
Economic and Social Commission for Asia and the Pacific
Working Group on Dry Ports

First meeting

Bangkok, 25-26 November 2015

Item 5 of the provisional agenda*

**Policies and issues relating to the development of
dry ports of international importance**

Policies and issues relating to dry ports

Note by the secretariat

Summary

Statistics show that the share of intraregional trade of overall exchanges in the region continues to increase. However, there is a risk that this growth could slow because of inadequate transport infrastructure and logistics services. Locating well-connected dry ports at strategically advantageous inland locations along the routes of the Asian Highway and Trans-Asian Railway networks may assist member countries in defining a hinterland development strategy, while facilitating access to markets for landlocked countries and advancing an efficient logistics industry across the region. Related actions will help to realize the vision of an international integrated intermodal transport and logistics system for the region.

In the present document, the work of the secretariat, in collaboration with member States, to promote the development of dry ports is highlighted and an assessment is provided of policies and issues which have contributed to the operational and financial success of such facilities in selected countries of the region. The assessment can be applied to the development efforts for such facilities in other countries.

The Working Group on Dry Ports is invited to review the document and consider policies and approaches for promoting investment in the development and operation of dry ports of international importance, creating a process for providing the secretariat with updated information on priority dry port development projects at regular intervals and encouraging the participation of member States in the implementation of the Intergovernmental Agreement on Dry Ports.

* E/ESCAP/DP/WG(1)/L.1.

I. Introduction

1. In 2011, the Organization for Economic Cooperation and Development (OECD) made the following forecast: “Air passenger traffic could double in 15 years; air freight could triple in 20 years; and port handling of maritime containers worldwide could quadruple by 2030”.¹ Recognizing that quality infrastructure plays a critical role in enhancing trade and has a positive impact on economic growth, OECD issued a warning: “Current gateway and inland transport infrastructure capacity will not be adequate to meet 2030 demand”.¹ With an average annual increase of 9.5 per cent in containerization, the Asian and Pacific region will have reached 68 per cent of global containerized trade by 2015² and regional transport networks will most likely be under increasing pressure to accommodate new trade volumes. Hence the urgency to review supply chain requirements and integrate them into the planning of future transport infrastructure, including dry ports. The increased focus on dry ports is a logical development given the demands of organizing freight movement in a globalized system, which has resulted in ever more complex production patterns requiring a high-level of synchronization between globe-spanning business processes.

2. At the same time, as container ships increase in size, the shipping industry will also have a growing impact on inland distribution. New ships with a capacity of 18,000 20-foot containers will travel the most frequented intercontinental shipping routes, such as the Asia to Northern Europe route, and call only at a small number of ports that can accommodate them in terms of draft, berth and shore-based equipment. The sudden arrival of a large number of container ships and the requirements for fast turnaround of vessels will test not only ports but land transport infrastructure networks and hinterland connections or hubs such as dry ports. In short, as maritime shipping and port terminal activities achieve greater integration, pressure will increase on land transport and inland terminals to reach a similar level of integration within high-performing intermodal networks.

3. Worldwide, intermodal networks are not a new concept. However, while in the past they were a patchwork of numerous individual facilities of relatively small size, they are now characterized by a hub-and-spoke configuration where traffic converges – often by rail³ – at a number of load centres with each of them serving their own particular market by road.

4. Given the above general considerations, the secretariat is intensifying its activities to facilitate the realization of the vision of an international integrated intermodal transport system, which the region needs in order to meet the growing challenges of globalization, as expressed in the Busan Declaration on Transport Development in Asia and the Pacific, adopted in November 2006, and reiterated in the Ministerial Declaration on Transport Development in Asia and the Pacific, adopted in March 2012 and endorsed by the Commission in its resolution 68/4. Finally, efficient dry ports can play a critical role in ensuring a modal shift from road to rail, thereby contributing to improved transport connectivity while mitigating the negative externalities of the transport sector.

¹ Organization for Economic Cooperation and Development, *Strategic Transport Infrastructure Needs to 2030: Main Findings* (Paris, 2011) p. 6.

² See ESCAP and Korea Maritime Institute, *Regional Shipping and Port Development: Container Traffic Forecast 2007 Update* (ST/ESCAP/2484).

