Annex 1

Review of Regional Cooperation in Transport Infrastructure Development in Asia and the Pacific

Regional Cooperation in Asian Land Transport Development

Sections II and III identified a special need for policy intervention in the land transport sector. In this sector, deep concerns have been voiced that hinterlands, certain regions of countries, and landlocked countries, located far away from the centres actively participating in regional production networks, will be marginalized. In order to address this risk, governments of the region have increasingly engaged in the development of interregional, regional, subregional and national policies for land transport.

This Annex provides an overview of the major ongoing regional and subregional cooperation initiatives in land transport in Asia in order to illustrate the level and types of existing cooperation.

Regional initiatives

(a) Early forerunners (1959-1992): Asian Highway and Trans-Asian Railway

Asian cooperation initiatives of a truly regional nature of continental geographical coverage have been rare. Even subregional initiatives encompassing a handful of neighbouring countries have been a rather recent phenomenon (see next Section).

In fact, until the late 1980s, there were only two significant regional cooperation initiatives in the Asian land transport that had a fairly comprehensive geographical coverage: the Asian Highway (AH) and Trans-Asian Railway (TAR) projects of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

The Asian Highway Project was initiated in 1959 by the then United Nations Economic and Social Commission for Asia and the Far East (ECAFE) that was later renamed ESCAP. This initiative was followed by the Trans-Asian Railway Project, which was commenced in the 1960s by ESCAP with the objective of providing a continuous 14,000 km rail link between Singapore and Istanbul (Turkey), with possible onward connections to Europe and Africa.

The international events that punctuated the 1960s, 1970s and early 1980s, coupled with inward-looking policies of many countries and lack of funding for the projects, influenced the momentum of these two initiatives. However, the dynamic economic, trade, investment and tourism development in the region since the 1980s, as well as the concomitant adoption of outward-looking policies, positive changes in the political environment and the advent of container technology, have resulted in the revival of a keen interest in regional cooperation as a means of improving and developing intraregional and interregional land transport linkages.

Until today, the Asian Highway and the Trans-Asian Railway have played a pivotal role in regional cooperation in land transport, both in terms of their achievements as well as models for many subregional initiatives of the past 15 years. These are described in more detail below.

(b) Asian Land Transport Infrastructure Development (ALTID) since 1992

The revived interest in land transport since the late 1980s led to the creation of the *Asian Land Transport Infrastructure Development Project (ALTID)*[150] by ESCAP in 1992. It is essentially an umbrella project, comprising the Asian Highway and the Trans-Asian Railway projects, as well as components related to the facilitation of cross-border land transport.

The strategy of the ALTID Project for the development of both the Asian Highway and the Trans-Asian Railway networks includes assisting countries in identification and formulation of routes, setting standards, formalization of the networks, putting the networks into operation or their "operationalization", integration of the various modes of transport (road, rail, inland waterways and shipping), and integration of transport networks with other relevant networks or "melding of networks" (freight forwarders, multimodal transport operators (MTOs), banking, customs, health, security, etc.).

In regard to the formulation of road, rail and road-cum-rail routes, it was decided that existing and potential trade flows should be the main factor for route selection[151]. Reflecting this factor, the criteria include:

– capital to capital links (for international transport);

– connections to main industrial and agricultural centres (links to important origin and destination points);

150. Endorsed by the Economic and Social Commission for Asia and the Pacific at its forty-eight session in 1992.

151. These criteria were endorsed by ESCAP's Committee on Transport and Communications.

- connections to major sea and river ports (integration of land and water transport networks);
- connections to major inland container terminals and depots (integration of road and rail networks); and
- connections to major tourist attractions (in the case of the Asian Highway).

The two basic principles, however, are to minimize the number of roads and railway lines to be included in the networks and to make the maximum possible use of the existing infrastructure.

A refined strategy[152] for the implementation of ALTID project was adopted in 1998 which includes the following components:

- Facilitation of land transport at border crossings and maritime transport at ports through the promotion of the relevant international conventions and agreements in Asia to improve the efficiency of international transport along land and land-cum-sea routes.
- Completion of formulation of Asian Highway and Trans-Asian Railway networks covering the whole of Asia as well as completion of missing links.
- Formalization of the Asian Highway and Trans-Asian Railway routes/ networks.
- Improvement of the operational efficiency of the Asian Highway and the Trans-Asian railway routes, including transport logistics.
- Improvement of transport logistics.
- Asian Highway and Trans-Asian railway promotion.

(c) The Asian Highway after 1992 and its Intergovernmental Agreement (2005)

The Asian Highway project is aimed at enhancing the efficiency and promoting the development of road transport infrastructure in Asia. The key tenets of the

152. *Major issues in transport and communications: Asian land transport infrastructure development: Refinement of the strategy for implementation of the ALTID project*, ESCAP Committee on Transport and Communications, 1-4 December 1997, ESCAP document E/ESCAP/CTC(3)/2. The refined strategy was developed by Vladimir N. Timofeev and adopted by the Commission at its 54th session (1998). As mandated by the Ministerial Conference on Infrastructure (2001), the implementation of the strategy by ESCAP resulted among others in the devekopment of the Intergovenmental Agreements on the Asian Highway Network (2005) and the Trans-Asian Railway Network (2006).

project have been to promote international and bilateral trade and tourism to encourage regional economic and social development.

The Asian Highway network now comprises approximately 140,000 kilometres of roads, passing through 32 member states (Figure 19). The ESCAP Secretariat supported the conversion of the Asian Highway project into an Intergovernmental Agreement.

The Intergovernmental Agreement on the Asian Highway network was adopted in November 2003 by 32 member states and has entered into force on 4 July 2005. To date[153], 28 member states have signed the Agreement and thirteen[154] have ratified, approved or accepted it. These commitments clearly indicate the importance of developing the regional transport network in the Asia-Pacific region.

The main obligations of the contracting parties within the Agreement are to:

- adopt the Asian Highway network as a coordinated plan for the development of highway routes of international importance;
- bring the network in conformity with the Asian Highway classification and design standards; and
- place Asian Highway route signs along the network.

