



IV. REGIONAL COOPERATION IN TRANSPORT

INTRODUCTION

Transport systems worldwide are undergoing rapid change. Globalization has created a demand for goods and services that makes improved infrastructure and more efficient transport systems a precondition for economic development.

Transport is important in enabling a country to effectively take part in the globalization process

The role of transport in economic development is usually discussed in relation to its contribution to carrying goods and people domestically and internationally. The ability of a country, particularly its more isolated communities, to participate in trade depends on how effectively its transport and communications infrastructure gives it access to the global trading system. Just as liberalization of trade can open new markets for developing countries, efficient transport systems and routes can increase the volume of trade and the movement of people, thus contributing to higher growth. Appropriate transport costs, timely delivery and the quality service are essential factors for improving the competitiveness of exports.

Globalization, however, has introduced new technology, more market-oriented policies and changes in consumption patterns. At the same time, growing environmental concerns are prompting the introduction of new standards for exhaust emissions and other measures which will also influence the transport sector's growth.

Regional cooperation in this sector calls for well-integrated policies and the fulfilment of three main objectives:

- (a) Identifying primary constraints in transport-related areas that hinder the growth of regional trade;
- (b) Identifying measures that can be taken to enhance the efficiency of the sector;
- (c) Examining the options for financing the construction and subsequent maintenance of infrastructure projects.

Regional Cooperation in transport sector deals with identification of constraints, measures to enhance efficiency, options of financing and maintenance of infrastructure

Issues such as coordinating various modes of transport, transport development and safety have also come to the forefront in regional discussions. Cooperation in this sector lies mainly in formulating appropriate policies, developing infrastructure and facilitating the movement of goods and services.

The obstacles to regional transport range from inadequate infrastructure to red tape and lack of suitable intermodal connection facilities including consolidation and distribution centres

Asia-Pacific countries will have difficulty in developing markets within and outside the region if they do not remove obstacles to transport which significantly raise the cost of doing business and weaken the competitiveness of goods. Such obstacles range from inadequate infrastructure and red tape to corruption in customs, restrictive bilateral protocols on the cross-border movement of vehicles, delays and pilferage in ports and lack of safe warehouses. In particular, these issues could prevent the region's landlocked countries from benefiting fully from liberalized trade.

Reduced maritime transport costs and the speed and ease with which containers and their contents can be moved between one mode of transport and another have created new possibilities for global sourcing in production. In turn, this has provided the opportunity to explore national and regional comparative advantages and has been a major driving force of economic development. However, in many Asia-Pacific countries institutional and infrastructural bottlenecks have meant that economic development has been largely confined to urban areas and coastline corridors, which have easy access to international maritime transport. Broad-based economic development through globalization makes it vital to remove the bottlenecks and create cost-effective maritime and land transport links with access to a wider domestic hinterland.

Since the early 1990s there has been a notable increase in transport cooperation among nations in Asia and the Pacific

Until recently, conditions were not conducive to the development of intra- and interregional land transport linkages in the Asian and Pacific region. Conflicts and lack of trust caused considerable damage to land transport infrastructure in many countries and created barriers to international land transport. Since the early 1990s there has been a notable increase in cooperation among nations in Asia and the Pacific. Most regional groups such as ASEAN, SAARC, the Pacific Islands Forum and ECO have action plans to improve transport in their respective subregions. In addition to these activities, ESCAP has taken a number of initiatives to extend maritime and land transport links to facilitate the movement of vehicles and goods across borders. Other organizations such as ADB also have region-wide transport programmes.

Since 1992, ESCAP has pursued the Asian land infrastructure development (ALTID) project (see box IV.1), consisting of the Asian Highway and Trans-Asian Railway projects. These integrated networks demonstrate the commitment of the region's mainland countries to open routes that would facilitate intraregional trade and provide easy access

Box IV.1. Asian land transport infrastructure development

Recognizing the vital role of transport in enhancing economic and social development, ESCAP is promoting the integrated project on Asian land transport infrastructure development (ALTID). Its main objective is to assist member countries in providing reliable and efficient land transport linkages within the region as well as linkages with Europe and Western Asia.

The project was endorsed in 1992 to implement the Asian Highway and Trans-Asian Railway projects. It seeks to develop land bridges that connect adjoining regions and bring into force international conventions that facilitate the cross-border movement of goods and people in transit. It also seeks to develop a regional interactive policy for sustainable and safe transport. ALTID seeks to maximize the use of existing land transport infrastructure, minimize the number of lines and routes to be included in the network, establish efficient cooperative arrangements at the subregional level and optimize the use of the limited resources available.

The project is carried out in close cooperation with national government officials, ECE, ESCWA, ADB, ASEAN, ECO, SAARC, SPECA, BIMST-EC and other international organizations. ESCAP plays a coordinating role in supporting its member countries by formulating and implementing national, regional and interregional transport initiatives called for under the New Delhi Action Plan (1997-2001) and the Regional Action Programme (2002-2006). ESCAP provides countries with practical guidelines on routes, networks, technical standards and requirements for the development of national highway and railway routes of international importance.

The Asian Highway project was conceived in 1959 and has since made considerable progress. Road networks have been identified, revised and formulated. International border-crossing facilitation measures have also been introduced. National networks, road classification and technical and design standards were reviewed and revised regularly to constitute a general guideline for the construction, improvement and maintenance of highways. Other major indicators of success to date include the introduction of the Asian Highway database and the adoption of the Intergovernmental Agreement on the Asian Highway Network. The Agreement lays down modalities for proposing new routes and a mechanism for dispute settlement and withdrawal from the Agreement. It marks a major step towards the realization of a massive land transport network linking the region's capital cities, tourism sites, industrial and agricultural centres and sea and river ports.