³ See Theo Notteboom and Jean-Paul Rodrigue, “Inland terminals within North American and European supply chains, *Transport and Communications Bulletin for Asia and the Pacific*, No. 78 (ST/ESCAP/SER.E/78).

5. Recognizing the value of intermodal facilities in extending the reach of the Asian Highway and Trans-Asian Railway networks as important regional assets to promote more equitable economic growth, the Economic and Social Commission for Asia and the Pacific (ESCAP), at its sixty-sixth session, held in 2010, requested the secretariat to work towards the development of an intergovernmental agreement on dry ports. Acting on this mandate, the secretariat initiated the negotiation process for an agreement at a regional meeting in Bangkok in November 2010 at which institutional, regulatory, technical and operational issues relating to the development of dry ports were discussed. The finalized draft of the agreement was approved by the Committee on Transport at its third session in October 2012, and the Intergovernmental Agreement on Dry Ports was adopted by the Commission at its sixty-ninth session, in 2013. The Agreement opened for signature on 7 November 2013 at the second session of the Forum of Asian Ministers of Transport. On that occasion, 14 member States signed the Agreement, including one that deposited an instrument of ratification.⁴ Subsequently, two more countries became Parties to the Agreement, namely the Republic of Korea through ratification in April 2014 and Viet Nam through approval in October 2014, and three more countries became signatories, namely Bangladesh in September 2014, Sri Lanka in May 2014 and Turkey in December 2014. Annex I contains a list of signatories and Parties.

II. Decisions and recommendations of legislative bodies

6. Since the Intergovernmental Agreement on Dry Ports opened for signature, the development and operation of dry ports have been considered at a series of high-level legislative meetings, as summarized in annex II to the present document. In addition, related issues have been discussed with development partners at meetings and events such as the ad hoc two-day regional seminar organized by the secretariat in March 2014 and the sixth meeting of the Working Group on the Asian Highway in 2015. In addition, given the role of dry ports in integrating the Asian Highway and Trans-Asian Railway networks, related issues have also been discussed at specific meetings relating to rail transport, such as the meeting of the heads of Economic Cooperation Organization railway authorities organized by the secretariat of that Organization, the Special Working Group on the Singapore-Kunming Rail Link Project organized by the secretariat of the Association of Southeast Asian Nations (ASEAN), the Meeting of Chief Executives of Railways of South and South-East Asia and the International Rail Freight Conference organized by the Organization for Cooperation between Railways.

7. Legislative meetings that addressed the topic in 2014 and 2015 included the seventieth and seventy-first sessions of the Commission, held in Bangkok on 23 May and from 4 to 8 August 2014, and from 25 to 29 May 2015, respectively, and the fourth session of the Committee on Transport, held in Bangkok, from 15 to 17 October 2014. These meetings highlighted the role of dry ports in promoting regional connectivity and economic integration and their importance to a future international integrated intermodal transport and logistics system for the region. Relevant excerpts from the reports of these legislative meetings are contained in annex II.

⁴ Armenia, Cambodia, China, Indonesia, Iran (Islamic Republic of), Lao People's Democratic Republic, Mongolia, Myanmar, Nepal, Republic of Korea, Russian Federation, Tajikistan, Thailand (also became a Party), Viet Nam.

III. Activities of the secretariat

A. Assessment of issues and policies related to the development of dry ports

8. As governments try to reconcile the increasing demand for transport infrastructure and services with the need to reduce the negative impact of the transport sector on the environment, the Intergovernmental Agreement on Dry Ports, together with the intergovernmental agreements on the Asian Highway and Trans-Asian Railway networks, form an institutional framework aimed at supporting member countries in their efforts to work together towards the development of regional transport corridors, using the routes identified in the Asian Highway and Trans-Asian Railway agreements, and of dry ports of international importance. They also provide a road map to define a hinterland development strategy, to help landlocked countries access markets at lower costs than is currently the case and to advance an efficient logistics industry across the region.

9. To assist member countries in addressing the development of dry ports, the secretariat undertook a series of fact-finding missions to selected countries to review the policies and approaches that have been adopted in the development and operation of facilities at Albury-Wodonga in Australia, Kunming in China, and Uiwang in the Republic of Korea.