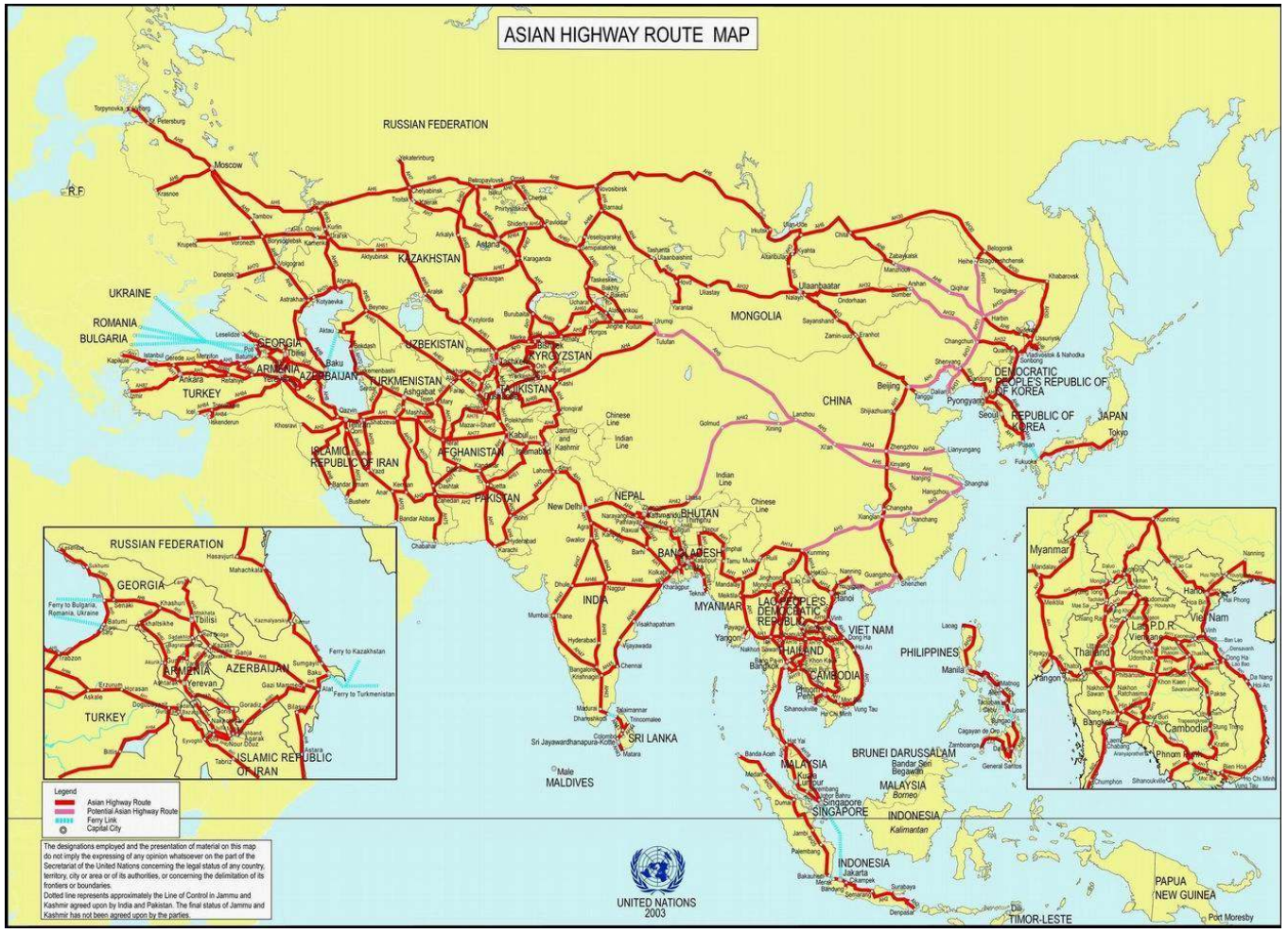
The Agreement also established a Working Group on the Asian Highway to review its implementation. The ESCAP Secretariat acts as secretariat for the agreement. The Agreement plays a catalytic role in the development of international highways in the Asia-Pacific region. UNESCAP Resolution 60/4, adopted at the 60th Commission session at Shanghai in 2004, invites international and regional financing institutions and multilateral and bilateral donors to provide financial and technical support for the development of the Asian Highway network and related infrastructure, particularly taking into account the special needs of landlocked developing countries (see Box 6).

Supported by the ESCAP Secretariat, member countries have identified a list of priority projects and prepared project profiles for potential donors. The highest priority has been given to the upgrading of substandard sections of the Asian Highway. ESCAP aims to play a role in the dissemination of high priority projects that have not yet received adequate funding, but are of such importance that, if realized, the whole Asian region would benefit.

153. As of 7 November 2005.

154. These include Armenia, Azerbaijan, Bhutan, Cambodia, China, Japan, Mongolia, Myanmar, Pakistan, the Republic of Korea, Sri Lanka, Uzbekistan and Viet Nam.

Figure 19: Map of the Asian Highway, 2003



Source: ESCAP

Box 6: Asian Landlocked Countries, ESCAP and the Almaty Programme of Action (APA)

Of the 30 landlocked countries in the world, 12 are located in Asia, namely: Afghanistan, Armenia, Azerbaijan, Bhutan, Kazakhstan, Kyrgyzstan, the Lao People's Democratic Republic, Mongolia, Nepal, Tajikistan, Turkmenistan and Uzbekistan.

Each of these countries is disadvantaged by dependence on a limited number of commodities for their export earnings and a lack of access to sea ports and international markets. These factors contribute to lower levels of income, high costs of imports and decreased competitiveness of exports. In most cases, the transit neighbours of landlocked countries are developing countries, often of broadly similar economic structure and with problems of their own, including scarcity of resources. Transit developing countries bear additional burdens deriving from transit transport and its financial, infrastructural and social impacts. Also, transit developing countries need to improve technical and administrative arrangements in their transport, customs and administrative systems to which their landlocked neighbours are expected to link.