The Trans-Asian Railway, conceived in early 1960s, has identified four major transport corridors which reflect all major intra-Asian and Asia-Europe land bridges:

- **Northern Corridor (Korean Peninsula to Europe)**

Belarus, China, Germany, Korean Peninsula, Mongolia, Poland, Russian Federation

- **Southern Corridor (South-East Asia to Europe)**

Bangladesh, China, India, Islamic Republic of Iran, Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Thailand, Turkey

- **Indo-China and ASEAN subregions**

Cambodia, China (Yunnan Province), Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Singapore, Thailand, Viet Nam

- **North-South Corridor (Northern Europe to the Persian Gulf)**

Finland, Russian Federation, Armenia, Azerbaijan, India, Islamic Republic of Iran, Kazakhstan, Pakistan, Turkmenistan, Uzbekistan

A major achievement was the construction of the Bafgh-Bandar Abbas (1995) and Mashad-Sarakhs (1996) rail links in the Islamic Republic of Iran. The Mashad-Sarakhs railway line completed the "New Silk Railway" linking China and Central Asia with Europe via the Islamic Republic of Iran and Turkey. The project provides the landlocked countries of Central Asia with rail access to seaports in the latter two countries. Recently, ESCAP developed a programme of action aimed at running container block trains along designated routes linking the Korean Peninsula to the heart of Europe. In June 2003, a cross-border rail link was reconnected between the Democratic People's Republic of Korea and the Republic of Korea. This demonstrates the significant political will being mobilized to complete the missing link on the Trans-Asian Railway Northern Corridor and operationalize all routes in that Corridor. The current phase of the project seeks to introduce cooperation agreements among railway organizations on Trans-Asian Railway routes.

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The efforts developed by ESCAP under the ALTID project will help countries to enhance their competitiveness, increase international trade and investment flows and promote greater development cooperation with their neighbours. The rail networks can be of great benefit to each country, particularly landlocked countries which have had no access to seaports. The project marks the promotion of friendly and cooperative relations between the Governments and people of the ESCAP region. The next challenge is to bring these efforts into operation in a coordinated manner.

Sources: ESCAP, *A Review of Regional and Subregional Agreements on Land Transport Routes: Issues and Alternative Frameworks*, (United Nations publication, Sales No. E.00.II.F.36); *Multistage Environmental and Social Impact Assessment of Road Projects: Guidelines for a Comprehensive Process* (United Nations publication, Sales No. E.02.II.F.35); *Road Transport and the Environment: Areas of Concern for the Asian and Pacific Region* (ST/ESCAP/1840); *Review of Developments in Transport and Communications in the ESCAP Region 1996-2001* (ST/ESCAP/2157); "Seoul Declaration on Infrastructure Development in Asia and the Pacific", Declaration of the ESCAP Ministerial Conference on Infrastructure, Seoul, 12-17 November 2001, <<http://www.unescap.org/tctd/seoul2001/seouldeclaration.htm>>; and *Regional Action Programme Phase II, 2002-2006*, <<http://www.unescap.org/tctd/rap/rap.htm>> and <<http://www.unescap.org/tctd/lt/altid.htm>>, 20 November 2003.

to a massive hinterland, much of which remains almost untouched by economic development. These planned transport corridors will also enhance links between Asia and the markets of Europe and North America through integrated land-and-sea routes. ESCAP's New Delhi Action Plan on Infrastructure Development in Asia and the Pacific (1997-2001) and Regional Action Programme of the New Delhi Action Plan (2002-2006) and the Almaty Programme of Action (2003) have also supported national and regional transport initiatives.

A. ISSUES IN TRANSPORT COOPERATION

To improve the efficiency of the transport sector and gain more benefits from regional and multilateral trade,¹ Asia-Pacific countries need to:

- Improve transport infrastructure and facilities;
- Improve logistical capabilities;
- Remove non-physical barriers;
- Reform transport services formulating clear policy guidelines;
- Develop human and institutional capacity.

The private sector can successfully finance, develop, manage and operate infrastructure previously left to the public sector

Key requirements for improving transport infrastructure and facilities are to optimize efficiency in the use of existing resources and assets and encourage new investment to widen the transport network. Experience has shown that the private sector can successfully finance, develop, manage and operate infrastructure that would traditionally have

¹ ESCAP, "Role of transport in integrating economies into the multilateral trading system", in *Development through Globalization and Partnership in the Twenty-first Century: An Asia-Pacific Perspective for Integrating Developing Countries and Economies in Transition into the International Trading System on a Fair and Equitable Basis* (ST/ESCAP/2054), pp. 155-180.

been within the domain of the public sector.² However, the success of public-private partnerships in this context depends on clear identification of objectives, legislative and institutional changes, selection and prioritizing of specific project opportunities, parallel public sector investment in supporting infrastructure and upgrading of existing in-house management. These partnerships also require a demonstration of political commitment and, importantly, the support of the population at large for change.

However, public sector experience is valuable

One major obstacle identified by the private sector as inhibiting its involvement in regional projects is the lack of a clear legal framework for its participation, covering ownership, corporate law, accounting practice, adequate flexibility regarding pricing and taxation. Government acceptance of risk-sharing between the public and private sector players is also important to attract private investment in such projects.

Transport facilitation and transit agreements are important to remove non-physical barriers along sea and land routes, including border crossings. Agreements reached by subregional groupings such as ASEAN and ECO can make a significant contribution to the removal of non-physical barriers to the movement of vehicles and goods across borders within the subregional groupings.³ However, inconsistencies among individual agreements can cause confusion and conflicts in interpretation. This problem also arises in cases where the same countries are signatories to two or more different agreements through their membership in overlapping groupings, such as ASEAN and the Greater Mekong Subregion (GMS).⁴ Until all countries are in a position to accede to international facilitation conventions, bottlenecks at border crossings will continue to add to transport costs.

Transport facilitation and transit agreements are important to remove non-physical barriers along sea and land routes, including border crossings

Fierce competition for markets has forced manufacturers to integrate production and transport logistic strategies in order to reduce costs and provide higher service standards. Transport and distribution-related activities, once considered secondary to production, are now being integrated in a process that starts with the collection of raw materials and ends with distribution and delivery of the manufactured product to the final consumer anywhere in the world. The use of reliable and time-definite, door-to-door, freight-forwarding and multimodal transport services increases competitiveness and business. A challenge for developing economies seeking to be integrated into the multilateral trading system is therefore to link up with global transport

Need for strategies for supply chain management in production and timely delivery of goods

² This does not mean that public sector can not successfully operate infrastructure and public sector experience can be a valuable resource.