1. Function and location issues

10. In many countries in the Asia-Pacific region, dry ports and their associated transport links function as a conduit for international trade between inland points of origin or destination and seaports.

11. In some countries, the distance between the two can be vast. This is particularly true of the landlocked countries of Central Asia and Mongolia, where international trade must travel distances of 1,000 to 8,000 km to an outlet to the sea. In China and India as well, many inland industrial centres are 1,500 km or more from the nearest seaport.

12. In contrast, in other countries, such as those of South-East Asia, distances between points of origin or destination and seaports are comparatively short. For example, in Thailand, containers are carried by road and rail between Laem Chabang Port and Lat Krabang Inland Container Depot, a distance of only 118 km.

13. Australia is a special case in that some 85 per cent of international trade volume does not move outside of the metropolitan areas of the state capital cities, all of which have seaports. Thus the throughputs of established inland intermodal freight terminals tend to be dominated by domestic freight. However, rising road traffic congestion in and around seaports in the largest cities of Sydney and Melbourne is forcing transport planning agencies to consider the consolidation of container handling facilities in the suburbs and the diversion of port-related container traffic from road to rail.⁵ This is despite the relatively short rail hauls involved.

⁵ This would represent a reversal of the trend of increasing road haulage of containers to/from the ports which became apparent from the early 1990s when "B-Double" prime mover-trailer combinations (prime mover plus two trailers) were licensed to enter the Port of Melbourne as described below in paragraphs 39 to 42.

14. Increasingly in China, as well as in the Russian Federation, established dry ports are also serving as terminals for Asia-Europe container traffic along the Trans-Asian Railway.⁶

15. The viability of dry ports will in no small measure depend on whether they are well located to serve international trade customers and to minimize total transport costs. Whether the distances between dry ports and seaports or other points of origin or destination are short or long, certain principles must be applied in determining the location of dry ports, including:

(a) A short delivery distance by road from trade sources, whether factories, warehouses or retail stores. This would imply that they should be located within or close to industry, manufacturing or logistics precincts or zones;

(b) Accessible from high-quality railways and highways with direct connections to seaports.

16. A major terminal operator interviewed in Melbourne, Australia, indicated that the location of inland terminals is selected first to minimize the distance from their customers' premises and second to optimize the relative use of road and rail transport, in order to minimize total transport cost.⁷ This usually implies that road transport will be used for short distance local delivery of freight and rail transport for long distance line-haul freight movement, but initiatives being taken in Melbourne and Sydney suggest that short-haul rail movement of containers can be sustained if annual volumes are large and movement patterns are regular.

17. In the case of all three countries visited to date, existing dry ports appear to satisfy the above-mentioned criteria. In the case of China and the Republic of Korea, very large rail-served terminals have been constructed in appropriately zoned areas some 30 to 40 km from city centres and have generated the growth of manufacturing and distribution industries around them. In the case of Australia, large interstate rail hub terminals have been established in the midst of industry and distribution zones, while smaller rail- and road-served terminals are being established within industrial estates in major inland centres. Examples of the latter include Albury-Wodonga on the New South Wales-Victoria border, Griffith in southern New South Wales and Toowoomba in southern Queensland.

2. Dry port ownership

18. While private sector ownership and operation of dry ports is not necessarily a condition for their sustainability, there appears to be a widespread acceptance that the operation of these facilities is optimized when they are managed, if not owned, by companies with logistics expertise. In all three countries visited so far, there is, to varying degrees, private sector participation in the ownership and operation of inland ports.

⁶ In July 2015, the first Kunming-Port of Rotterdam container train service was launched, following other similar services originating in Chengdu, Zhengzhou, Wuhan and Yiwu. Source: "Chinese containers reach Rotterdam by rail", *Railway Gazette*, 27 July 2015. Available from <http://www.railwaygazette.com/news/freight/single-view/view/chinese-containers-reach-rotterdam-by-rail.html>.

⁷ Interview with representative of SCT Logistics, Altona, Victoria, Australia, 28 August 2015.