Over the years, international attention has focused on the special situation of landlocked countries. The international community has recognized and in part addressed some of the constraints faced by landlocked countries through international legal instruments (e.g., the Barcelona Convention of 1921, the New York Convention of 1965, and UNCLOS in 1982). More recently, there has been increased recognition of the dependencies between landlocked and transit countries which has provided a new impetus to increased regional cooperation. The Lao People's Democratic Republic, for example, has been referring to itself as being "land-linked" and not "landlocked".

The United Nations convened an International Ministerial Conference of Landlocked and Transit Developing Countries and Donor Countries and International Financial and Development Institutions on Transit Transport Cooperation at Almaty, Kazakhstan, in August 2003. The Conference adopted the Almaty Programme of Action (APA): Addressing the Special Needs of Landlocked Developing Countries within a New Global Framework for Transit Transport Cooperation for Landlocked and Transit Developing Countries, and the Almaty Declaration. The work of ESCAP in the area of landlocked and transit countries focuses on the implementation of the APA. APA aims to: (a) secure access to and from the sea by all means of transport, (b) reduce costs and improve services so as to increase the competitiveness of their exports, (c) reduce the delivered costs of imports, (d) address problems of delays and uncertainties in trade routes, (e) develop adequate national networks, (f) reduce loss, damage and deterioration enroute, (g) open the way for export expansion, (h) improve the safety of road transport and the security of people along the corridors. The five priority areas of APA are: (a) policy improvements, (b) improved rail, road, air and pipeline infrastructure, (c) international trade measures, and (d) technical and financial international assistance.

(d) The Trans-Asian Railway after 1992

Similar to the case of the Asian Highway, the Trans-Asian Railway Project is aimed at enhancing the efficiency and development of rail transport infrastructure in Asia, thereby promoting international and bilateral trade and regional economic and social development.

Given the extent of the territory covered by the Trans-Asian Railway (Figure 20), the differences in standards and in the levels of technical development between railways in the region, a step-by-step approach was adopted to define the network, initially based on four major corridors and with a focus on break-of-gauge points and missing links. In addition, "software" aspects were reviewed with particular attention to tariff-related issues and the institutional framework pertaining to the passage of goods across borders.

With support from ESCAP and OSJD, four demonstration runs of container block trains along different routes of the northern corridor of the Trans-Asian Railway were carried out between Nov. 2003 and July 2004, based on a ministerial-level Memorandum of Understanding (MOU)[155] and Steering Committee Meetings (SCM). The first such run was successfully organized between the Chinese port of Tianjin and Ulaanbaatar in Mongolia, the second one between the Chinese port of Lianyungang and Almaty in Kazakhstan, the third one between Ulaanbaatar and Brest, and the fourth one between Vostochny in the Far East of the Russian Federation and Malaszewicze in Poland (Figure 21). Meanwhile, other services have also been tested or are being tested.

It should be noted that a container block train between Western Europe and the Far East that travels at about 1,000 km per day on average would have at least seven days advantage in transit time as compared to sea transport.

The demonstration runs have already been followed by more than 200 commercial container block trains between 2004 and 2005[156]. However, all routes in the northern corridor of TAR connect at some stage with the Trans-Siberian main line, whose current capacity of around 300,000 TEU per year will soon become a constraint[157]. This illustrates the benefits of exploring and developing other routes.

On 10 November 2006, the Intergovernmental Agreement on the Trans-Asian Railway Network was signed by 18 member states at the Ministerial Conference on Transport in Busan, Republic of Korea. Looking beyond the Agreement, the formalization of the Trans-Asian Railway Network constitutes one step towards the identification of an international intermodal network covering the continent as mandated by the Ministerial Conference on Infrastructure held in Seoul, Republic of Korea, in November 2001.

155. China, Kazakhstan, Mongolia, the Republic of Korea, and the Russian Federation have signed the MOU at the ministerial level. Relevant authorities of DPR Korea have indicated their agreement in principle. The other participating countries are Belarus, Germany and Poland.
156. Source of information: OSJD.
157. In fact, containers carried along the Trans-Siberian line have increased from 48,800 in 2001 to 119,000 in 2003, with a majority of cargo destined for and originating in Finland.