³ For example, the ASEAN Framework Agreement on the Facilitation of Goods in Transit, the ASEAN Framework Agreement on the Facilitation of Inter-State Transport, the ECO Transit Trade Agreement and Eco Transit Transport Framework Agreement.

⁴ ESCAP, op. cit.

and logistical services. Partnerships may be the best option available to combat strong competition and develop a global network. The use of ICT, especially e-commerce, can give an added advantage in this respect, and countries need to develop a comprehensive framework encompassing trade, transport and ICT to face the challenges of globalization.

Logistics management in the maritime sector depends on increasingly close interdependence among shipowners, shippers and ports

Logistics management is becoming increasingly important to the maritime sector, driven by the advance of containerization and the gradual replacement of conventional cargo systems. As a result, the maritime sector is seeing increasingly close interdependence among the key players: shipowners, shippers and ports. The traditional port services of loading and discharging now need to be backed up by total logistics solutions in order to meet the sophisticated requirements of global shippers. Freight forwarding is also undergoing change. Some countries' forwarders provide only basic services but others have moved beyond multimodal transport to provide logistics services. The growth of the freight-forwarding industry leads to trade facilitation and greater efficiency in transporting goods. Regional cooperation in developing a proper system will prove useful, especially for landlocked countries which use the ports of different countries. Developing countries face a policy dilemma in ensuring access to competitive shipping services while promoting national shipping fleets and related interests. Overall liberalization of trade and trade services creates a need for a clear understanding of the role of government in a deregulated maritime environment.

Countries are negotiating liberalization of maritime services under GATS

Liberalization of maritime services is included for negotiation under GATS. Negotiations were originally due to end in June 1996 but participants failed to agree on commitments and further talks were needed. Talks have resumed as part of the new services round, which started in 2000. The three main areas in this sector are access to and use of port facilities, auxiliary services and ocean transport.⁵ To enhance the benefits of liberalized maritime services, the scope of negotiations may be extended beyond auxiliary services and ports to include issues such as multimodal transport, inland waterways and the land transport dimension in international maritime transport. Countries in the region still need time to prepare for this expanded agenda as there are associated risks which may affect their domestic economies.⁶ At the same time, they also need to participate actively in negotiations to ensure that the outcome reflects the region's needs.

Another challenge for developing countries in the meantime is to provide training to upgrade human resources in the transport sector. Programmes to upgrade skills need to be fully integrated into overall

⁵ For more details, see WTO web site <<http://www.wto.org>>.

⁶ ESCAP, op. cit.

infrastructure development plans. The planning, design, operation and maintenance of infrastructure facilities all require the availability of appropriate skills. The training of seafarers is also needed by the shipping industry. Moreover, new skills are required to handle freight forwarding, multimodal transport and logistics management. Investment in human resources development is recognized as one of the most fundamental and cost-effective factors contributing to economic growth. Countries should consider regional cooperation in this context.

Attention needs to be paid to human resources development to improve transport operations

B. SELECTED REGIONAL COOPERATION IN THE TRANSPORT SECTOR

Transport in the Asia-Pacific region already has much to its credit. A general feature is the priority given by transport networks to serving industrial and economic activity in the vicinity of international seaports. Attention has been given to improving the regional transport network. In developing the route network, particular emphasis has been given to design, standards and safety. More recently, countries of the region have paid attention to transit transport at border crossings, and subregional groups have signed several agreements, conventions and protocols to facilitate cooperation on this issue.⁷ Asia-Pacific countries are also cooperating in the maritime sector.

More recently, countries have paid attention to transit transport at border crossings

1. TRANSPORT COOPERATION IN ASEAN

Cooperation among selected ASEAN members started with a multilateral agreement on non-scheduled commercial flights in 1971 and an agreement on searching for aircraft in distress and rescuing survivors of accidents in 1972.⁸ Similar agreements for marine transport followed in 1975.⁹ In the 1980s increased intraregional movement of vehicles made a common driving licence necessary and Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand agreed in 1985 to recognize each others' domestic driving licences.

The major move towards cooperation in transport came through the ASEAN Plan of Action in Transport and Communications (1994-1996). Its major objectives were to:

⁷ In order to deal with the continuing problems faced by landlocked and transit developing countries and to improve their transit transport systems the International Ministerial Conference (held in Almaty, Kazakhstan, 2003) addressed the special needs and problems of these countries in integrating effectively into the world economy. The conference adopted the Almaty Programme of Action, which aims to forge partnerships to overcome the difficulties encountered by landlocked countries due to their lack of territorial access to sea and remoteness from world markets.

⁸ The details of these agreements are available from the ASEAN web site, <<http://www.aseansec.org/7370.htm>>.

⁹ Agreement for Facilitating the Search for Ships in Distress and the Rescue of Survivors of Ship Accidents, <<http://www.aseansec.org/7371.htm>>.

ASEAN Plans of Action in Transport and Communications are the foundation for cooperation among member countries in the group

- Develop multimodal transport and trade facilitation to allow door-to-door delivery of goods, thus reducing the time and cost of marketing and distribution;
- Develop interconnectivity in telecommunications, fixed and mobile voice, data and electronic data interchange services for trade and business communications, enhanced land, sea and air transport to ensure interconnectivity and harmonization of telecommunication services between ASEAN countries and between ASEAN and global networks;
- Harmonize road transport laws to facilitate movement across land borders;
- Improve air management to increase the efficiency of airspace utilization;
- Develop ASEAN rules for the carriage of dangerous goods and industrial waste on land and by sea to ensure safety and avoid spillage;
- Develop human resources in the transport and communication sectors to increase operational efficiency and capacity utilization.

Projects and activities under each programme have been designed and implemented under the Integrated Implementation Programme for the ASEAN Plan of Action in Transport and Communications (1997).¹⁰ The Programme has received technical assistance and some financial support from a variety of countries, including technical assistance for an open-skies study from Australia, human resources development in river transport and road traffic management from China and Belgium, studies on the maritime sector, road safety, intelligent transport systems and urban transport from Japan, studies on highway construction from the Republic of Korea and planning for handling dangerous goods in ports from Germany. ADB and the International Maritime Organization (IMO) also provided technical assistance in road safety studies and the accession of ASEAN countries to IMO conventions respectively.