19. A joint stock company, Chinese Railway Intermodal, comprising shareholding by China Railway Container Transport Corporation (37 per cent), NWS Holdings Ltd of Hong Kong, China, (30 per cent), China Shipping Corporation (10 per cent), Lucky Glory International Ltd of Hong Kong, China, (15 per cent), and DB International (8 per cent) was established to invest in and operate 18 major rail container hub terminals throughout China. To date, only nine of these terminals are in operation. The first, at Kunming, started operation in November 2006. Total investment in the terminals, comprising infrastructure and handling equipment, is shared among the investors in proportion to their shareholding, that is, the Government of China at 47 per cent and the private sector at 53 per cent, while operation is the responsibility of Chinese Railway Intermodal, the successor of China Railway Container Transport Company Ltd.

20. In the Republic of Korea, inland container depots currently operate at five locations as part of inland logistics depots with broader functions for the handling of domestic as well as international cargo. All operate under public-private partnership contracts with public and private shareholdings of 25 per cent and 75 per cent, respectively. Ownership of the land under the terminals is vested in the public sector partner, Korean National Railroad, or Korail, which then leases the land at less than commercial rates to the private partners who operate the terminals. The public sector partner is responsible for investing in the road and rail accesses to the terminals, while investment in infrastructure and handling equipment within the boundaries of the terminals, including container yard paving, rail sidings and internal roadways, is the responsibility of the private partners. The latter investment is provided under a 30-year build-operate-transfer concession in the case of the Uiwang Inland Container Depot and a build-own-operate concession in the case of the other four facilities.

21. In Australia, the ownership and operation of inland intermodal freight terminals and investment in their development is almost wholly in private sector hands. Two exceptions to this are the development of the largest intermodal terminal in Australia, with an annual throughput capacity of 1.7 million TEU (twenty-foot equivalent unit), in Moorebank on the south-western outskirts of Sydney and the development of terminals in suburban Melbourne connected by rail shuttle services to the Port of Melbourne. Both projects are supported by investment funding from the Australian federal Government, which, in the case of the Melbourne project, will supplement funding from the Government of the State of Victoria. The Moorebank project, with an estimated cost of 1.83 billion Australian dollars (\$A), of which \$A 1.5 billion is to be financed by the private sector, will have the primary function of handling export and import containers which will be transported by rail to and from Port Botany, a distance of only 31 km. Warehousing will be a major income earner for the new terminal, which will ultimately have a warehousing area of 85 hectares. The project will be developed under public-private partnership modalities between the federal Government and a joint venture of two major private sector logistics operators, Qube and Aurizon.

22. Other ESCAP member countries which have experience in applying public-private partnership principles to dry port development include Malaysia and Thailand. The development of the large inland container depot at Lat Krabang, 27 km east of Bangkok, represents a type of public-private partnership in which the land and infrastructure is owned and provided by the State Railway of Thailand and the handling equipment is provided by six logistics companies which lease and operate the six modules comprising the inland container depot.

3. Dry port development incentives

23. Financial incentives may be provided by governments to encourage the development of dry ports by the private sector, especially in areas which are the focus of government decentralization or income equalization policies. Such incentives can often determine the viability of an operator's investment in the construction of a terminal.

24. A limited range of such incentives is provided by the Governments of the three countries visited. The most significant of these is the provision of low-cost land or low-cost land rent. In the Republic of Korea, private terminal operators at the Uiwang Inland Container Depot lease land from Korail at rates which are significantly lower than those of properties in the industrial zones surrounding the inland container depot.

25. In China, all terminal land is owned by the Government and payment for its use is recovered in the form of land taxes, payable by terminal operators. By keeping land valuations low relative to prevailing market rates, the Government can provide land-use incentives to terminal operators. In addition, if the container yard area occupied by an operator exceeds 60,000 m², that operator will receive a 50 per cent reduction in the rate of land tax applied.

26. In Australia, very few incentives are applied to encourage dry port development. During interviews with an operator of an existing terminal and the developer of a future terminal in the Albury-Wodonga area, they indicated that the land for these terminals had been purchased by the operators from companies managing the industrial estates in which the terminals are or will be situated. These industrial estates were in turn developed by local government authorities in Albury and Wodonga. It is not known whether land sold for the development of these intermodal freight terminals was sold below prevailing commercial prices. In the case of the large Moorebank Terminal, the federal Government, as part of its public-private partnership share, transferred to the joint venture operating company approximately 82 hectares of land which was formerly occupied by an army stores depot. This land was valued at \$A 320 million, or \$A 3.9 million per hectare.