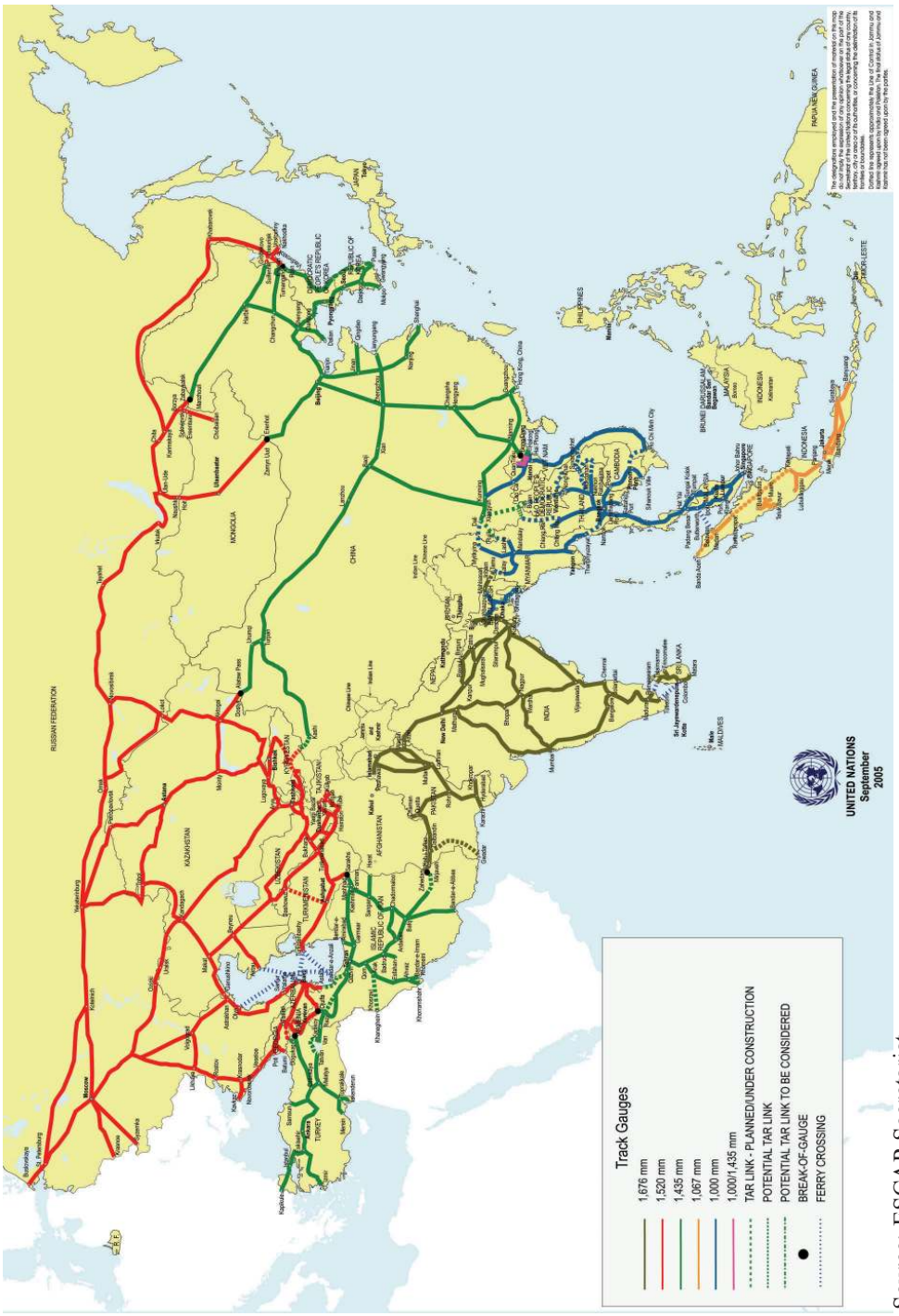
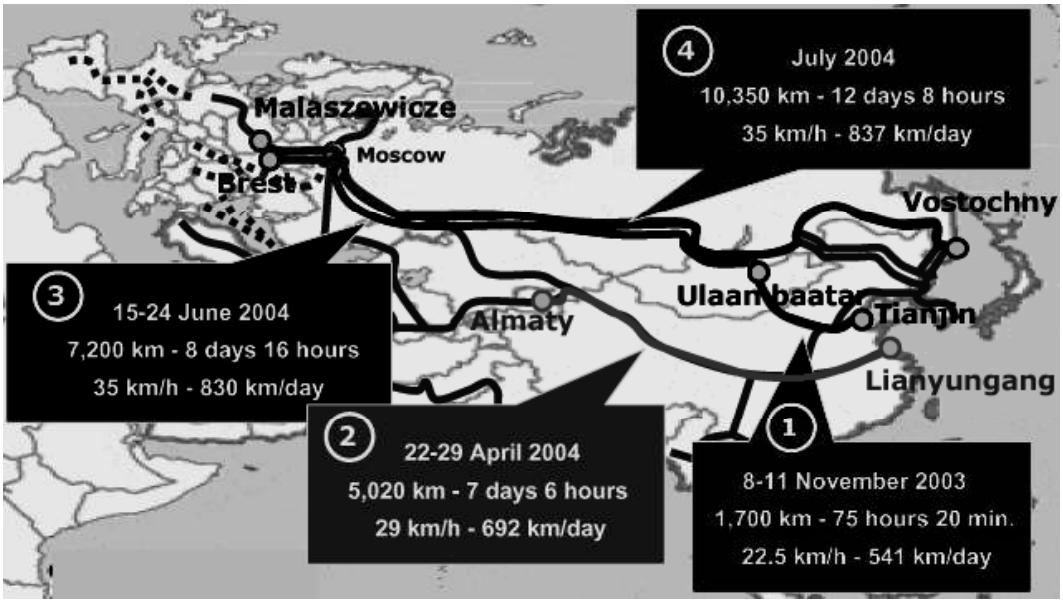


Figure 20: Map of the Trans-Asian Railway, September 2005

Source: ESCAP Secretariat

Figure 21: ESCAP-promoted demonstration runs of Container Block-trains along the TAR Northern Corridor



(e) UN Special Programme for the Economies of Central Asia (SPECA) since 1997

At the request of, and following consultations with the Central Asian Republics[158], the United Nations Economic Commission for Europe (ECE) and the Economic and Social Commission for Asia and the Pacific (ESCAP) jointly initiated a programme in 1997 focusing specifically on economic issues of concern to those countries.

The UN Special Programme for the Economies of Central Asia, or SPECA, assists the participating countries in strengthening cooperation for their economic development through more efficient use of resources and facilitation of their integration into Europe and Asia. The implementation of the programme started by selecting priority areas for national and regional actions, and setting up project working groups in those areas. This includes a Project Working Group (PWG) on Transport and Border Crossing (TBC). The PWG adopted an Action Programme for Transit Transport Cooperation for SPECA Countries (APTTC).

158. Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. Azerbaijan joined in 2000 and Afghanistan in 2005.

SPECA activities on "enhancing transit infrastructure" include, inter alia: (a) accession to multilateral agreements on infrastructure (AGR, AGTC, AH Agreement, etc.); (b) road and rail infrastructure asset management; (c) promotion of favourable legal environment to attract investments; (d) identification of priority projects; and (e) logistic centre pilot projects.

(f) Euro-Asian Transport Linkages since 1997

As noted earlier, there are large and increasing overall trade volumes between Europe and Eastern Asia: 3.2 million TEU from Eastern Asia to Europe and 7.2 million TEU in the other direction in 2005[159], almost all of which is currently transported by sea. ESCAP has promoted a number of initiatives to improve "Euro-Asian Linkages" along land routes. These efforts are geared to the opening up of the almost untapped potential of land transport infrastructure in this respect. Furthermore, they are also promoting infrastructure development in order to improve transport linkages between Central Asia and Europe, as well as between East Asia and Central Asia.