ASEAN has concluded agreements on Transit Trade in 1998 to spread the benefits of AFTA

ASEAN has also concluded agreements on transit trade (1998) and recognition of vehicle inspection certificates (1998).¹¹ The agreements show that ASEAN countries recognize the value of transport integration where common infrastructure will be used extensively to spread the benefits of AFTA. Projects such as the ASEAN highway network also reflect the existence of institutional mechanisms to help to identify strategic routes and ensure uniform technical design standards and compatibility with ASEAN road safety standards.

¹⁰ ASEAN web site <<http://www.aseansec.org/7375.htm>>, 20 November 2003.

¹¹ ASEAN web site <<http://www.aseansec.org/7376.htm>>, 20 November 2003.

ASEAN's wide-ranging cooperation on transport in its region (consisting of six agreements, two plans of action, three ministerial declarations and two extraregional cooperation agreements with China and Japan) highlights the importance of interconnectivity in strengthening the capacity of member countries to manage globalization. Moreover, the plans of action give member countries a common level of transport and regulation, enhancing the mobility of goods and passengers. These initiatives generate employment, increase socio-economic benefits and help the economies to integrate. ASEAN leaders at their Eighth Summit in 2002 emphasized that liberalization of intra-ASEAN trade in services required stronger transport links, interconnecting telecommunications, increasing use of ICT and the liberalization of investments in these sectors.

ASEAN Cooperation highlights strengthening of interconnectivity and capacity building to manage globalization

2. COOPERATION IN TRANSPORT AND RELATED ISSUES IN ECO

The development of a reliable and efficient transport network in the ECO region will be a high priority in the new Millennium. Many ECO countries are landlocked, making transport an integral part of their development. The transit transport agreement mentioned previously emphasizes, among other points, designation of transit routes (road, rail and water routes), improvement of the transit infrastructure (north-south and east-west corridors, postal and telephone links), identification and upgrading of some existing routes and encouragement of combined and multimodal transport based on internationally recognized procedures. Efforts are also being made to develop transport linkages within and beyond the ECO region, as well as to remove physical, procedural and administrative obstacles to the free flow of road, rail and air transport. Steps towards the implementation of the Almaty Outline Plan for the Development of the Transport Sector in the ECO region and the Programme of Action for the ECO Decade of Transport and Communications (1998-2007) and the ratification of the Transit Transport Framework Agreement (1998) are being undertaken.¹²

Transit Transport Framework Agreement of ECO was signed in 1998

A major effort to develop railways began in the ECO region in the 1990s,¹³ adding 4,000 km to the rail network between 1994 and 1999, although rail-carried freight did not increase between 1995 and 1998, except in the Islamic Republic of Iran and Azerbaijan. Meanwhile, the road network only increased significantly in Pakistan and Turkey in the second half of the 1990s.¹⁴

Despite the importance of transport to ECO in managing and profiting from globalization, many member countries are slow to ratify transport and communications conventions.¹⁵ Networking with other subregional groups may be useful on issues such as institutional development, private sector financing and coordinating different modes of transport.

The slow pace of ratification of transport and communication conventions hinders the growth of intraregional trade

¹² ECO, *Annual Economic Report 2000* (Tehran, 2001).

¹³ These connections help ECO countries access the ports in China, Iran and Turkey.

¹⁴ ECO, op. cit.

¹⁵ Ibid.

Air connectivity is important for Pacific Islands Forum countries; regional cooperation issues include safety, airspace management and promoting airfreight for exports

3. TRANSPORT COOPERATION IN PACIFIC ISLAND COUNTRIES

For faster communication, the Pacific Islands Forum formulated the Forum Aviation Action Plan in 1998 and then, after reviews in 1999 and 2001, adopted a new action plan in 2003.¹⁶ The 1998 action plan was aimed at encouraging trade, investment and tourism in the island countries but focused mainly on cost-effective airspace management and enhancing competition through the participation of the private sector. The 1999 and 2001 reviews emphasized safety and the use of new technologies. After a major overhaul, Forum ministers committed themselves in 2003 to implementing the new plan, which focuses on four areas: economic regulation and liberalization, oversight of regional safety regulations, airspace management and airfreight for export promotion.

The ministers agreed that collaborative effort was required to enhance safety and assistance is being sought to improve airspace management and airport infrastructure development.

4. TRANSPORT AND INFRASTRUCTURE DEVELOPMENT COOPERATION IN SAARC

SAARC members recognized the inadequacy of infrastructure in the South Asian subregion at their Ninth Summit in 1997 and the following year agreed to modernize telecommunications, including simplifying regulations and tariffs. The group set up a Technical Committee on Communications and Transport¹⁷ with a plan of action to develop transport, telecommunications and postal services. The former Technical Committee on Transport worked towards exchanging data and information, compiling databases and directories, organizing seminars and workshops and conducting training courses.

SAARC gives priority to modernizing telecommunications but improved transit transport has also become important with the signing of SAFTA

Under the direction of SAARC's Council of Ministers, the group's Committee on Economic Cooperation looked closely at ways to improve transport infrastructure and transit facilities in the 1990s, but a comprehensive agreement has yet to be developed. The creation of SAFTA, however, gives even greater importance to the role of the transport sector. The Islamabad Declaration (2004)¹⁸ emphasizes the need to accelerate cooperation and the participation of the private sector through joint ventures.

¹⁶ Forum Secretariat documents on the aviation sector available at the Forum Secretariat web site, <<http://www.forumsec.org.fj/Home.htm>>, 20 November 2003.

¹⁷ Earlier, two technical committees on telecommunications and transport existed; they were merged into one.

¹⁸ This was announced during the Twelfth SAARC Summit, held at Islamabad from 4 to 6 January 2004.

5. ESCAP'S INITIATIVES IN TRANSPORT COOPERATION

ESCAP has worked extensively in the transport sector and promoted regional development cooperation as an effective means for countries to meet the emerging challenges of globalization. The most significant transport projects promoted by ESCAP are the Asian Highway and the Trans-Asian Railway, which together provide a web of transport links spanning the region.

