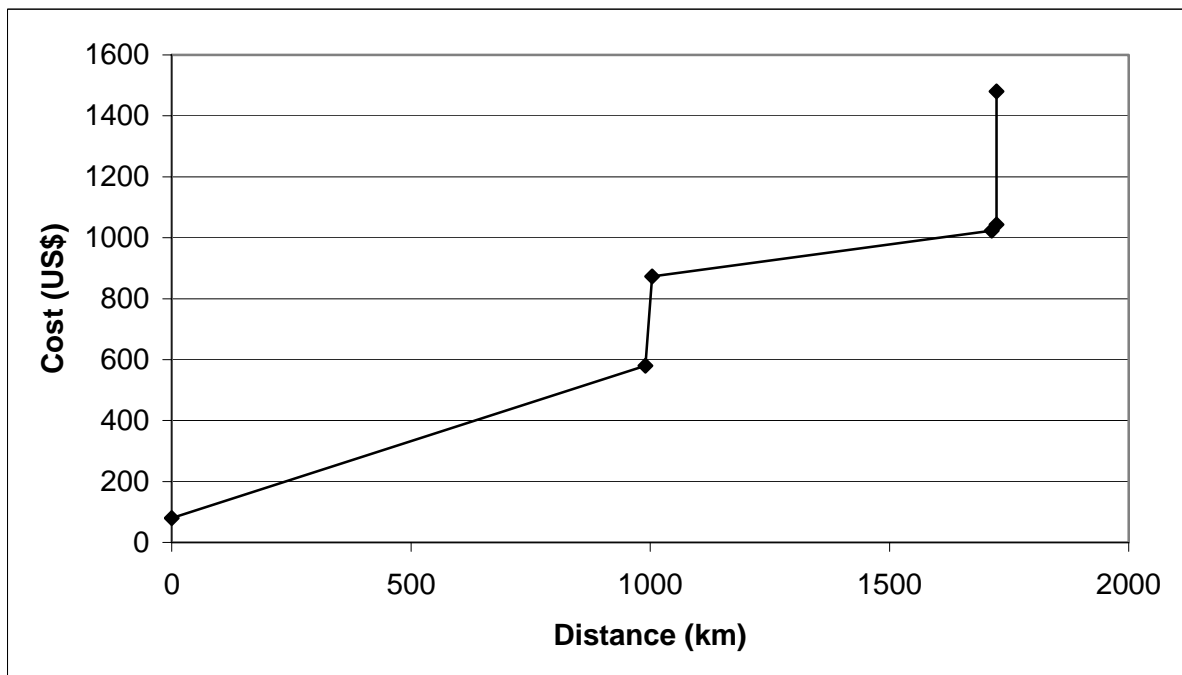


Figure VIII.1 illustrates the variation in transit time for the Tianjin Port-Ulaanbaatar all-rail corridor. For the regular service train, in the best case scenario, goods arrive in Ulaanbaatar within three and a half days of discharge from Tianjin port but, in the worst case, it can take 12 days for the goods to be delivered. This variation in terms of transit time seriously hinders the ability of Mongolian importers to plan their inventory levels, with safety stocks being the norm. For the return of the empty containers, data for minimum and maximum times were not obtained but it is assumed that they are approximately the same as the journey to Ulaanbaatar.

The costs associated with the Tianjin Port-Ulaanbaatar all-rail corridor are plotted in figure VIII.2. The transit cost of importing one TEU from Tianjin Port to Ulaanbaatar has been quoted as US\$ 1,480 for a container owned by the carrier, and at US\$ 1,100 for a container owned by the shipper. In the case of one FEU (Forty-foot Equivalent Unit) owned by the shipper, the quoted price is around US\$ 1,600. These prices can be negotiated for larger volumes. The prices quoted include the costs of returning the empty container to Tianjin port, which represent 31 per cent of total transit transport costs. This implies that, as export volumes grow, import transit costs should decline.

The rail transport cost from Tianjin Port to Erenhot has been quoted at US\$ 500 per TEU, which is equivalent to around US\$ 0.5 per TEU per kilometre. The rail transport cost from Zamiin Uud to Ulaanbaatar is much less, at US\$ 0.21 per TEU per kilometre. The cost of local road transport within Mongolia is also quite reasonable, at US\$ 20 per container within a 10-kilometre radius of the railway station at Ulaanbaatar.

The critical cost increases on this corridor are at the border crossing, between Erenhot and Zamiin Uud, and when the empty container is returned to Tianjin Port. Border crossing costs, at around 20 per cent of total transit transport costs, are quite significant. These costs are composed of document and transit charges as well as the cost of physically crossing the border. In any transit system, the capacity and reliability of the system will be a reflection of its weakest link. The reliability indicator, which is a perceptual tool, clearly demonstrates that the level of confidence regarding transport along this corridor is positive, except for the border crossing, which has a negative perception associated with it. Border crossing charges also represent around 27 per cent of the costs of returning an empty container to Tianjin Port.

(b) Route 2: Tianjin Port-Ulaanbaatar, road-rail

One of the major constraints regarding the utilization of the all-rail option is the limited capacity available on the railways in China, as higher priority is given to domestic traffic over transit traffic to Mongolia (except for the case of the Friendship Express). The road-rail combination offers an alternative that may not be competitive in terms of cost but provides greater flexibility for Mongolian importers. Road transport from Tianjin Port to Erenhot and Zamiin Uud is easier to organize and perceived by Mongolian respondents to be more reliable than Chinese rail transport. From Zamiin Uud, goods are moved by rail to Ulaanbaatar as the roads between the two cities are not suitable for the movement of containers at present. However, as the route from Zamiin Uud to Ulaanbaatar is on Asian Highway route AH3, it is likely to be upgraded in the near future. The estimated time and costs associated with the Tianjin Port-Ulaanbaatar road-rail route are presented in table VIII.3 and plotted in figures VIII.3. and VIII.4. below. As can be seen from the table, the main advantage of the road/rail route from Tianjin Port is a slight savings in time (on the Tianjin-Erenhot leg), but at a slightly greater cost.

Table VIII.3. Estimated time and costs required for the import of containerized cargo by road and rail from Tianjin Port to Ulaanbaatar

(Per TEU)

Leg	Mode	Distance (km)	Cum. distance (km)	Time (days)				Cost (US\$)	Cum. cost (US\$)
				Min.	Cum. Min.	Max.	Cum. Max.		
Port charges in Tianjin								80	80
Tianjin-Erenhot	road	990	990	1	1	1.5	1.5	655	735
Document charges								13	1 028
Transit charges					2		6.5	30	
Erenhot-Zamiin Uud (border crossing)		14	1 004	1		5		250	
Zamiin Uud-Ulaanbaatar	rail	710	1 714	1	3	3	9.5	150	1 178
Ulaanbaatar-warehouse	road	10	1 724	0.5	3.5	1	10.5	20	1 198
Total		1 724		3.5		10.5			
Return of empty container: Warehouse-Ulaanbaatar	road	1724	3 418	n/a	n/a	n/a	n/a	20	1 712
Ulaanbaatar-Zamiin Uud	rail							70	
Zamiin Uud-Erenhot (border crossing)								117	
Erenhot-Tianjin Port	road							307	
Total (incl. return)		3 418						1 712	

Source: Data collected by ESCAP staff. (Cum. = cumulative).

In the case of transit traffic from Tianjin Port, the Chinese transport company, SINOTRANS, is the only company authorized to carry Mongolian cargo by road to the border. The crossing of the border is done with the help of a Mongolian truck driver, whose job is to drive the Chinese truck from Erenhot to Zamiin Uud. Chinese trucks are allowed into Mongolia up to Zamiin Uud whereas Mongolian trucks are not permitted to cross the border. While the data for the road-rail route shown above does not show the additional time required at Zamiin Uud railway station in order to collect a sufficient number of containers to form a trainload, transit time is usually faster than the all-rail route, especially for inland transport within China. In this regard, the twice weekly Friendship Express is more competitive in terms of transit time and reliability but is less flexible with respect to departure times. Transit time to Erenhot is on average less than one day using two drivers, and the border crossing itself can be done within a couple of hours.

When the goods arrive in Zamiin Uud, they are subject to the same treatment as goods arriving by train, as all containers are at present transhipped on to trains for carriage up to Ulaanbaatar. Customs charges for the border crossing are US\$ 12 in China and around US\$ 15 in Mongolia. Pre-clearance with customs in Ulaanbaatar can reduce customs checking time. If the goods are not transported in containers, the border crossing charge is US\$ 100-150.