Series of St. Petersburg Conferences since 1998: At the initiative of the Russian Federation, and with the support of ESCAP and ECE, a series of Euro-Asian Conferences on Transport were held in St. Petersburg since 1998. The 2nd such conference in Sept. 2000 identified four main Euro-Asian transport corridors as the backbone network: the Trans-Siberian, TRACECA, Southern, and the North-South Corridors (Box 7).

The third such conference in Sept. 2003 recommended a strategy for the development of an Integrated Euro-Asian Transport system, as well as support measures and a number of specific initiatives[160]. The strategy focuses, inter alia, on: (a) formulation of integrated intermodal international Euro-Asian transport routes/corridors and networks; (b) formalisation of international transport routes/networks through related international agreements or amendments to existing ones, as a basis for their coordinated development; (c) facilitation of transport at border-crossings and ports based on relevant international conventions; (d) analysis of routes/corridors; (e) operationalization of international transport routes and periodical performance evaluation; (f) development of public-private partnership with freight forwarders and multimodal transport operators.

Specific initiatives were recommended in the areas of infrastructure development, modern freight technologies, attracting transport infrastructure

159. Source: Containerisation International.
160. ECE document number TRANS/2004/12

Box 7: Main Euro-Asian transport corridors identified by the 2nd Euro-Asian Conference on Transport in St. Petersburg, Sept. 2000

Transsiberian Corridor

– Europe (PETCs 2, 3 and 9) – Russian Federation-Japan, with three branches from the Russian Federation to: (a) Kazakhstan-China; (b) Korean Peninsula; and (c) Mongolia-China.

– The rail corridor became an important double track railway line, fully electrified, stretching about 10,000 km up to the port of Nakodha. Infrastructure on this corridor is undergoing continuous modernization and important improvements in originating ports and railway stations on the borders in North-East Asia. In 1993, an International Coordinating Council on Transsiberian Transportation was established, in order to enhance the competitiveness of the corridor. Road reconstruction along the Transsiberian corridor has also been going on for some time.

Transport Corridor Europe–Caucasus–Asia (TRACECA)

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

– TRACECA was initiated as a programme more than 10 years ago by the European Union (EU) as an additional transport corridor to the existing ones to promote integration with the Trans-European Networks (TENs). When the TRACECA corridor is completed, intermodal rail-cum-sea routes will follow part of the ancient Silk Road from the Chinese port of Lianyungang on the Yellow Sea to the Georgian ports of Poti and Batumi on the Black Sea and then across the Black Sea into Western Europe. A so-called "transport delta" will be created on the Georgian coast of the Black Sea. TRACECA member states have set up an Inter-Governmental Commission (IGC), consisting of the highest governmental authorities of member states or their representatives.

Southern Corridor

– South-eastern Europe (PETC 4) – Turkey – Islamic Republic of Iran with two branches to: (a) Central Asia – China, and (b) South Asia – South East Asia/Southern China.

– The ESCAP study entitled "Development of the Trans-Asian Railway–Trans-Asian Railway in the Southern Corridor of Asia-Europe routes" has explored the potentials of this corridor.

North-South Corridor

– Northern Europe (PETC 9) – Russian Federation, with three branches: (a) Caucasus – Persian Gulf, (b) Central Asia – Persian Gulf, and (c) Across the Caspian Sea – Islamic Republic of Iran – Persian Gulf.

– The corridor is expected to offer both quicker and cheaper transportation than the primary alternative—the shipment of goods from South Asia through the Suez Canal and the Mediterranean and then into the Atlantic and North Sea to Baltic ports. According to some estimates, delivery time using the North-South Corridor will be reduced by 10-20 days and the cost per container will decrease by US$ 400 to 500.

investments, promotion and development of tourism, information technologies, safety and environment, improvement and rationalization of customs procedures and simplification of border crossings, as well as in the area of expansion of access to the market of transport services.

OSJD Agreement 1997: In the railway sector, the Organization for Railways Cooperation (OSJD)[161] concluded an agreement on organizational and operational aspects of combined Euro-Asian transport in 1997. This agreement identified a number of Euro-Asian railway corridors and routes (Figure 22).

Project of the United Nations Regional Commissions since 2002: An example of inter-regional cooperation in *all* modes of land transport is the United Nations project "Capacity-building in developing interregional land and land-cum-sea transport linkages"[162] since 2002. It is implemented jointly by the five United Nations Regional Commissions, namely the Economic Commission for Europe (ECE), the Economic and Social Commission for Asia and the Pacific (ESCAP), the Economic Commission for Latin America and the Caribbean (ECLAC), the Economic Commission for Africa (ECA) and the Economic and Social Commission for Western Asia (ESCWA).

The common approach adopted in the project is to use the regional transport networks which have been developed by the respective regional commissions as the basis for identifying major interregional routes which can be further developed through cooperative strategies by participating countries. These strategies range from the sharing of information on the current conditions of infrastructure and future investment plans; assessment of bottlenecks which hinder the smooth transit of goods, particularly at border crossings and intermodal nodes; and the exchange of ideas and experiences on approaches to remove such bottlenecks.

In the ECE-ESCAP[163] and the ECE-ESCWA-ESCAP[164] components of the project, countries have indicated a set of major road, rail and inland water transport routes linking the two continents.

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161. http://www.osjd.org/
162. This project was funded through the UN Development Account.
163. Participating countries: Afghanistan, Armenia, Azerbaijan, Belarus, Bulgaria, China, Georgia, the Islamic Republic of Iran, Kazakhstan, Kyrgyzstan, Moldova, Romania, Russian Federation, Tajikistan, Turkey, Turkmenistan, Ukraine, and Uzbekistan.
164. Participating countries: Iraq, Syria, Jordan, Saudi Arabia, Kuwait, United Arab Emirates, Palestine (OPT), Egypt, the Islamic Republic of Iran, Pakistan and Turkey

Figure 22: Euro-Asian Corridors

Source: OSJD

Subregional initiatives

While the Asian Highway and Trans-Asian Railway networks have been formulated from national networks, they now form the primary corridors for interregional, subregional and national movement of goods and people. In so doing, the subregional networks provide more inclusive access to subregional hinterlands, while national networks provide even more comprehensive access to national hinterlands. Consequently, regional cooperation plays an important role in not only developing inter-country linkages but also in promoting physical access at the national level.