The Intergovernmental Agreement on the Asian Highway Network was finally adopted in November 2003 after years of work and consensus-building. It identifies roads to be developed as international highways linked to the road networks of other countries, and contains agreed designs and standards. For the first time, countries made a formal commitment to the linkages and alignment of highways totalling over 140,000 km and connecting 32 member countries (see Asian Highway route map).

The Trans-Asian Railway network, cutting across the entire Asian continent, offers a land transport alternative which connects Asian markets with Europe and facilitates intraregional and interregional movements. The network was updated in 2003 to include new linkages proposed by member countries and now comprises 80,000 km of tracks in 25 countries (see Trans-Asian railway network map).

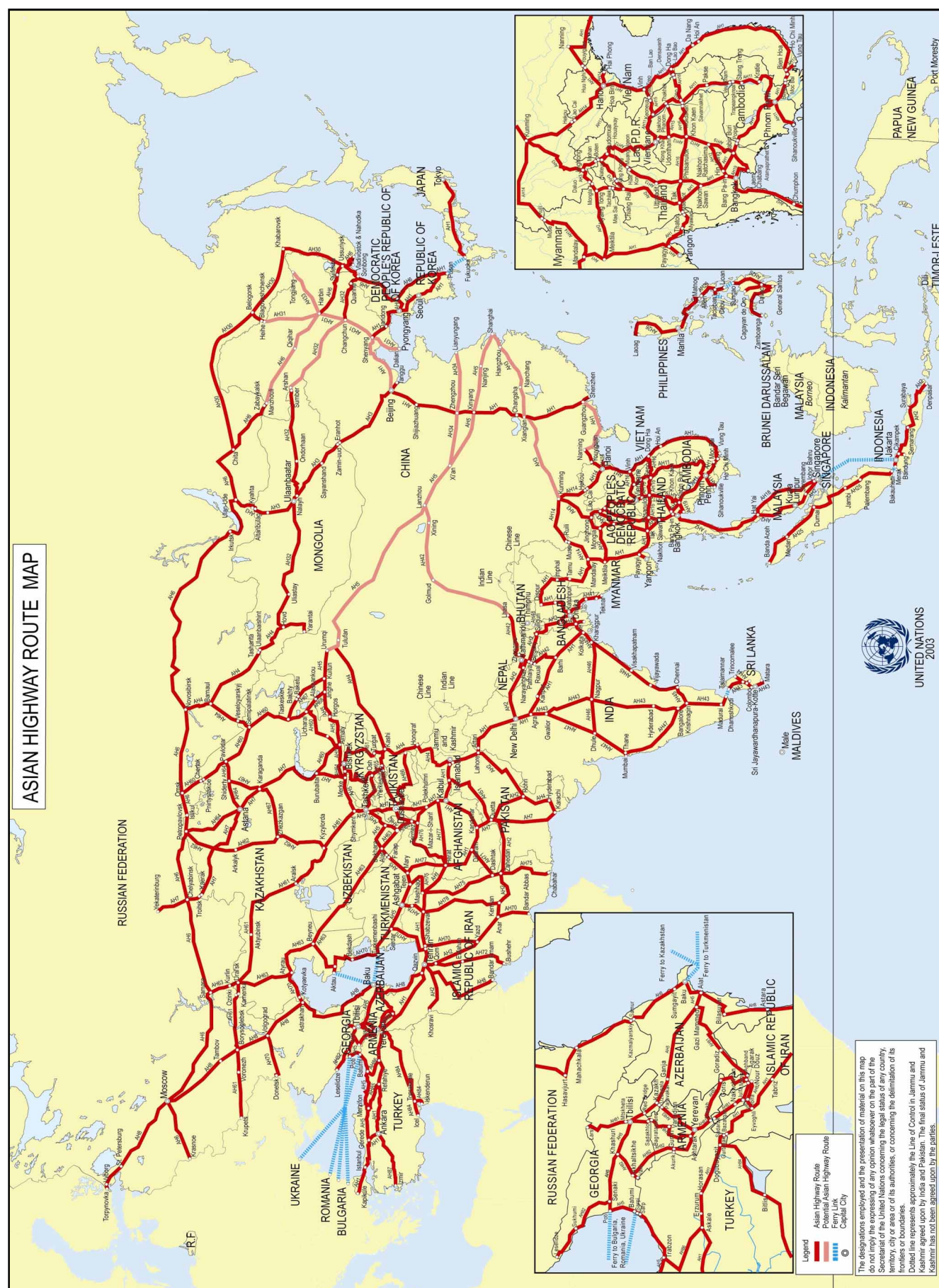
Both systems provide valuable links to ports for landlocked countries. The Trans-Asian Railway gives Central Asian countries access to ports in the Islamic Republic of Iran and Turkey, while giving Mongolia access to ports in China and the Russian Federation. The Asian Highway plays a similar role for Bhutan, the Lao People's Democratic Republic and Nepal, where rail transport is not extensively developed. Bhutan and Nepal have access to ports in Bangladesh and India; the Lao People's Democratic Republic is linked to ports in Thailand, Viet Nam and China, and will be linked to Myanmar possibly at a later stage. The Asian Highway will help these countries to have quicker and smoother access to seaports in other countries.