Figure VIII.3. Estimated cumulative time required for the import of containerized cargo by road and rail from Tianjin Port to Ulaanbaatar (up to warehouse)

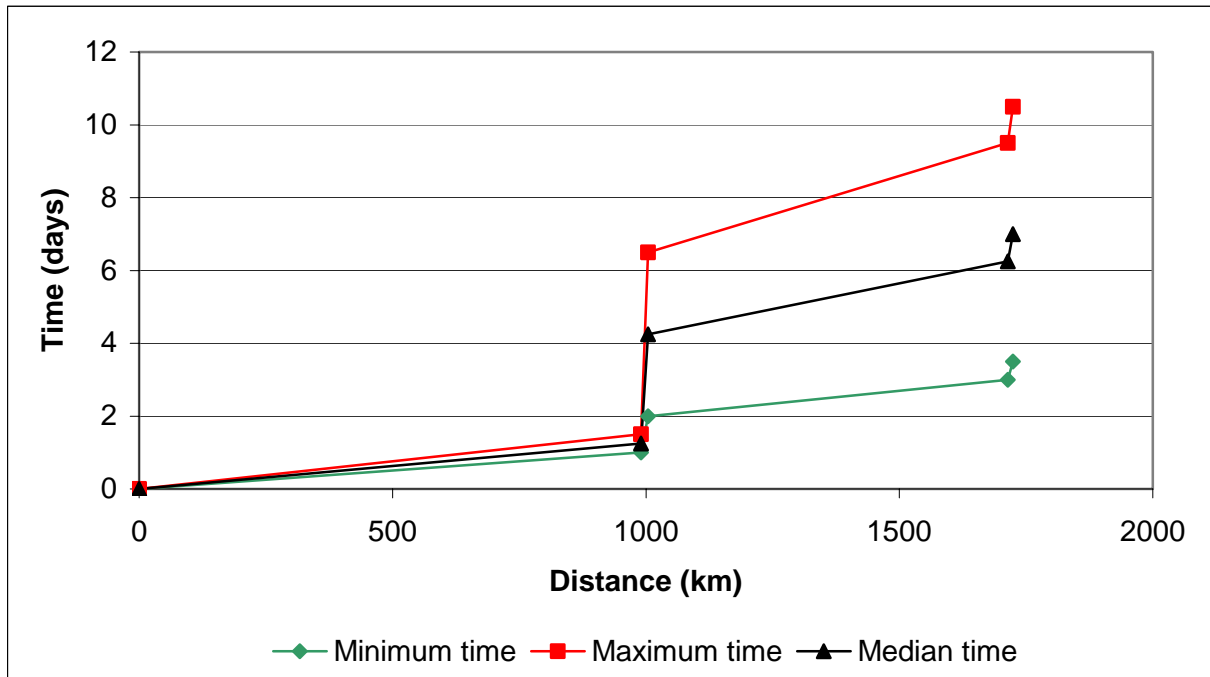
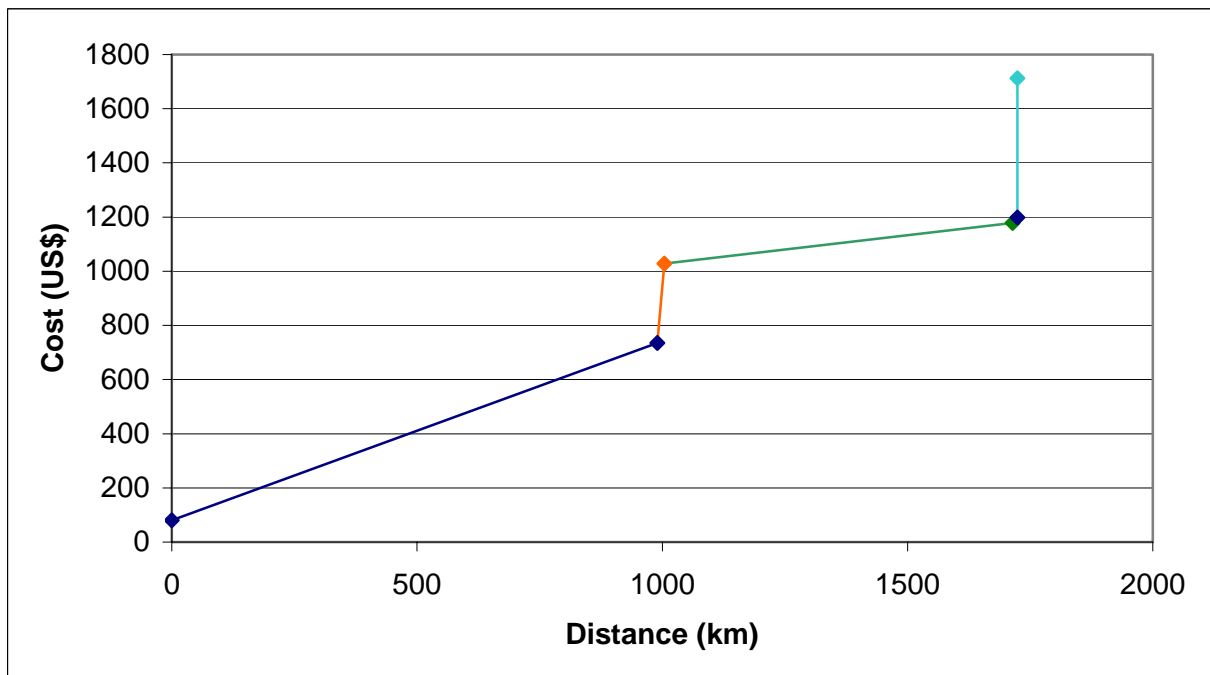


Figure VIII.4. Estimated cumulative costs required for the import of containerized cargo by road and rail from Tianjin Port to Ulaanbaatar, including empty return (Per TEU)



Dark blue = road; orange = border crossing costs; green = rail; light blue = cost of empty return.

If SINOTRANS is not utilized all the way to Zamiin Uud, the container will have to be transhipped in Erenhot. There are specialized road transport companies that only provide transportation services between Erenhot and Zamiin Uud at a cost of around US\$ 250 (including handling charges). This service is operated in accordance with the 1991 road transit agreement. While the charge quoted here is on the same level as for the all-rail route, road transport is slightly more expensive than rail between Tianjin Port and Erenhot. Road transport charges from Tianjin Port to Erenhot have been quoted at US\$ 655 per TEU, or around US\$0.66 per TEU per kilometre, higher than the US\$ 0.5 per TEU per kilometre by rail. The border crossing and the return of the empty container to Tianjin Port again represent critical points for cost increases along this route.

(c) *Route 3: Vladivostok-Ulaanbaatar, all rail*

In the past few years, some cargo in transit for Mongolia has been routed through seaports in the Vladivostok cluster area, which includes Vostochny and Nakhodka. Most of the cargo has been grain, primarily wheat, representing grant aid from the United States. Automobiles from Japan have also been transported using this route. The infrastructure of Vladivostok port is adequate to handle practically all transit cargo to and from Mongolia, both for open and covered storage, as well as cargo in containers. However, cargo handled in Vladivostok is mostly bulk cargo. The port authorities in Vladivostok offer a discounted container-handling tariff for Mongolian transit cargo, regardless of the type. For example, rates for transit containers are US\$ 80 per 20-foot container and US\$ 104 per 40-foot container. Rates for other general cargo depend on several factors and are negotiated separately on a case-by-case basis.

In addition to the cargo shipped through Vladivostok, the port of Nakhodka has handled shipments of copper concentrate from Mongolia to Japan and Republic of Korea. Other ports of in the area do not handle Mongolian transit cargo. However, port managers repeatedly said during meetings that their ports are ready to handle such cargo as they have adequate capacity.

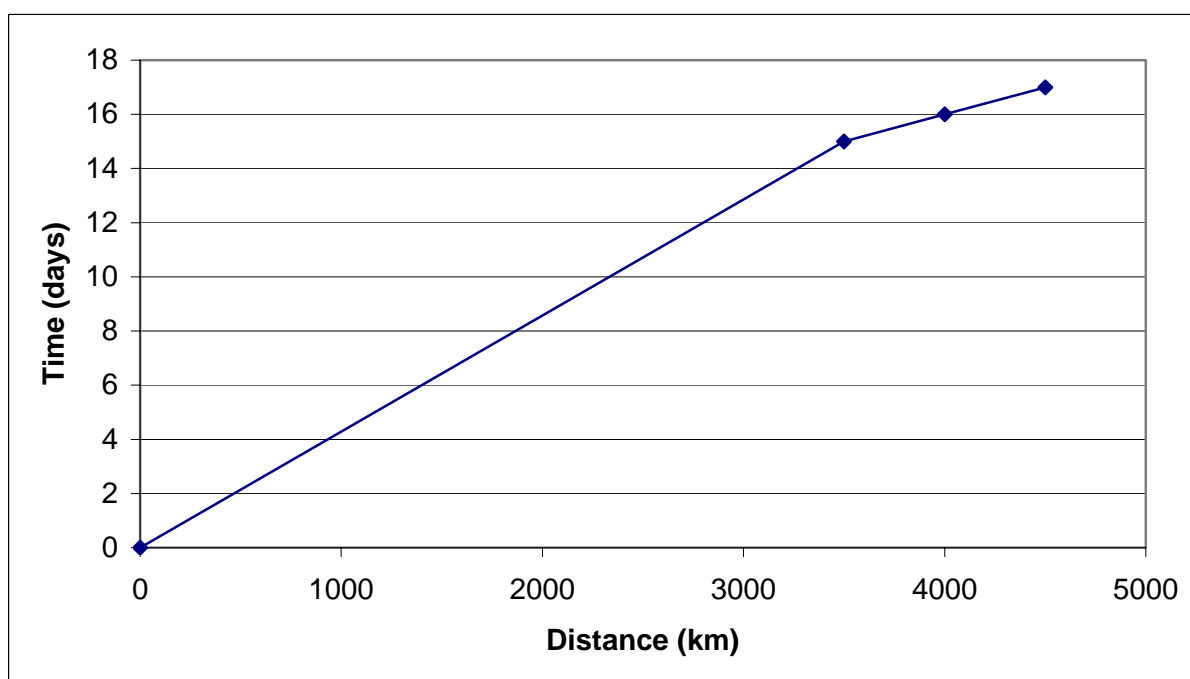
The cumulative time required for the Vladivostok-Ulaanbaatar route is provided in table VIII.4 and illustrated in figure VIII.5. The one-way rates for general cargo, using shipper-owned containers, from the container yard in Vostochny Port to Ulaanbaatar were quoted at US\$ 1,160 for a 20-foot container and US\$ 2,140 for a 40-foot container. A more detailed breakdown of costs along the route was not available.