(a) Subregional intergovernmental organizations

The major part of subregional cooperation in transport is promoted under the frameworks of subregional, intergovernmental organizations, such as ASEAN, ECO, FORUM, SCO and SAARC, which cover a multitude of economic sectors. There is also the CIS and IGC-TRACECA consisting of a number of countries, located inside and outside of the region, which formed part of the former Soviet Union. Yet, these subregional organizations are rather diverse in nature with significant differences in terms of the depth of integration and types of cooperation.

Association of South-East Asian Nations (ASEAN) since 1967: The Association of Southeast Asian Nations or ASEAN was established on 8 August 1967 and presently has ten members[165]. ASEAN is particularly active and has established some 20 bodies for the transport sector, at the working group, senior officials and ministerial levels.

The most recent instruments of regional cooperation are the ASEAN Vision 2020, the Bali Concord II, and the Vientiane Action Plan. In the Vientiane Action Plan, the Heads of State and Government of ASEAN member countries committed themselves to gearing-up ASEAN transport as a critical logistics and services support sector through the implementation of the ASEAN Transport Action Plan for 2005-2010[166]. The Action Plan focuses on cooperation activities towards facilitating seamless movement of peoples and goods; enhancing integration and efficiency of multimodal transport infrastructures, facilities and services; accelerating open-sky arrangements; and advancing liberalisation in air and maritime transport services.

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165. ASEAN members: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei Darussalam, Viet Nam, Lao Peoples Democratic Republic, Myanmar and Cambodia.
166. adopted at the 10th ASEAN Transport Ministers Meeting held at Phnom Penh in November 2004.

Commonwealth of Independent States (CIS) since 1991: The Commonwealth of Independent States (CIS)[167] was created in 1991. In 1993, an Agreement on the creation of an Economic Union was signed, in order (a) to form a common economic space based on free movement of goods, services, labour force, capital; (b) to elaborate coordinated monetary, tax, price, customs, external economic policy; (c) to bring together methods of regulating economic activity; and (d) to create favourable conditions for the development of direct production relations.

Joint activities of the member states in the development of transport and communications systems are guided by the Coordinating Transport Conference. In 1998, a protocol on international roads of CIS was adopted, which lists CIS international roads and prescribes classification and design standards.

Economic Cooperation Organization (ECO) since 1985: The Economic Cooperation Organization (ECO) is an intergovernmental regional organization[168] established in 1985 as the successor organization of Regional Cooperation for Development (RCD) which was active between 1964 and 1979. The organization has been active in the transport sector, signing a Transport Transit Framework Agreement in 1998, which includes a list of prescribed road, rail and inland waterway transit routes[169].

A guiding framework for the organization's work is the ECO Vision 2015 which was adopted in 2005. Inter alia, it includes commitments to remove physical and non-physical barriers in transport (including reconstruction of missing links), to operationalize container and passenger train initiatives, and to support APA, the Asian Highway and TRACECA.

South Asian Association for Regional Cooperation (SAARC) since 1985: The South Asian Association for Regional Cooperation (SAARC)[170] was established in 1985. A Technical Committee on Transport was set up to work on land, sea and air transport. Its activities have included seminars, workshops, training, exchange of data and information, preparation of status papers (including on transit facilities), compilation of database and directories of consultancy centres for transport sector.

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167. At present CIS members include: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, Uzbekistan and Ukraine.
168. Current members are: Islamic Republic of Iran, Pakistan, Turkey, Afghanistan, Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
169. The formal adoption of the network has yet to be approved.
170. Members: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.

Recent areas of cooperation also include transport safety, rural transport, environmental aspects, and energy conservation. However, until recently, SAARC has not made significant progress in re-establishing its transport network. Prospects have improved since the SAARC Summit of 2004. Also since 2004, the Asian Development Bank and SAARC, formalized through an MOU, work on a SAARC Regional Multimodal Transport Study.

(b) Other arrangements

Besides the dominant work of subregional, intergovernmental organizations mentioned above, there is an increasing number of other programmes, projects and initiatives with elements of subregional cooperation in land transport. Noteworthy examples include, inter alia:

- the Brunei, Indonesia, Malaysia, Philippines East ASEAN Growth Area (BIMP-EAGA);
- Indonesia, Malaysia, Thailand-Growth Triangle (IMT-GT);
- Indonesia, Malaysia, Singapore-Growth Triangle (IMS-GT);
- ASEAN Mekong Basin Development Cooperation (AMBDC);
- Greater Mekong Sub-region (GMS); and
- Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS).
- ESCAP-OSJD cooperation on container demonstration runs and the operationalization of Euro-Asian rail routes to landlocked countries in Asia and the Caucasus.
- Various projects and programmes of UNCTAD, IRU, IRF, OSJD and ASEAN+4.

Most of these organizations and programmes aim to complement each other and the Asian Highway and the Trans-Asian Railway.

Regional cooperation in maritime transport development

Regional cooperation in maritime transport takes significantly different forms in the case of the coastal regions of the Asian continent and its major economies, than in the case of small island developing states (SIDS) in the Pacific. There are big differences in terms of driving forces, issues, goals and nature of such cooperation. These are discussed subsequently in this Section.

Shipping along coastal areas of major Asian economies

Arguably, the system of container ports and shipping has been the most important backbone network of the current phase of globalization. Furthermore, the evolution of international production and distribution networks has been shaped by global changes in liner shipping due to changes in technology, such as the advent of the container and increasing container ship sizes and speeds. In fact, the size of container ships has increased several-fold since the 1960s, in order to make use of the available economies of scale. This has emphasized even further the "hubs-and-spokes" character of the global shipping and ports system. In essence, large ships service hubs, whereas smaller second-generation vessels are deployed on feeder routes.

Consequently, in the last fifteen years, we have seen significant changes in container shipping route structures. There has been a trend away from the provision of direct liner services and towards the establishment of networks centred on regional hub ports. Carriers that previously only serviced major routes have joined networks servicing secondary routes.[171] As direct calls by mainline vessels tend to make economic sense for any major market that is only a short deviation from the main shipping routes, we see on average two to four port calls of mainline vessels in each main world region today.