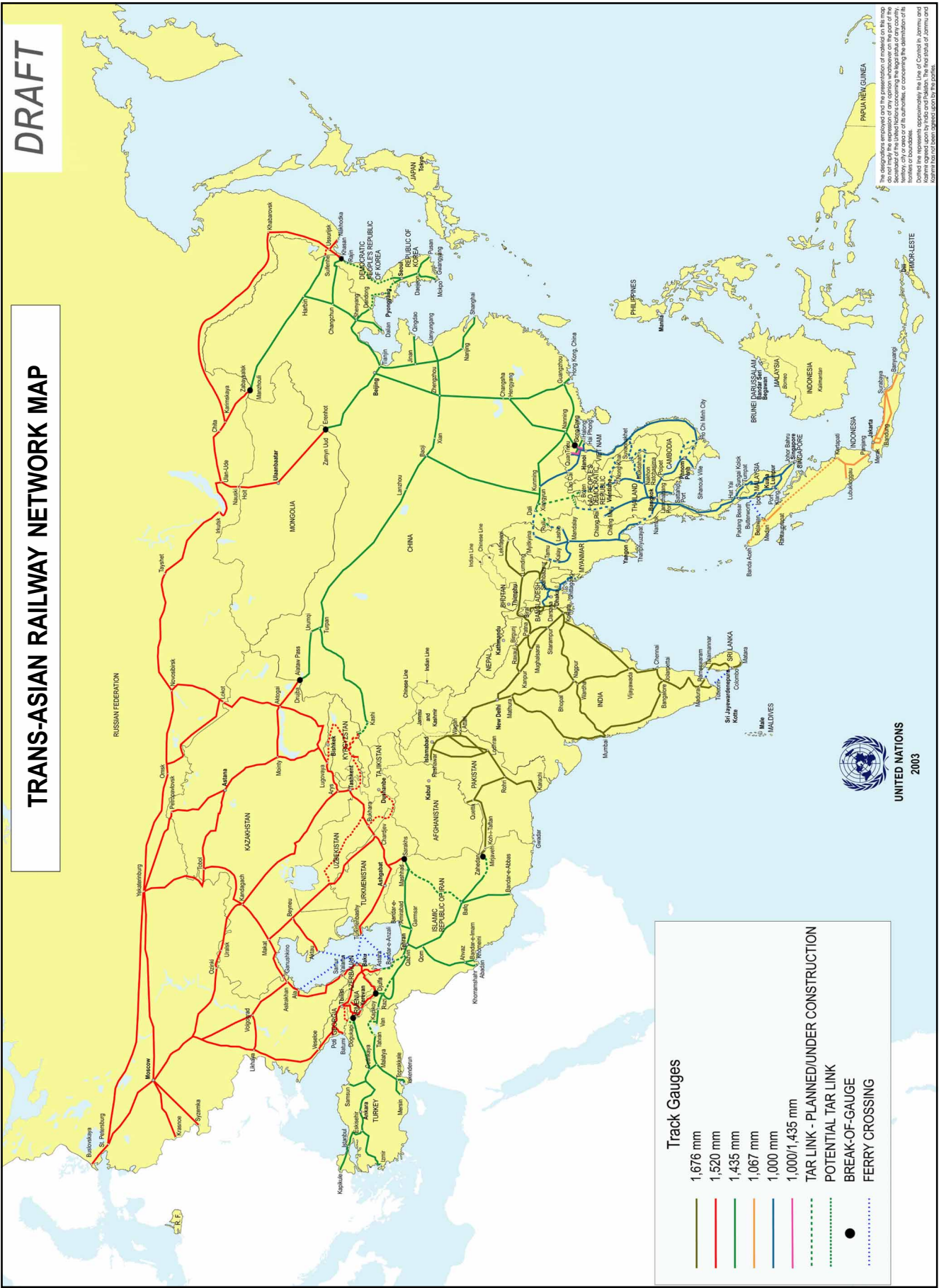
The secretariat is now formulating an intergovernmental agreement on the Trans-Asian Railway network. Rail transport has considerable potential, particularly for Asia's landlocked countries, and offers significant advantages for the environment and safety. The challenge is to overcome the technical and institutional barriers, which currently hinder the through-movement of trains and the smooth transfer of goods across different gauges.

Over the years the transport needs of the region have continuously changed in response to new requirements. Issues such as road safety, air pollution, environmental degradation and the unwanted side effects of land transport have become issues of increasing concern to countries.

The Intergovernmental Agreement on the Asian Highway network was adopted in 2003 and is ready for signing

ESCAP is working towards the formulation of an intergovernmental agreement on the Trans-Asian Railway network





The map shows the Trans-Asian Railway Network, including existing and planned rail lines. The network is color-coded by track gauge: 1,676 mm (dark blue), 1,520 mm (blue), 1,435 mm (green), 1,067 mm (yellow), 1,000 mm (orange), and 1,000/1,435 mm (red). The map also shows potential TIR links (dashed green lines), break-of-gauge points (black dots), and ferry crossings (dashed blue lines). The map is labeled with various countries and cities, and includes a scale bar and a north arrow.

The map is a draft and does not represent the official position of the United Nations. It is intended for informational purposes only and should not be used for legal or official purposes. The map is the property of the United Nations and should not be reproduced without the written permission of the United Nations.

In maritime transport, the secretariat has set up a consultative mechanism among the major stakeholders: shipowners, shippers and ports

Increased population mobility and urban migration have exacerbated the undesirable social consequences of such movements. Although regional cooperation in the fields of environmental protection and human security related to the adverse impacts of land transport has not fully developed, ESCAP is assisting countries in developing appropriate regional strategies to meet their social and environmental needs.

In maritime transport, the major concerns are the application and impact of modern shipping technology and ICT, and the regulatory issues related to commercialization, corporatization and private sector participation in ports. Related issues are simplification of port tariffs, freight rates and ancillary charges. The ESCAP secretariat has established a consultative mechanism for the major stakeholders: shipowners, shippers and ports. On the recommendation of the Committee on Transport, Communications, Tourism and Infrastructure Development,¹⁹ ESCAP is trying to improve manpower planning in order to bring about a better balance between supply and demand in the shipping industry. The secretariat has also been actively engaged with countries in forecasting the container transport requirements of the major ports in the region.

ESCAP is supporting efforts to harmonize the initiatives of subregional groupings such as ASEAN, ECO and GMS. In accordance with the mandate given by the 2001 ESCAP Ministerial Conference on Infrastructure, a cooperative initiative has been forged with the Tumen River Secretariat and other relevant organizations to develop an integrated transport network in North-East Asia.