Table VIII.4. Estimated cumulative time required for the import containerized cargo by rail from Vladivostok Port to Ulaanbaatar

<i>Leg</i>	<i>Distance (km)</i>	<i>Cum. distance (km)</i>	<i>Time (days)</i>	<i>Cum. time (days)</i>	<i>Cost (US\$) 20 foot cont.</i>	<i>Cost (US\$) 40 foot cont.</i>
Vladivostok Port	0	0	0	0	1 160	2 140
Vladivostok-Naushki	3 500	3 500	15	15		
Naushki-Sukhbaatar	500	4 000	1	16		
Sukhbaatar-Ulaanbaatar	500	4 500	1	17		

Source: Data collected by ESCAP staff. (Cum. = cumulative).

Figure VIII.5. Estimated cumulative time required for the import of containerized cargo by rail from Vladivostok Port to Ulaanbaatar



Based on the quote above, the cost of transporting a 20-foot container from Vladivostok to Ulaanbaatar would be US\$ 0.25 per TEU per kilometre, as the distance to be covered is estimated at around 4,500 kilometres. The required transit time to Naushki would be 15-17 days, with a further two days from Naushki to Ulaanbaatar.

The main problems related to using this route include the higher cost, owing to the longer distances which make Russian ports less competitive when compared with Chinese ports. Although the estimated transit time, at 17 days, is competitive with the worst case scenario on the route through China, there are difficulties in the customs clearance of this cargo, even though a 1991 transit agreement exists between the Russian Federation and Mongolia. There is also a shortage of wagons as well as a prohibition on the use of leased

wagons outside the Russian Federation. It was also discovered that scheduled container ships only called at Vostochny Port in the port cluster area.

(d) *Route 4: Brest-Ulaanbaatar, all rail*

The transit route from Brest to Ulaanbaatar is the newest and probably the most challenging, as it is used as a gateway for Mongolian trade with Europe. Under the auspices of the International Coordination Council of Trans-Siberian Transportation, the transit route is organized in cooperation between Belintertrans in Belarus, Rubikon in Russian Federation and Tuushin in Mongolia. It is a block train service, called the Mongolian Vector, with two monthly departures from Brest, on the 15th and 30th days of the month. A minimum of 30 TEU is required for the service to operate at the advertised transit rate; with fewer than 30 TEU, a different transit rate applies. The advertised transit time is 10 days, but, in practice, it averages 15 days and can take as long as 18 days. Extra security and dedicated handling increases the reliability of the service. The total transport cost for Brest to Ulaanbaatar is US\$ 1,020 per TEU including handling charges. A more detailed breakdown of the transit time and costs along the route is presented in table VIII.5 and plotted in figures VIII.6 and VIII.7.

Table VIII.5. Estimated time and costs required for the import of containerized cargo by rail from Brest to Ulaanbaatar
(Per TEU)

<i>Route</i>	<i>Distance (km)</i>	<i>Cum. distance (km)</i>	<i>Time (days)</i>	<i>Cum. time (days)</i>	<i>Cost (US\$)</i>	<i>Cum. cost (US\$)</i>
Brest-Naushki	6 690	6 690	13	13	800*	800
Naushki-Sukhbaatar	230	6 920	1	14	35	835
Sukhbaatar-Ulaanbaatar	420	7 340	1	15	65	900
Transit and service charges					120	1 020
Total	7 340		15		1 020	

Note: * Includes transit and service charges. Source: Data collected by ESCAP staff. (Cum. = cumulative).

There are no particular problems with customs clearance in either Belarus or Russian Federation, as the goods are moved under a single through-transport document, which is issued by the service provider. The only potential difficulty can be customs clearance in Mongolia at Sukhbaatar but this issue can be solved through pre-clearance with customs in Ulaanbaatar. At the start of the service, there were many difficulties with customs authorities in transit countries but these problems appear to have been solved. It is still possible that the train might be delayed at borders for verification by relevant authorities, which may take from a couple of hours to three days, but the emphasis is now more on facilitating the movement of the train service.

In terms of costs and time, this route has the potential of becoming a substantial transit route for the European market. If goods are imported from Europe through the traditional sea routing, it takes 5-6 weeks before they arrive in Ulaanbaatar. Some service providers have already started to quote rates of US\$ 2,100 per TEU from any point of origin in Europe to Ulaanbaatar, with a transit time of 3-4 weeks. An expansion of traffic along this corridor could lower transit costs even further and increase its reliability. The cost build up

along this route is gradual as there are no break-of-gauge points where the wagons need to be transhipped. The cost of transport is around US\$ 0.12 per TEU per kilometre on average for the whole route but the portion in Mongolia is slightly more expensive at around US\$ 0.15 per TEU per kilometre.

Figure VIII.6. Estimated cumulative time required for the import of containerized cargo by rail from Brest to Ulaanbaatar

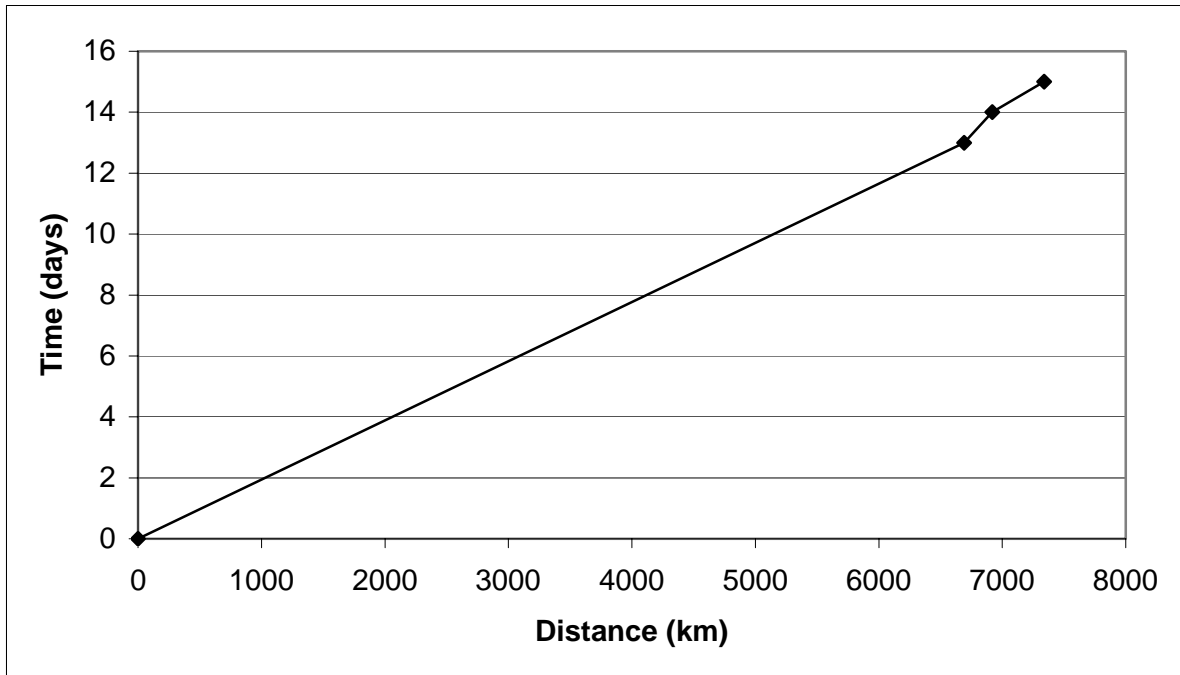
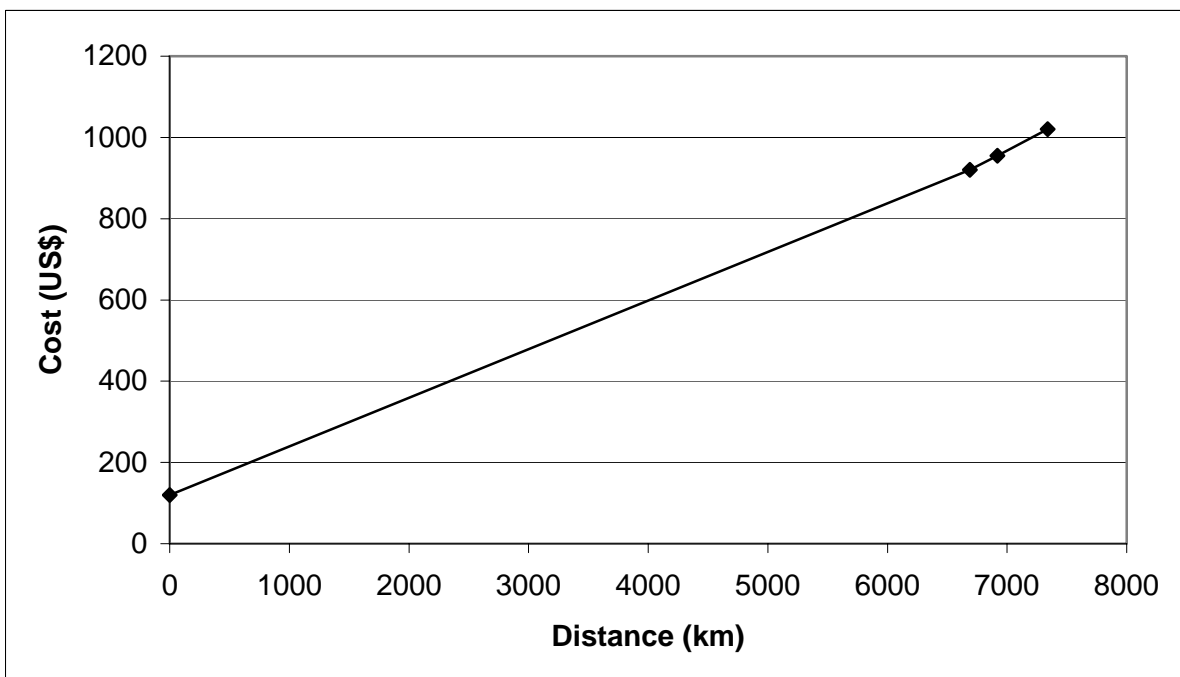