In line with rapid increases in trade from and to Asia, the region has seen large investments in seaports, including investments by state owned or controlled ports, such as Singapore; Hong Kong, China; and others. Shanghai port alone has grown by more than 3 million TEU in 2004, which was larger than the total throughput of Felixstowe at the time. Yet, major infrastructure bottlenecks and issues remain even in North-East Asia.[172]

As ship sizes continue to increase, faster container handling is necessary just to keep up. Otherwise, extended port time would destroy the rationale for having bigger ships. Port congestion has become a problem, even for developed countries, with the possibility of congestion surcharges becoming more common. Furthermore, it appears that almost every port wants to be a "mega hub". Yet, in reality only few will be able to become a hub, otherwise there will be "more hubs than spokes".

Concentration of ownership has increased appreciably in the market for international liner shipping over the past twenty years, yet it is still lower than in

171. For more details, please see "Review of Part X of the Trade Practices Act 1974: International Liner Cargo Shipping", Australian Government, Productivity Commission Draft Report, 2004, www.pc.gov.au

172. ESCAP (2004). Development of Shipping and Ports in North-East Asia, ST/ESCAP/2354.

some other transport industries. Profitability appears not to be that high, even though investment in new capacity continues to be high. This is despite the existing agreements between shipping lines, where "conferences" have been the traditional form of cooperation designed to fix freight rates. Conferences have somewhat declined in importance, whereas discussion agreements have become more important as a mechanism for influencing freight rates on most major trade routes[173] .

The market trends outlined above have led to further consolidation, concentration, and increasing importance of co-opetition and strategic alliances in shipping. In particular, the emergence of powerful, "global" port operating companies with increasing market power should be noted. For example, P&O Ports operates 27 container terminals and logistics operations in over 100 ports in 18 countries[174]. In fact, earlier this year, Drewry Shipping Consultants Ltd. summed up the changing market situation as follows[175]: *"Ten years ago:* Shipping lines could take the view that whatever their demands were (e.g. bigger ships, more volumes, more port calls), ports would and could respond. When shipping lines said 'jump'… ports said 'how high?' *Today:* The pendulum is swinging the other way. Ports (and inland infrastructure) are influencing shipping lines more. When shipping lines say 'jump'….ports say 'we'd like to, we want to, we will if we can…….but it's not quite as simple as that anymore……...".

In the past, the case for exemption from competition law for the shipping liner market was made based on the theoretical possibility of "destructive competition", due to its natural monopoly character. But there continues to be a lack of empirical evidence in support of this concern. In contrast, examples of other less collusive market arrangements have emerged with no indication of "destructive competition" in the market-place. Also, there are close parallels between the international liner shipping market and other sectors which are natural monopolies, such as airline travel, which also shows a similar hubs-and-spokes system. For example, liberalized airline travel in the USA has led to large benefits for the consumer as well as for the economy as a whole[176].

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173. but they do not occur on European trade routes
174. http://portal.pohub.com/portal/page?_pageid=36,1,36_31151:36_32101&_dad=pogprtl &_schema= POGPRTL
175. *Global Economic Trends in the Shipping and Terminal* Industries, Drewry Shipping Consultants Ltd, Aegir Port Property Consultants, at AAPA Joint Public Relations & Maritime Economic, Development Seminar, Galveston Texas, 5 April 2005, www.drewry.co.uk
176. In this context, it should be noted that the US example allows operational agreements relating to marketing and service rationalisation which are extensively used.

The one type of "destructive competition" that has occurred is between some governments which got involved in pushing "their" ports and connections over those of neighbouring countries, beyond any economic rationale. In fact, this situation has emerged due to insufficient competition in the market-place rather than too much competition. It appears to be due to a fundamental imbalance between *global* networks of shipping lines and port operators and the *national* confines of governments. It appears that governments will only be able to redress this imbalance through promoting competition between these businesses at the international level, through regional and international cooperation initiatives.

Small island developing states in the Pacific

Regional and subregional cooperation in transport of small island developing states (SIDS) is promoted mainly by the UNESCAP Pacific Operations Centre (EPOC) and the Pacific Island Forum which are discussed in this Section. In addition, since 1994, the Global Action Plan for small island developing states has been a guiding framework for regional cooperation in the Pacific and beyond.

(a) Global Plan of Action for Small Island Developing States

Small Island Developing States around the globe share a set of common challenges related to transport and communications issues that are somewhat specific to these economies. In fact, in the case of the Pacific the severity of these issues is even greater than elsewhere due to extremely long distances. The UN Global Conference on the Sustainable Development of Small Island Developing States, at Bridgetown, Barbados, in 1994, highlighted those issues and adopted a long-term Plan of Action. This Plan forms the basis of much of regional cooperation activities in the field of transport and communications in the Pacific.

Transport and communications are the lifelines linking small island developing states with the outside world, with each other and within their own countries, and are an important means of achieving sustainable development. However, distance and isolation have resulted in relatively high transport costs, including high transport insurance costs, for many small island developing states. The quality and frequency of international shipping and air services are largely beyond the control of island states. Domestic markets are too small to provide economies of scale and the remoteness of many rural and outer-island communities constrains options and increases costs. While national airlines are necessary to serve the local market, especially in archipelagic states, they tend to fragment the regional market. The constraining influence of factors on the sustainable development of island countries cannot be underestimated.

In order to overcome these problems, the Action Plan of the Barbados Conference held in 1994 recommends the following focus areas for interventions in the transport and communications sectors: (a) addressing the environmental uses associated with transport development, including quarantine and land transport; (b) devising innovative approaches to resolving transport problems, such as low-cost methods for moving cargo; (c) infrastructure asset management; and (d) infrastructure investments.

While confirming the Global Plan of Action of 1994, the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States[177] adopted in 2005 puts greater emphasis on communications and ICT aspects, in addition to transport, as well as on regional cooperation mechanisms in air, land and sea transport.