In addition, to reduce the pressure on ocean transport, ESCAP could play a catalytic role in facilitating regional cooperation in the area of transportation of gas through natural gas transportation grids (see box IV.2). To the extent gas is transported by pipelines, the demand for ocean transport is reduced with positive impact on the environment. This is important as consumption centres of gas are often located far from the production site and require large scale investment for its safe and smooth transportation. In the region, a mismatch exists between the areas of resource endowment and the centers of demand for natural gas. This is true within countries as well as across countries and subregions; some countries or subregions are resource-rich and others resource-poor. For example, the Russian Federation is rich in natural gas resources, while nearby countries of North-East Asia are resource poor. Similarly in South-East Asia, Indonesia has large natural gas reserves, while others have no or relatively low reserves. In Western and Central Asia too, there are large variations in supply and demand, with large reserves

¹⁹ ESCAP, "Major issues in transport, communications, tourism and infrastructure development: establishment of consultative mechanisms among key maritime stakeholders" (E/ESCAP/CTCTID (3)/(4)).

Box IV.2. Towards Asia-Pacific natural gas transportation grids: developing regional cooperation

There is a great potential for trade in natural gas in the Asia-Pacific region given the continuing high demand for energy and the energy resource endowment. To achieve this, a comprehensive strategic plan needs to be developed with appropriate analysis of the market dynamics and energy trade flows. This is to ensure the availability of adequate, clean and affordable energy.

There are a number of initiatives already at various stages of development or implementation across the region, such as the Trans-ASEAN gas pipeline,^a initiatives in North-East Asia^b and the proposed APEC-PEG gas pipeline,^c as indicated in the figure below.

In 1998, at the APEC leaders' meeting in Kuala Lumpur, Malaysia, a plan for an Asian gas grid was proposed by the Partnership for Equitable Growth (PEG), a non-profit organization acting as a catalyst for private sector involvement within the framework of APEC. The proposal is to connect major gas fields, in particular those of Indonesia, for bulk transport to Shanghai, China, through a submarine gas pipeline extending over almost 5,000 km. The gas grid also plans to link up with the Trans-ASEAN gas pipeline, which will enable South-East Asian countries to tap their requirements from the grid or feed surplus natural gas for eventual transmission to China and possibly to other countries in North-East Asia.

Natural gas fields and planned or proposed gas pipeline routes in Asia^d



^a ASEAN Centre for Energy web site <<http://www.aseanenergy.org/>>.

^b ESCAP "Perspective for intercountry cooperation in energy development in North-East Asia", presented at the Senior Officials Meeting on Energy Cooperation in North-East Asia, 2002 <<http://www.unescap.org/esd/energy/>>.

^c APEC: The Partnership for Equitable Growth (APEC-PEG) <<http://www.apecpeg.org/>>.

^d Compiled by the ESCAP secretariat based on various maps from the Northeast Asian Gas and Pipeline Forum, the Energy Information Administration, the China National Petroleum Corporation (CNPC), APEC-PEG and the ASEAN Centre for Energy.

(Continued overleaf)

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As the major markets for natural gas are currently in North-East Asia, connecting gas fields of the Russian Federation and South-East Asia to North-East Asia will provide a steady supply of natural gas to countries in need of natural gas and present an option for those countries to diversify their energy supplies with an environmentally sound energy option with enhanced energy security.

To facilitate the matching of resources with demand, a long-term vision has to be developed with the participation of all relevant stakeholders focusing on public-private partnership. Such a vision would form the basis for effective coordination of the apparently isolated initiatives. With the necessary political commitments in place, it would be possible to establish Asian natural gas grids with linkages among the subregions that have the potential for gas development and trade. To realize such potential, thorough feasibility studies would need to be carried out with extensive consultations and the involvement of concerned stakeholders. Studies should include projections of energy demand and supply trends taking into account economic, social and environmental dimensions, followed by the development of a strategy to achieve the long-term vision. Considerable financial resources will be required to achieve the vision; private sector participation will be critical in securing the necessary funds. However, with a solid strategic plan in place, mobilization of investments may be possible given the strong interest of the international oil and gas companies.

Natural gas pipelines that cross several borders will certainly contribute to enhancing energy security through the sharing of risks and responsibilities in the development and operation of the pipelines. One initial but critical challenge will be to secure political and financial commitment, followed by extensive multi- and bilateral negotiations to clearly identify and share the responsibilities among stakeholders. ESCAP, as an independent and neutral body, could play a catalytic role in facilitating regional cooperation in this area. It has agreed in principle to a request to support the proposed APEC-PEG initiative on the Asian gas grid with a view to developing a linkage and synergies with other initiatives, in particular the North-East Asian energy initiative.

in some countries, including the Islamic Republic of Iran, Kazakhstan, Turkmenistan and Uzbekistan. These variations indicate the existence of untapped potential for turning the mismatch problem into an opportunity for trade by developing a well-coordinated natural gas pipeline grid(s) in Asia-Pacific by linking resource-rich countries and subregions with demand centres. Such networks would facilitate infrastructure development and intraregional energy exchange and trade with investment flows as well as bring economic and environmental benefits with less pressure on large scale ocean transportation. ESCAP is well placed to develop synergies among existing efforts and initiatives.

6. OTHER IMPORTANT INITIATIVES IN THE REGION

(a) ADB initiatives

ADB is a key source of finance for infrastructure development

ADB, a key source of finance for infrastructure development, emphasizes the importance of regional and subregional cooperation in transport. It also supports the development of guidelines for reducing vehicle emissions in Asia. Some important initiatives undertaken by ADB in last few years are:

- Implementing the Agreement for Facilitation of the Cross-Border Transport of Goods and People in GMS;
- Developing regional solutions to Asia's high traffic mortality rate;
- GMS projects on energy, environment, trade, and transport;
- Road safety in ASEAN;

- Regional cooperation in transport projects in Central Asia;
- Strengthening subregional cooperation in the transport sector of the East ASEAN Growth Area and the Indonesia-Malaysia-Thailand Growth Triangle;
- Cooperative airspace management in the Pacific subregion.