Figure VIII.7. Estimated cumulative costs required for the import of containerized cargo by rail from Brest to Ulaanbaatar* (Per TEU)



Note: * Includes transit and service charges.

(e) *Comparison of four routes*

Mongolian exporters, importers and transport service providers can re-evaluate their strategies for freight transportation, considering the transfer of goods between modes and all alternative routes. With the development and improvement of infrastructure in the region, Mongolia has achieved greater choice in accessing the international market. A summary of import transit times and costs of the four selected transit corridors is provided in table VIII.6.

Table VIII.6. Summary of the estimated times and costs required for the import of containerized cargo to Ulaanbaatar using selected routes
(Per TEU)

<i>Route</i>	<i>Origin</i>	<i>Mode</i>	<i>Distance (km)</i>	<i>Average transit time (days)</i>	<i>Total cost (US\$)</i>
1	Tianjin Port, China	Rail	1 700	7	1 480
2	Tianjin Port, China	Road & Rail	1 684	5	1 712
3	Vostochny Port, Russia	Rail	4 500	17	1 160
4	Brest dry port, Belarus	Rail	7 340	15	1 020

Source: Data collected by ESCAP staff.

A comparison of the route via Tianjin Port with the route originating in Brest is very difficult as the distances involved are not comparable. As an indicator, the sea freight rate from northern Europe to Tianjin Port is in the US\$ 800-1,900 per TEU range, depending on the commodity, with an average transit time of at least four weeks. This means that for imports from Europe, the route via Brest is very competitive, both in terms of cost and transit time, while the reliability of this route is considered to be adequate.

Mongolia's geographical location makes it remote from its markets and suppliers. Access cost is relatively high, with a high dependency on transit states for access to the sea, international gateways and local markets. It is very important for Mongolia to be able to formulate transit development strategies that will help it become a "land-linked", rather than a landlocked, country. Some of the strategies that Mongolia can follow are:

- Find market niches for high value products where transport costs represent a smaller share of total value (for example, cashmere products).
- Seek mutually advantageous transport policies with transit states. The joint formulation of transit routes and their operationalization would be critical for improved access to and from the country.
- Minimize rather than emphasize transport and transit barriers. Transport facilitation should be done in conjunction with transit states (for example, making truck regulations compatible).

CHAPTER IX: CASE STUDY OF NEPAL

A. Country profile

Nepal, together with Afghanistan and Bhutan, is one of three landlocked least developed countries in South Asia. Like Bhutan, Nepal is bound by India to the south and the Tibet Autonomous Region of China to the north. Nepal covers an area of 147,181 square kilometres, with a length of 885 kilometres east to west and a mean width of 193 kilometres from north to south. Nepal is divided into three ecological zones, ranging from the plains of the Terai in the south to the central mountains and the Himalayan region in the north. The altitude ranges from 305 metres to 8,848 metres above sea level. The high mountain ranges, including the Himalayas, which run through the breadth of Nepal, hinder access to the more remote parts of the country and define the contours of its major transport routes.

Most of Nepal's economic activities, excluding agriculture, occur either in the Kathmandu valley or along its long border with India. However, the overwhelming majority of the population relies on subsistence farming and lives in rural areas where poverty is widespread. The ratio of population to arable land is among the highest in the world. It has been estimated that some two fifths of the population of Nepal live in poverty due to slow growth in agriculture, poor social services delivery, and poor infrastructure. Linking the large number of scattered villages, particularly in mountainous areas, to the national transport grid so as to integrate them into the national market remains a significant task.

Nepal has, nevertheless, made encouraging progress in development. Although the population, currently estimated at around 23.6 million, has been growing at approximately 2.3 per cent annually, GDP per capita increased at an average annual rate of 2.6 per cent between 1990 and 2000. More recently, however, the global economic slowdown and social instability have contributed to slower growth as revenues from exports and tourism declined. In particular, the agricultural sector, which accounts for around 80 per cent of employment, has seen its contribution to GDP fall to just over 39 per cent, little more than the contribution of the services sector. Value added in industry has also declined somewhat and the sector currently contributes around 22 per cent of GDP.

As a landlocked country with a low level of development, Nepal has found it difficult to expand merchandise exports. Revenue from tourism used to dominate Nepal's relatively modest level of export earnings until the mid-1980s when the country entered the market for labour-intensive manufactured goods such as woven carpets and ready-made garments and, more recently, pashmina. Rapid export growth followed and export earnings amounted to over 25 per cent of GDP until the recent economic slowdown lowered this figure to around 23 per cent. Imports as a percentage of GDP have also declined to around 32 per cent, following a period of rapid growth due to trade liberalization. Since Nepal relies on imported capital goods, as well as its imported oil for energy, imports have consistently exceeded exports, leading to substantial deficits in Nepal's merchandise trade balance. Earnings from tourism and remittances from migrant workers remain significant contributors to export earnings but have not been sufficient to offset the imbalance in merchandise trade, and the current account deficit has remained in the order of 5-6 per cent of GDP in recent years.

Nepal has essentially a free trade regime with India, and the Indian rupee also circulates freely in the country. Trade with India is, however, sometimes affected by sales taxes and other restrictions imposed by states, as well as by other measures such as quality control tests and quarantine certificates. The Treaty of Trade between His Majesty's

Government of Nepal and the Government of India, signed in December 1991 was renewed in March 2002 for a further period of five years after prolonged negotiations to address Indian concerns on rules of origin and safeguards.⁵⁸ Exports to India have grown very rapidly, and around 28 per cent of total Nepalese exports by value (in US dollars) have gone to India in recent years. Unofficial exports may add to this figure. However, exports to India have fallen back in the current fiscal year following the imposition of quotas of some duty free exports from Nepal. With concomitant trade liberalization in both countries, commodities exported to India have been diversified somewhat as re-exports of goods to that country declined dramatically. However, an important potential export – hydroelectric power – remains undeveloped so far. According to the Nepal Rastra Bank, during the first five months of fiscal 2003, pashmina accounted for nearly a quarter of total exports to India, followed by vegetable ghee, toothpaste, jute goods and soap.⁵⁹ India has been the source of approximately 34 per cent of imports by value (in US dollars) into Nepal, on average. Major imports from India into Nepal were cotton fabrics, medicines, rice, machinery and parts and chemicals. Nepal's trade deficit with India is a very significant part of its total deficit, and unofficial imports are likely to widen this figure.

Among other countries, the United States of America is a principal market for exports from Nepal, taking on average 31 per cent of total exports by value (in US dollars) in recent years. Countries in the European Union (EU), particularly Germany, are other major export destinations. Exports to these countries have benefited from quotas under the Multifibre Arrangement (MFA) and the generalized system of preferences (GSP). In general, exports to third countries have focused narrowly on higher value-added, manufactured goods, namely, garments, carpets and pashmina, which is somewhat worrying as the trends in the exports of these products have been on the decline. Garments and carpets accounted for one half and one third respectively of Nepal's exports to third countries in early fiscal 2003. Pashmina, gold, silverware and ornaments and handicrafts accounted for the rest. Major imports from countries other than India during this period were petroleum products, gold and silver, threads, machinery and parts, transport equipment and chemical fertilizers. Imports of raw materials needed for the manufacture of products affected by the Indian quotas have, not surprisingly, declined. Countries in East and South-East Asia are the principal sources of manufactured imports. In particular, imports from China have increased very rapidly in recent years and currently account for approximately 13 per cent of total imports by value (in US dollars).

Nepal has a relatively open economy, which is partly the result of its relationship with India and partly a reflection of the policy of import liberalization pursued under the Structural Adjustment programmes of the World Bank. Non-tariff barriers have been largely eliminated and tariff levels are low for a developing country. The establishment of the South Asian Association for Regional Cooperation (SAARC) Preferential Trading Arrangement (SAPTA) is expected to lead to further liberalization. The country is currently an observer at the World Trade Organization (WTO) and is in the process of accession to that body. In this context, Nepal is expected to restructure its import tariff bands from five to four, with a maximum rate

⁵⁸ In particular, the concerns related to hydrogenated vegetable oil (vegetable ghee), which is made of palm oil imported from Malaysia that faces negligible duties in Nepal as compared to heavy duties in India. Quotas have now been placed on the duty-free export of vegetable ghee, acrylic yarn, copper wires and zinc oxide from Nepal to India. The text of the Treaty of Trade is available at <http://www.tcpnepal.org.np/tagree/main.htm> (14 June 2003).