(b) ESCAP Pacific Operations Centre (EPOC)

The objective of the ESCAP Pacific Operations Centre (EPOC) in Fiji, which was established in Vanuatu in 1984 is to provide technical assistance to Pacific island countries at the specific request of their respective governments (19 ESCAP members and associate members) in a wide range of economic and social fields. Regional advisory services were provided in (a) the preparation and review of port master plans; (b) evaluation of port rehabilitation projects; (c) environmental and socio-cultural impact of port development; planning, development, operation and maintenance of shipping facilities to outer islands; (d) review of port regulations and tariffs; and (e) capacity building of engineers, management and operations personnel.

(c) Pacific Island Countries Forum

The Pacific Island Countries Forum[178] represents the Heads of Governments of all the independent and self-governing Pacific Island countries, Australia and New Zealand. Since 1971, it has provided member nations with the opportunity to express their joint political views and to cooperate in areas of political and economic concern. The Forum meets each year at the Heads of Governments level. Immediately after this, the post-Forum dialogue is conducted at the Ministerial level with Forum dialogue partners from outside the region. The Secretariat of the Pacific Island Countries Forum and nine other organizations have joined to form the Council of the Regional Organizations in the Pacific (CROP).

177. See the attachment to the report of the meeting.

178. Current members: Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Republic of the Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

Recent FORUM work in the transport sector includes a Pacific Regional Transport Study in 2004 which identified major impediments to efficient transport in the Pacific region that are within the control of governments and made recommendations for the aviation and maritime sectors, including suggestions for new investments, more efficient use of current assets, and institutional issues. In response to the study, FORUM Leaders declared the *FORUM Principles on Regional Transport Services* (FPRTS) in 2004 which emphasized, inter alia, (a) principles of good governance; (b) commercial viability; (c) regulatory systems; (d) regional solutions; (e) international aviation and maritime security standards. In order to strengthen regional cooperation and integration, a Pacific Plan was prepared by the FORUM secretariat for consideration in October 2005 which also defines the role of private sector mechanisms in the transport sector.

Regional Cooperation in Intermodal Transport Development

International production networks require a highly sophisticated level of supply chain and, more specifically, logistics. As a result, the need for efficient, integrated, intermodal international transport has become ever more apparent, and services providers have emerged that offer optimal combinations of transport modes (road, rail, IWT, sea, air) depending on customer preferences in terms of delivery time, reliability and cost.

Regional initiatives

Governments in the region have been increasingly aware of the strategic competitive importance of the need to promote institutional changes and seamless physical interconnection between the various transport modes. While the private-sector driven maritime and civil aviation networks have developed into their characteristic hubs-and-spokes systems, thereby making maximum use of economies of scale, governments have tried to promote scale and interconnection through the promotion of inland container depots (ICDs) and even freight villages, the latter integrating many related services and intermodal connections in one place, in order to cut costs and promote traffic.

It should be noted, however, that these government efforts in Asia have been national initiatives, almost without exception. On the other hand, the hubs-and-spokes development in the maritime and air transport sectors has been driven by the private sector, essentially leading to companies owning or running regional and even global networks of their own. Clearly, the strongest case for regional cooperation initiatives to promote intermodal transport is, therefore, in the land linkages to these networks.

The ALTID project of ESCAP is an obvious example of a regional programme that incorporates principles of intermodal connectivity. In particular, since the Ministerial "Seoul Declaration on Infrastructure Development in Asia and the Pacific" in 2001, the concept has been firmly on the agenda and it has become an integral part of ALTID. In fact, one of the outcomes of the Declaration was the agreement by Ministers that they considered it essential that "governments take a leading role in more effectively integrating the different forms of transport in order to develop sustainable intermodal transport systems that deliver efficient domestic transport services and at the same time provide access to international markets and wider hinterlands".

The two-pronged approach followed by the ESCAP Secretariat for promoting this process on a truly regional, continental scale, is:

– on the one hand, to promote subregional cooperation on integrating national intermodal transport systems ("bottom-up" approach, see next section), and

– on the other hand, to ensure interoperability, compatibility and consistency both in terms of standards and policy analysis methodology ("top-down approach").

This document is the first in a series of planned contributions of the Secretariat for the latter "top-down" approach. It is expected to serve as a basis for high-level policy making and promote consistency of the many national and subregional initiatives.

Subregional initiatives

(a) ESCAP projects on subregional integrated transport networks

As a first step to support and promote regional cooperation in the development of an Asian integrated transport network, the ESCAP Secretariat has started to carry out subregional studies on the issues that follow the ESCAP methodological approach mentioned above. The first such study focused on North-East Asia, the second one which is in preparation focuses on Central Asia.

ESCAP and the UNDP Tumen Secretariat have been jointly carrying out a project on an integrated international transport and logistics system for North-East Asia. A policy-level expert group meeting in Ulaanbaatar in 2004 adopted an integrated international transport and logistics network for North-East Asia with a mix of major routes and corridors (appropriate roads, railways and water transport),

including connections to major seaports[179]. These were based on the Trans-Asian Railway and Asian Highway. Intermodal interfaces, such as inland container depots, freight terminals and distribution centres and border crossings were identified as important nodes along the routes. The meeting adopted actions required to develop the integrated network.

(b) ADB programmes on subregional cooperation

ESCAP has also been working closely with ADB, supporting its comprehensive subregional cooperation programmes in Asia and the Pacific, all of which include components related to integrated transport.

In fact, ADB has been supporting regional cooperation programmes in the Asia and Pacific Region, namely, the Greater Mekong Subregion (GMS); the South Asia Subregional Economic Cooperation (SASEC)[180]; the Central Asia Regional Economic Cooperation (CAREC); the Brunei, Indonesia, Malaysia, Philippines-East ASEAN Growth Area (BIMP-EAGA); the Subregional Economic Cooperation in South and Central Asia (SECSCA); and the Pacific Plan for the small island states in the Pacific Ocean.

179. ESCAP (2005). Integrated International Transport and Logistics System for North-East Asia, Draft for the Workshop (same title), 11-12 April 2005, Ulaanbaatar.
180. Based on the earlier South Asian Growth Quadrangle (SAGQ).