(b) APEC initiatives

APEC has paid particular attention to enhancing regional cooperation on transport safety and security, but has also considered ways of reducing obstacles to trade and investment, including liberalizing transport services. The APEC Transportation Working Group has endorsed a series of projects intended to work towards the goals of an increasingly safe, secure, efficient, integrated and environmentally sustainable transport system in the APEC region.²⁰

The APEC Transportation Working Group has endorsed a series of transport projects for the APEC region

C. OBSERVATIONS ON REGIONAL COOPERATION IN THE AREA OF TRANSPORT

Countries in Asia and the Pacific have continued to expand their share of global trade in the past decade despite the 1997 Asian financial crisis and Japan's slow economic recovery. The twin stimuli of expanding industrial and agricultural production and trade are generating demand for transport as never before. Countries face the challenge of not only transporting greater volumes of freight, but also providing the level and quality of services which are required to support increasingly globalized trade and manufacturing practices. At the same time, countries need to find new and creative ways to cooperate in order to manage the pressures that globalization generates.

An analysis of the cooperation arrangements in transport shows that subregional groups are cooperating beneficially in some areas of transport. However, compared with the enormous potential value of such links, there is relatively little cross-border road and rail transport in Asia. There are several reasons for this, including lack of infrastructure, uncoordinated planning, bureaucratic procedures and lack of familiarity with integrated logistical practices. This prevents countries from exploiting the benefits of intermodal transport systems emphasizing just-in-time delivery and competitive pricing.

Compared with its enormous potential value, there is relatively little cross-border road and rail transport in Asia

²⁰ Some of the projects recommended are developing a competency-based model of mutual recognition of qualifications for logistics managers, workshops on the use of global navigation satellite systems in relation to several aspects of multimodal transport, a workshop on international air services negotiations, case studies on using new technologies in intermodal transport in trade and forecasting cargo throughput to assist shipping and port authorities. See APEC web site, <<http://www.apecsec.org.sg>>, 26 January 2004.

Attention on developing feeder roads creating links to a wider hinterland and smaller ports needed

Most regional and subregional initiatives focus on improving major transport infrastructure, particularly highways, railways and large ports, and the provision of services. Attention also needs to be given to developing feeder roads creating links to a wider hinterland and to opening smaller ports; otherwise the benefits of transport cooperation will not trickle down to the general population and the benefits of development goals will be unevenly distributed.

Countries also need to establish a favourable investment climate to encourage private sector participation in financing transport and operations. This requires an appropriate legal framework, trade facilitation measures, equitable risk-sharing strategies and clarifying the role of any regulatory body. Asia-Pacific countries should enact enabling legislation which would recognize and encourage freight forwarders, multimodal transport operators and the use of e-commerce, as well as encourage the development of logistics services and supply-chain management.

D. ESCAP'S FUTURE ROLE IN TRANSPORT

ESCAP's focus is on strengthening networks, improving information and skills for transport planning and reducing transport barriers at borders

ESCAP's main concern is to build the capacity of countries to plan and implement transport policies and enhance participation in the regional and subregional agreements relating to transport infrastructure and facilitation. In promoting infrastructure and transport the focus of its support is first on strengthening networks, second on improving information and skills for transport planning and third on reducing barriers to transport at borders.

1. STRENGTHENING TRANSPORT NETWORKS THROUGH REGIONAL COOPERATION

The next phase of ESCAP's work will be to complete the existing projects including the Asian Highway and the Trans-Asian Railway. It will look for ways to further integrate the various networks and create linkages between different modes of transport and between subregions. This will entail, for example, setting up or upgrading inland container depots and dry ports so that countries can exploit the benefits of containerization, multimodal transport and logistics solutions.

2. IMPROVING INFORMATION AND SKILLS FOR TRANSPORT PLANNING

As more and more countries look for ways to strengthen their transport sector, there is a growing need for better and more appropriate information on transport developments across the region, as well as the skills to use such information. This will help countries to exploit

existing port capacities efficiently, thus reducing excess investment in capacity generation. It will also help them to give more attention to auxiliary services, which shippers now look for when selecting ports. ESCAP initiatives are promoting greater transparency and increasing the information available to forecast container transport requirements for the major ports of the region. This activity also helps to provide long-term forecasts of investment requirements in the sector. Focus will be given in the next phase to the collection of similar data and statistics on the movement of vehicles and goods across land borders by both road and rail. ESCAP will assist countries in collecting such data along selected transit corridors, with the aim of better monitoring the movement of goods and identifying bottlenecks.²¹

3. REDUCING BARRIERS TO TRANSPORT

Transport facilitation is another challenging area of work, which encompasses many actors; it raises legal, regulatory, institutional, operational and technological issues. Indeed, one of the challenges is to harmonize the different initiatives undertaken by different subregions, which have led in some cases to conflicting legal commitments, documentary requirements and procedures. As the region's trade is increasingly among the countries that comprise it, these conflicts are pushing up administrative costs, making products less competitive in the market. The ESCAP secretariat is analysing facilitation agreements within the region with the intention of preparing model framework agreements on transit transport. It is anticipated that this work will lead to a substantial review of commission resolution 48/11 of 23 April 1992 on road and rail transport modes in relation to facilitation measures and provide a checklist of the most important transport-related conventions and other arrangements which need to be put in place to ensure efficient border-crossing movements.

One of the challenges is to harmonize initiatives undertaken by different subregions

4. FUTURE REGIONAL COOPERATION IN THE TRANSPORT SECTOR

Towards the middle of the current decade, the Asian Highway and Trans-Asian Railway networks are expected to become the main international trunk routes linking countries to each other and to other regions. The secretariat will continue to assist countries so that they can take the fullest advantage of these networks, in terms of using them not only for international and transit transport purposes but also as the basis

²¹ This will be done as a result of some recent studies undertaken as part of the preparations for the International Ministerial Conference on Transit Transport Cooperation, (Almaty, 25-29 August 2003).

Governments and the private sector need to find out ways for better communicating their requirements and plans to spread economic development to wider hinterlands

for spreading economic development to wider hinterlands. Indeed, a major challenge in the context of increasingly globalized manufacturing practices will be to find ways of ensuring that all countries are able to compete for international and trade investment flows. That will require the region to have a wide range of transport options. It also makes it necessary for all major stakeholders, particularly Governments and the private sector, to find ways of better communicating their needs and plans to each other.