⁵⁹ Nepal Rastra Bank, "Press communiqué of Nepal Rastra Bank on the recent macroeconomic situation of Nepal" available at http://www.nrb.org.np/press/Recent_Macroeconomic_Situation_of_Nepal--205910-english.pdf (14 June 2003).

of 35 per cent, and to convert the exceptional tariff rates on vehicles to excise taxes. While the import liberalization measures will have benefited consumers, they will also have increased cost pressures on domestic producers, particularly as the increased import demand has not been matched by strong export growth. The range of exports also remains narrow. The outlook for Nepal's commodity exports is further conditioned by the scheduled ending of the MFA in January 2005. The country will then be forced to compete with other low cost producers in third markets on an equal basis and may find itself at a disadvantage as a result of its landlocked nature. While earnings from invisibles such as tourism and remittances can be expected to grow, greater integration with subregional and regional economies by encouraging increased investment targeting markets in neighbouring economies, including developing and maintaining infrastructure such as transport and energy, could be a way forward.

B. Transit transport infrastructure and facilitation

1. Transit transport infrastructure

(a) Land transport

The principal mode of transit transport between Nepal and India takes place by road. The road network in Nepal has grown rapidly over the past fifty years. The total length of road was approximately 640 kilometres in the mid-1950s, but by 2000 the figure was nearly 16,000 kilometres. Between 1993 and 1998, in particular, Nepal's road network experienced one of the highest rates of growth in the region, expanding at an average annual rate of 4.6 per cent.⁶⁰ Out of 75 districts in the country, 65 are accessible by roads that can be used by motor vehicles. As of July 2001, the number of cargo vehicles registered with the Department of Transport Management was 21,580, approximately 7 per cent of the total number of registered vehicles. The classification of the road network in 2000 by region is given in table IX.1. Just fewer than 30 per cent of all roads are paved, and those that are not paved are frequently washed away in the rainy season. Hill and mountain trails are often the only means of access for villages in remote areas, and are suitable only for pedestrians and pack animals.

Table IX.1. Nepal road network, 2000

Region	Classification					Total	Of which per cent paved*
	NH	FRN	FRO	DR	UR		
Eastern	670	185	0	2 106	49	3 410	25
Central	749	462	117	3 906	1 109	6 343	31
Western	486	415	29	1 390	389	2 709	70
Mid Western	580	390	25	1 046	65	2 106	22
Far Western	489	197	0	612	39	1 337	27
Total Nepal	2,974	1,649	171	9,060	2,051	15,905	29

Source: Adapted from Country Report on Asian Highway Development in Nepal, presented at the UNESCAP Expert Group Meeting on Development of Asian Highway Network, 8-11 May 2002.

Notes: NH = national highways; FRN = feeder roads major; FRO = feeder roads other; DR = district roads; UR = urban roads.

* Bituminous pavement.

⁶⁰ ESCAP, *Review of Developments in Transport and Communications in the ESCAP Region, 1996-2001* (ST/ESCAP/2157).

Fifteen national highways and 51 feeder roads, some of which are currently under construction, amounting to a total of roughly 4,800 kilometres, make up the Strategic Road Network, which forms the main network of national importance. Of this, a Core Network of 1,692 kilometres has been identified, consisting of the following routes:

- East-West Highway (1,024 km);
- Tribhuvan Rajpath (Birgunj-Katmandu, excluding the overlap with the East-West Highway; 162 km);
- Prithvi Highway (Naubise-Pokhara, 174 km);
- Mugling-Narayanghat (36 km);
- Siddhartha Highway (Bhairahawa-Pokhara, 183 km); and
- Kodari Highway (Katmandu-Kodari, 113 km).

While the basic road infrastructure network for transit trade through India is in place, the condition of the infrastructure is poor in places, particularly in the feeder roads, at bridges and at transshipment facilities at border crossings. The slower speeds necessitated by the poor condition of the roads and the breakdown of vehicles are also seen to be a contributing factor to the pilferage and theft that takes place along the transit route.

The only border point with China is by road through Kodari, 110 kilometres northeast of Kathmandu, and the road to Kodari was constructed with aid from the Chinese government. While cargo flows are limited at present, Nepal could become an important transit country between India and China with the extension of the Asian Highway, route AH42, to Lhasa, China.

In terms of rail transport, Nepal has a 42-kilometre narrow gauge railway from Jaynagar to Jaleshore. With grant assistance from the Government of India, a 5.4 kilometers broad gauge railway track was completed in March 2001 between Raxaul (India) and Birgunj, where an inland clearance depot (ICD) has been built. When operational, the route will connect to the Indian Railways' Raxaul-Calcutta link. A 3.65-kilometre road link has also been built connecting the Birgunj ICD to the main Kathmandu road.

(b) Air transport

Due to its topography and geographic location, the Government of Nepal has made efforts to develop domestic and international air transport. At present, domestic air transport plays a significant role in the transportation of goods and passengers to the remote areas of the country. However, the high costs of construction and maintenance has meant that this sector still carries a relatively small proportion of Nepal's traded cargo. As of 2001, Nepal had 50 airports, of which nine had paved runways. Only one, the Tribhuvan International Airport in Kathmandu, is an international airport. Air-air transport, and air-sea transport are current alternatives to land-sea transport for high-value cargo. In the case of air-sea cargo, items are shipped by air to Bangkok or Singapore, and then transshipped onward to their final destination.

(c) *Inland clearance depots (ICDs)*

With assistance primarily from the World Bank, three Inland Clearance Depots (ICDs) have been completed at three points close to the border with India, at Birgunj in the centre, Biratnagar to the east and Bhairahawa to the west. All three are linked by road to Kathmandu. As mentioned above, the ICD at Birgunj also has rail connections laid by Indian Railways. It is expected that the finalization of negotiations between India and Nepal on bringing the Birgunj ICD into operation will greatly facilitate the movement of Nepalese transit cargo and promote a modal shift to rail (see below).

(d) *Transit port facilities*

Kolkata Port Trust (KPT), which comprises the Kolkata Dock System (KDS) and Haldia Dock Complex, remains the dominant port of entry and exit for Nepal's transit cargo. In the last two years, Haldia's share of containers to and from Nepal has increased more than tenfold and now stands at just under half of total container imports, and approximately 70 per cent of container exports. Goods in containers are loaded on to feeder vessels, which then travel to Singapore and, in some cases, to Colombo, for transshipment to destinations in Europe, the Middle East, East Asia and the Americas. A breakdown of Nepalese transit cargo, both imports and exports, through KDS and Haldia is given in table IX.2.

Table IX.2. Nepal transit cargo handled at Kolkata Port Trust
(thousand tonnes)

<i>Year</i>	<i>Imports</i>			<i>Exports</i>			<i>Total</i>
	KDS	Haldia	Total	KDS	Haldia	Total	
1998-99	404	147	551	31	6	37	588
1999-00	588	242	830	25	10	35	865
2000-01	404	155	559	23	8	31	590
2001-02	311	384	695	5	11	16	711
2002-03*	290	297	565	3	18	21	586

Source: Kolkata Port Trust.

Note: * April 2002-January 2003.

The table shows that the throughput of Nepal's transit cargo has fluctuated, peaking in 1999-2000 and then declining sharply. Figures for 2001-02 indicate a notable revival of some 21 per cent, and the available figures for April 2002 to January 2003 indicate further growth of nearly 13 per cent as compared to the same period a year earlier. The growth of imports through Haldia is particularly notable, surpassing imports through KDS in 2001-02. The principal imports passing through KPT and in transit to Nepal are vegetable oil, fertilizer, rapeseed and steel. As can be seen from the table, the volume of Nepal's exports through Kolkata is very low compared with imports.

Since 1976, Chittagong and Mongla ports in Bangladesh have also been used for routing Nepal's third country trade. However, the use of these ports is currently very limited due to a number of factors, including longer distances, as compared with Kolkata.

2. Legal framework

(a) *Bilateral arrangements between Nepal and India*

Transit transport through India is carried out in accordance with the Treaty of Transit between the Government of India and His Majesty's Government of Nepal signed in December 1991 and renewed in January 1999 for a period of seven years. The protocol and the memorandum to the Treaty outline the export and import procedures on goods exported from Nepal to third countries, or imported from third countries into Nepal and transiting through India. The protocol identifies 15 entry-exit points located along the India-Nepal border.⁶¹

(b) *Bilateral arrangements between Nepal and Bangladesh*

Transit transport through Bangladesh is covered by the bilateral Trade and Payments Agreement and the Transit Agreement, signed in April 1976, between the Government of Bangladesh and His Majesty's Government of Nepal, under which the movement of traffic-in-transit by all means of transport through the seaports of Khulna-Chalna, and Chittagong, and the border points of Biral, Banglabandh, Chilhati and Benapole was approved.

According to the SAARC Business Information Network, Nepal currently uses the border crossing points of Biral and Banglabandh.⁶² Biral, a metre gauge rail point at Bangladesh border, has been used for the movement of Nepal's trade traffic to and through Bangladesh after the Government of India allowed the rail connection from its border station at Radhikapur to Biral in 1978. India has also allowed the use of the road connection from the Phulbari border crossing point with Bangladesh.

Both Nepal and Bangladesh are keen to promote the greater use of transit routes through Bangladesh via India, as well as to increase their bilateral trade.

(c) *Regulations on road transport*

Due to the difficult terrain and the condition of roads in Nepal, trucks cannot operate at high speeds or with high axle loads on most parts of the road network. The Vehicle and Transport Management Regulations 1998 fix the maximum permissible axle load for all vehicles at 10.2 T. At present, Indian-owned trucks dominate the road transport sector of the transit system, due to a number of factors such as cost differences.

3. Transit transport procedures

The procedures involved in exports and imports are summarized below. According to the Kolkata Port Trust and the Customs Preventive Office, a small number of containers are opened for inspection at the port on landing. Containers bound for Nepal, once sealed by customs, do not have to be inspected again en route, if the seal is intact.

⁶¹ The official border crossing points are Sukhia Pokhri, Naxalbari (Panitanki), Galgalia, Jogbani, Bhimnagar, Jayanagar, Bhitamore (Sitamarhi), Raxaul, Nautanwa (Sunauli), Barhni, Jarwa, Nepalgunj Road, Tikonina, Gauri-Phanta, and Banbasa.

⁶² SAARC, "A Guide on Imports and Exports Procedure and Documentation" available at <http://www.saarcnet.org/newsarcnet/govtpolicies/nepal/final.htm> (14 June 2003).

The 15 designated border-crossing points between India and Nepal for third country traffic are open seven days a week. Opening hours depend on the working hours of the customs staff, which are generally from 8 am to 6 pm. There are also several customs checkpoints along the routes to Nepal, as well as custom patrols, which may undertake random checks or checks on receipt of specific information. Any inspection en route has to be reported to the Customs Preventive Office in Kolkata. In the event of the seizure of a container, the information has to be sent by radio message to Kolkata. Once the goods reach the land customs station at the Indian border point, the goods will be allowed to proceed to Nepal if the seal is intact.

<i>Direction</i>	<i>Steps in processing documents</i>
<i>Nepal – Kolkata</i>	Processing Customs Transit Document (CTD) at Birgunj/Biratnagar and the other border customs as designated by Nepal-India treaty of transit.
	Clearance at Jobgani/Raxaul Customs and the other border customs as designated by Nepal-India treaty of transit.
	Final approval of CTD at Kolkata Customs
	Furnishing CTD to Kolkata Port Trust
<i>Kolkata – Nepal</i>	CTD processing at Kolkata
	Clearance at Raxaul/Jogbani Customs and the other border customs as designated by Nepal-India treaty of transit
	Clearance at Birgunj/Biratnagar and the other border customs as designated by Nepal-India treaty of transit with duty payment
	Final CTD processing at Kolkata (upon receipt of communication from Nepal Customs officials)

Source: Kolkata Port Trust.

At Kolkata port, Nepalese cargo is moved to godowns. Port charges are paid only before final clearance. The KPT has introduced a computerized system for customs procedures developed by the National Informatics Centre. The objective of the Electronic Data Interchange Gateway Programme is to improve the speed and reliability of information exchange. In Nepal, initiatives such as the introduction of the Automated System of Customs Data and the Advance Cargo Information System (ACIS) are being pursued with assistance primarily from the World Bank under the Nepal Multimodal Trade and Transit Facilitation Project (NMTTFP) but are still in fairly early stages of implementation. According to Nepalese officials, it is expected that the Freight Transit Monitoring System of the ACIS will be installed at the new Birgunj ICD as well as at the Kolkata ports, with a view to generating information on cargo traffic moving by rail. There is still considerable scope for harnessing modern information technology to improve customs and traffic monitoring processes.

The large number of documentary requirements applies to third country trade to and from Nepal. The Government of Nepal is taking steps to simplify customs and other trade documents, including the documents required for foreign exchange controls. Proposals for simplification of existing procedures, which emanated from an in-depth study conducted under the NMTTFP, have been forwarded to relevant agencies and are currently under consideration.⁶³ There is also a need to standardize documents required for transit trade and transport.

⁶³ Ministry of Industry, Commerce and Supplies, Nepal Multimodal Transit and Trade Facilitation Project; progress report, September 2002.

4. Coordination of trade and transport facilitation

In order to facilitate the coordination of national policies, a National Trade and Transport Facilitation Committee (NTTFC) was established in Nepal in 1998. In addition to the Ministry of Industry, Commerce and Supplies, the NTTFC comprises of the Ministries of Finance and Labour and Transport Management, Department of Customs, Nepal Rastra Bank, several other government departments and representatives from key commerce and transport industry associations (Annex IX.1). Its membership was expanded in 2000 to include other important players in the trade and transport sectors, namely the Trade Promotion Center, Handicrafts Association of Nepal, Central Carpet Industries Association, and the Goods Carriers Association. Under this committee, three subcommittees on Trade Facilitation, Law and Insurance have been constituted.

C. Analysis of selected corridors

At present, an estimated 70 per cent of third country trade is transported across the border between Birgunj (on the Nepali border) and Raxaul (on the Indian border) and on to the Kolkata Port Trust. The distance between Birgunj and the ports of Kolkata and Haldia is 960 km and 1080 km respectively (approximately). A shorter, alternative route runs between the border point of Biratnagar in the east of Nepal, crossing the border at Jogbani, with a distance of about 536 kilometres and 640 kilometres, respectively, from Kolkata and Haldia (approximately). The route chosen for the application of the ESCAP time/cost methodology was Kathmandu-Birgunj/Raxaul-KPT and the unit of measurement was containerized cargo (per TEU). The time/cost estimates are presented in table IX.3 and plotted in figure IX.1 and figure IX.2.

Table IX.3. Estimated time and costs required for the export of containerized cargo by road from Kathmandu to Kolkata Port Trust
(Per TEU)

Leg	Distance (km)	Cum. distance (km)	Transit time (hours)*				Cost (US\$)	Cum. cost (US\$)
			Min.	Cum. min.	Max.	Cum. max.		
Kathmandu-Birgunj	298	298	12	12	24	24	250	250
Birgunj-Raxaul (border)			6	18	48	72	124	374
Raxaul-KPT	960	1 258	96	114	144	216	525	899
Kolkata port			48	162	72	288	-	
Port charges							125**	1 024
Total	1 258		162		288		1 024	

Source: Data collected by ESCAP staff. (Cum. = cumulative).

Notes: * Time at Kolkata Port refers to clearance time for export cargo.

** With regard to wharfage, free time of 20 clear working days is given for containerized cargo; for all other cargo free time is seven clear working days.

Figure IX.1. Estimated cumulative time required for the export of containerized cargo by road from Kathmandu to Kolkata Port Trust

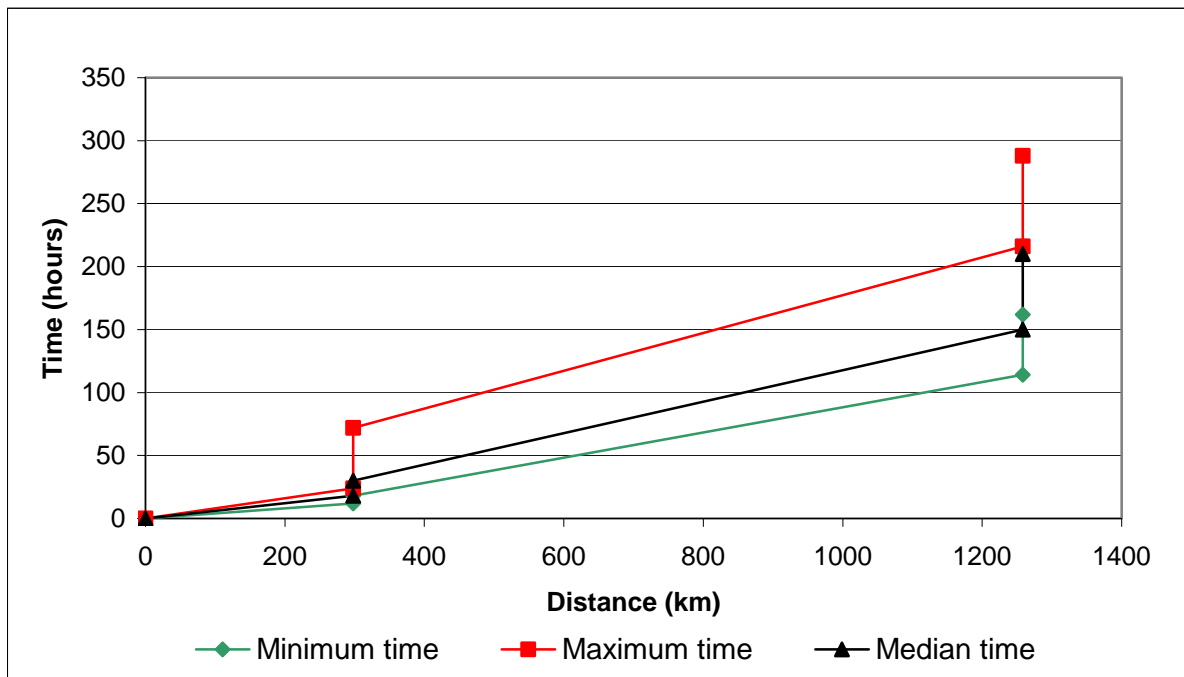
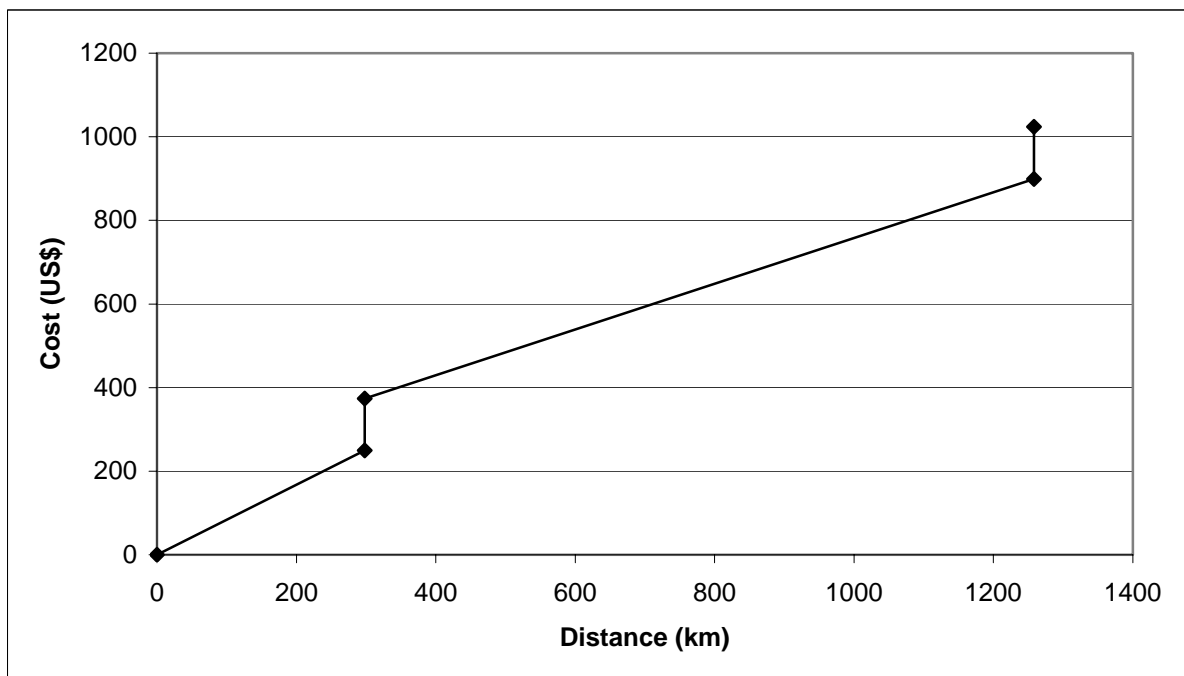


Figure IX.2. Estimated cumulative costs required for the export of containerized cargo by road from Kathmandu to Kolkata Port Trust (Per TEU)



Note: Time at Kolkata Port Trust refers to time taken for processing export cargo.

Representatives from the Government, transport operators and freight forwarding companies consulted for this case study all referred to the transit route through Birgunj in their responses. A fairly consistent picture emerged with regard to the total time and the costs of transit transport to and from Nepal. However, when asked for a breakdown of costs, there were some disparities in the relative amounts of transit charges, border-crossing charges, and other charges including labour costs, crane and container rentals, and informal payments. The transit undertaking charges for imports, for example, were said to vary according to the cost, insurance and freight (c.i.f.) value, and were estimated at 0.15 per cent and 0.45 per cent of the c.i.f. value for Government and sensitive private cargo respectively⁶⁴.

The wide variation in transit times is due in part to the time taken at the border and at the ports to clear customs. Customs clearance was said to be relatively reliable, but when documents were incorrect or a more thorough checking than usual was undertaken, delays could be as long as 3 days. The variation was also said to be due to uncertainty surrounding road conditions (especially delays caused by weather and accidents); vehicle breakdowns; labour strikes and equipment breakdowns at the border and the ports during loading/unloading of cargo.

As the road sector which is carrying the bulk of transit freight between India and Nepal is dominated by small private trucking companies, competition is high and the transport costs are relatively low. In addition, as noted in a World Bank study, the cost of road transport per kilometer is kept down by the low labour costs and less expensive vehicles (in terms of capital rather than maintenance costs).⁶⁵ However, poor conditions of the roads cause damage to both the trucks and sometimes the cargo, adding to operating costs and time. The weight limits on the roads may also limit the size of the cargo carried.

Since the ICD at Birgunj has rail connections laid by the India Railway, when negotiations between India and Nepal are finalized and the ICD becomes operational, it may provide optional routes and facilitate the movement of Nepal's transit cargo.

⁶⁴ The Nepal-India Treaty specifies category of sensitive cargo.

⁶⁵ Forging Subregional Links in Transportation and Logistics in South Asia, Uma Subramanian and John Arnold, World Bank, January 2001.

Annex IX.1: Membership of Nepal's National Trade and Transport Facilitation Committee

1. Secretary, Ministry of Industry, Commerce and Supplies (Chairman)
2. Joint Secretary, Ministry of Industry, Commerce and Supplies
3. Ministry of Finance
4. Ministry of Labour and Transport Management
5. Department of Customs
6. Nepal Rastra Bank
7. Nepal Transit and Warehousing Company Limited
8. Federation of Nepalese Chambers of Commerce and Industry
9. Nepal Chamber of Commerce
10. President, Nepal Freight Forwarders Association
11. Nepal Bankers Association
12. Nepal Insurers Association
13. Trade Promotion Center*
14. Handicrafts Association of Nepal*
15. Central Carpet Industries Association*
16. Goods Carriers Association*
17. Project Implementation Unit, Nepal Multimodal Trade and Transit Facilitation Project
18. Deputy Director, Nepal Multimodal Trade and Transit Facilitation Project

* Joined in 2000.

REFERENCES

General

- Andriole S.J. & Hopple G.W., 1983, "An overview of political instability research methodologies: basic & applied recommendations for the corporate analyst", in: *Global risk assessment: issues, concept and applications*; Rogers J (Ed.), Global Risk Assessment Inc., Riverside, California, pp. 75-97.
- ASEAN Framework Agreement on the Facilitation of Goods in Transit,
<http://www.aseansec.org/7377.htm>
- Banomyong, R. "Multimodal Transport Corridors in South East Asia: A Case Study Approach", unpublished doctoral dissertation, University of Cardiff, Cardiff Business School, 2000.
- Banomyong, R. & Beresford, A.K.C., 2001, "Multimodal transport: the case of Laotian garment exporters". *International Journal of Physical Distribution & Logistics Management*, 31(9), pp. 651-673.
- Banomyong, R., Nair, R. VNP, & Beresford, A.K.C., 1999, "Managing 'Demand Amplification' in the supply chain: the Thai forwarders' experience", Occasional Paper No. 59, Department of Maritime Studies and International Transport, Cardiff University.
- Barnhart, C., & Ratliff, D.H., 1993, "Modeling Intermodal Routing". *Journal of Business Logistics*, 14(1), pp.205-223.
- Beresford, A.K.C., 1999, "Modelling Freight Transport Costs: A Case Study of the UK-Greece Corridors". *International Journal of Logistics: Research and Applications*, 2(3), pp. 229-246.
- Beresford, A.K.C. & Dubey, R.C., 1990, *Handbook on the management and operations of dry ports*, UNCTAD, RDP/LDC/7, Geneva, Switzerland.
- Castro, C., 1999, "Containerization, logistics cost and facilitation", Paper presented at the World Bank/ESCAP Regional Technical Workshop on Transport and Transit Facilitation, Bangkok, 19-21 April 1999.
- Christopher, M., 1998, *Logistics and Supply Chain Management*, Prentice Hall, Harlow.
- ESCAP and United Nations Development Programme, 2003, *Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenges of Poverty Reduction* (United Nations publication, ST/ESCAP/2253, Sales No. E.03.II.F.29).
- ESCAP, *Transport Planning for Landlocked Countries: Transit Issues and Border-crossing Issues* (ST/ESCAP/1484).
- ESCAP, 2003, *Economic and Social Survey of Asia and the Pacific 2003* (United Nations publication, ST/ESCAP/2233, Sales No. E.03.II.F.11).
- ESCAP, 2001, *Review of Developments in Transport and Communications in the ESCAP Region, 1996-2001* (ST/ESCAP/2157).
- Fowkes, A.S., Nash, C.A. & Tweddle, G., 1989, "Valuing the attributes of freight transport quality: Results of the Stated Preference Survey", Institute For Transport Studies, University of Leeds Working Paper 276.
- Hayuth, Y., 1992, "Multimodal Freight Transport". *Modern Transport Geography*, Hoyle B & Knowles R (Eds.), Belhaven, London, pp. 199-215.
- Hayuth, Y., 1985, "Freight Modal-Split Analysis of Air and Sea Transportation". *Logistics and Transportation Review*, 21(4), pp. 389-402.
- Jung, T.Y. & Beresford A.K.C., 1994, "Intermodal Development on China's Railways", Occasional Papers No. 24, Department of Maritime Studies and International Transport, Cardiff University.

- Kopicki, R., 1999, "Government support of efficient supply chains". Paper presented at the World Bank/ESCAP Regional Technical Workshop on Transport and Transit Facilitation, Bangkok, 19-21 April 1999.
- Levander, K., 1993, "The potential for fast ships in European freight transport". *European short sea shipping*; Wijnost N, Peeters C & Liebman P (Eds.), Lloyd's of London Press, London, pp. 22-39.
- Liberatore, M.J. & Miller, T., 1995, "A decision support approach for transport carrier and mode selection". *Journal of Business Logistics*, 16 (2), pp. 85-115.
- Marlow, P.B. & Boerne G.L., 1992, "The Case for Inter-modalism in Freight Transport", Occasional Papers No. 4, Department of Maritime Studies and International Transport, Cardiff University.
- Min, H., 1991, "International intermodal choice via chance-constrained goal programming". *Transportation Research A*, 25A (6), pp. 351-362.
- Moskowitz H., 1987, "Decision Analysis", in: *Operations Research-Principles and Practice*; Ravindran A, Phillips DT & Solberg JJ (Eds.), John Wiley & Sons, New York, pp. 221-249.
- Rosenhead J., 1989, "Robustness analysis: keeping your options open", in: *Rational Analysis for a Problematic World*; Rosenhead J (Ed.), John Wiley & Sons, Chichester, pp. 193-218.
- TRACECA Basic Multilateral Agreement, <http://www.traceca.org/mla/mlae.pdf>
- UNCTAD, Report of the Second Meeting of Governmental Experts from Land-locked and Transit Developing Countries and Representatives of Donor Countries and Financial and Development Institutions, New York, 19 – 22 June 1995.
- Yan, S., Bernstein, D. & Sheffi, Y., 1995, "Intermodal pricing using network flow techniques". *Transportation Research B*, 29B, pp. 171-180.

Central Asia

- Asian Development Bank, 1998, Regional Economic Cooperation in Central Asia.
- Asian Development Bank, 1999, First Workshop on Economic Cooperation in Central Asia: Challenges and Opportunities in Transportation.
- Sanaullah, "Improvement of Transit Systems in Central Asia", background paper for the Sixth Meeting of Governmental Experts from Landlocked and Transit Developing Countries and Representatives of Donor Countries and Financial and Development Institutions and the First session of the Intergovernmental Preparatory Committee of the International Ministerial Conference on Transit Transport Cooperation, New York, 23-27 June 2003. (UNCTAD/LDC/2003/5, 7 April 2003).
- TRACECA, Intermodal Service Project: Final Report 2001.
- TRACECA, Border Harmonization Evaluation Workshop, Baku, September 2002.
- Economic Cooperation Organization, "Transport and Communications in ECO Region: Prospects and Challenges", 4th Ministerial Meeting on Transport & Communications, September 2002.
- Molnar, E. and Lauri Ojala, "Transport and Trade Facilitation (TTF) issues in the CIS7, Kazakhstan and Turkmenistan" draft paper Feb. 18, 2003, Energy and Infrastructure Sector Department, Europe and Central Asia Region, World Bank.
- World Bank web site,
<http://wbln0018.worldbank.org/ECA/Transport.nsf/Countries/Kazakhstan?Opendocument>.
- World Road Transport Organization (IRU), "Barriers to International Road Transport in the CIS Member States", Moscow, August 2000.

Lao People's Democratic Republic

- Bouaphanh, K. and S. Kommasith, "Review of the Vientiane Plan of Action on Measures designed to Improve Transit Transport Systems of the Lao People's Democratic Republic", paper presented at the United Nations Conference on Trade and Development, Second Specific Consultative Meeting on the Transit Transport Systems of the Lao People's Democratic Republic, 15-16 January 2003, Vientiane (UNCTAD/LDC/Misc.88).
- Cabanius, P. and K. Bouaphanh, Review of Progress in the Developments of Transit Transport Systems in South-East Asia, 13 June 2001, UNCTAD/LDC/110, report prepared for the Meeting of Governmental Experts from Landlocked and Transit Developing Countries and Representatives of Donor Countries Financial and Development Institutions.
- ESCAP, 2002, Trade Facilitation Handbook for the Greater Mekong Subregion, ST/ESCAP/2224, New York, <http://www.unescap.org/itid/publication/t%26ipub2224.htm>.
- Hoc, Dang Thi, Deputy Director General, International Relations Department, Ministry of Transport, "Report on Transit Transport Issues in Vietnam", paper prepared under UNESCAP project "Transit Transport Issues in Landlocked and Transit Developing Countries", 2003.
- Ministry of Communications, Transport, Posts and Construction, Government of the Lao People's Democratic Republic, "Country Report on Asian Highway Network Development", October 2001.
- Ministry of Transport, Government of Thailand, "Thailand Country Paper", presented at the ESCAP Subregional Seminar on International Transit Transport under TIR System, Kunming, 23-25 September 2002.

Mongolia

- ESCAP, Report on advisory services to Mongolia on land transport development policy, 5-17 December 2002, Unpublished.
- Future Development of Sea Transportation Corridors in North East Asia*, paper presented at the 3rd Northeast Asia Port Director-General Meeting, September 12-18, 2002, China.
- Government of Mongolia, National Statistical Office, accessible at http://www.nso.mn/yearbook/2001/sect_12.pdf (26 June 2003).
- UNCTAD, "Draft transit framework agreement between the People's Republic of China, Mongolia and the Russian Federation" (UNCTAD/LDC/Misc.47/Add.3).
- UNCTAD, "Report of the third negotiating meeting on the draft transit framework agreement between the People's Republic of China, Mongolia and the Russian Federation" (UNCTAD/LDC/Misc.81).
- World Bank Country Brief on Mongolia, available at <http://www.worldbank.org/eap/eap.nsf/Countries/Mongolia/075015C0507B45BD85256C7000653113?OpenDocument> (26 June 2003).

Nepal

- Federation of Nepalese Chamber of Commerce and Industry (FNCCI), "*Transit-Transport Systems in Bangladesh, particularly in reference to its importance for Nepal's Traffic-in -Transit*", Study Report, November 2000.
- Government of India and His Majesty's Government of Nepal, "Treaty of Transit" (1999), <http://www.tcpnepal.org.np/tagree/main.htm> (14 June 2003).
- Goyal, A. R., Deputy Secretary, Ministry of Commerce and Industry, Government of India, paper presented at the Subregional Seminar on Transit Transport Issues of Landlocked and Transit Developing Countries: South Asia", 3-4 April 2003.

- His Majesty's Government of Nepal, Ministry of Physical Planning, Department of Roads, Country Report on Asian Highway Development in Nepal, presented at the UNESCAP Expert Group Meeting on Development of Asian Highway Network, 8-11 May 2002, Bangkok.
- His Majesty's Government of Nepal, Ministry of Industry, Commerce and Supplies, Nepal Multimodal Transit and Trade Facilitation Project; progress report, September 2002.
- Karmacharya, Binod K., "ADB's Subregional Cooperation in South Asia and the Transport Sector", paper presented at the Subregional Seminar on Transit Transport Issues of Landlocked and Transit Developing Countries: South Asia", 3-4 April 2003.
- Kolkata Port Trust, Planning Department, His Majesty's Government of Nepal, "Kolkata Port: A Humble Partner Contributing to the Development of Nepal", February 2003.
- Lama, Namgyal, President of the Nepal Freight Forwarders Association (NEFFA), "Trade and Transit", paper presented at the Subregional Seminar on Transit Transport Issues of Landlocked and Transit Developing Countries: South Asia", 3-4 April 2003.
- Nepal Rastra Bank, "Press communiqué of Nepal Rastra Bank on the recent macroeconomic situation of Nepal" available at http://www.nrb.org.np/press/Recent_Macroeconomic_Situation_of_Nepal--205910-english.pdf (14 June 2003).
- Ojha, Purushottam, Joint Secretary, His Majesty's Government of Nepal, Ministry of Industry, Commerce and Supplies, "Development of Transit Transport System in Nepal", paper presented at the Subregional Seminar on Transit Transport Issues of Landlocked and Transit Developing Countries: South Asia", 3-4 April 2003.
- Rauniar, R. B., Presentation on transit issues of landlocked countries, presented at the Subregional Seminar on Transit Transport Issues of Landlocked and Transit Developing Countries: South Asia", 3-4 April 2003.
- SAARC, "A Guide on Imports and Exports Procedure and Documentation" available at <http://www.saarcnet.org/newsarcnet/govtpolicies/nepal/final.htm> (14 June 2003).
- Subramanian, Uma and John Arnold, "Forging Subregional Links in Transportation and Logistics in South Asia", World Bank, January 2001.
- Trade Promotion Centre, "Nepal's Trade & Transit Agreements", Patan, 1999.
- UNCTAD, Chakra Infrastructure Consultants Pvt. Ltd., "Review of Progress in the development of transit transport systems in the India, Nepal and Bhutan Subregion", (2 July 2001, UNCTAD/LDC/114), Paper prepared for the Fifth Meeting of Governmental Experts from Landlocked and Transit Developing Countries and Representatives of Donor Countries and Financial and Development Institutions, New York, 30 July – 3 August 2001.
- World Bank/ESCAP, "Proceedings of the Regional Technical Workshop on Transportation and Transit Facilitation – Regional Initiative on Transport Integration South Asia Region", Vol.I Summary, Bangkok, April 19 – 21 1999.