27. Other forms of financial incentives which can be provided by governments are in the nature of tax waivers, especially business or corporate tax, or tax holidays, whereby taxes are waived for an agreed period of time, usually to allow operators some time to establish their businesses and generate income. Information provided during meetings in the three countries visited indicated that none provided tax incentives of this type.

B. Assessment of issues and policies related to the operation and sustainability of dry ports

28. It is important that, once established, dry ports should continue in operation, generating a reasonable level of profit for their operators and/or developers and at the same time minimizing transport and cargo handling costs between cargo origins/destinations and ports.

29. Government policies can assist in achieving these objectives, in particular through measures designed to accelerate the turnaround of containers in terminals and to maximize rail haulage of containers to/from ports. The main issues and policies associated with these objectives are outlined below.

1. Reform of customs and other border control procedures

30. It is estimated that if the average dwell time of import containers in a terminal can be reduced from seven to three days, the annual throughput of that terminal can be expanded nearly 2.5 times, meaning that handling revenues can be more than doubled without a commensurate increase in costs since fixed costs will be spread over a greater throughput. Given that operating efficiency and border control processes are the most significant contributors to the detention of containers in a terminal, Governments therefore have a strong incentive to streamline the efficiency of their customs, quarantine and border security processes.

31. Many member countries in the Asia-Pacific region have already made substantial progress in streamlining the efficiency of their customs, quarantine and border security processes, including, in the case of customs, moving to pre-clearance of import consignments. However, few have adopted a genuine single-window system for the processing of trade consignments, and thus delays owing to the need to comply with multiple sets of border procedures can be substantial.

32. In the Republic of Korea, border control procedures are conducted separately by separate agencies, while in China the separate procedures are carried out in the same office, but without an exchange of information among the different agencies.

33. In Australia, the Department of Immigration and Border Protection unifies customs, immigration, quarantine and border control functions within a single agency. The Department has adopted a trade consignment approval and clearance process in which all forms, applications and related decisions are available online. Information relating to import consignments is received online 72 hours before arrival at seaports and a customs risk assessment, which is the basis for deciding whether or not a consignment is to be inspected, is made before the vessel actually arrives in port. Data were provided by officers of the Department to show that last year on average only 100,000 out of 2 million import TEU arriving in Australia were physically inspected or X-rayed, so that the delay factor attributable to customs clearance processes was minimal.⁸ Such pre-clearance procedures allow import containers to be taken out of the port and dispatched to inland destinations without any delay. The Department regularly assesses the efficiency of its clearance and inspection procedures and at the same time measures the extent to which its procedures contribute to delay in the movement of import consignments.⁹

2. Minimization of total logistics costs

34. One of the key indicators of the success of dry ports is the extent to which they can contribute to the minimization of the total logistics cost between cargo origins/destinations and seaports, or in the case of domestic intermodal freight terminals, between ultimate cargo origins and destinations.

⁸ Interview with a representative of the Department of Immigration and Border Protection, Canberra, Australia, 25 August 2015.

⁹ Assessments are published in a series of regular reports; one example is *Australian Customs and Border Protection Service: Time Release Study, 2013*.

35. Logistics costs are the costs or charges associated with the entire logistics chain, payable by cargo owners or shippers for local delivery, terminal handling and storage, line-haul transport (transport between dry ports and seaports or between domestic intermodal freight terminals) and other intermediate costs, such as those related to customs clearance.

36. Terminal handling and storage costs reflects the operational efficiency of terminals, but also the effectiveness of streamlining customs and other border control procedures in order to accelerate the turnaround of containers and cargo in terminals.

37. The transport-related costs with regards to local delivery and line-haul transport, as a share of the total cost, is influenced by modal choice decisions. It is important that these decisions be based on the relative efficiency and cost-effectiveness of road and rail for each type of transport task. Modal choice decisions will not only affect the total transport cost in financial terms, but also the environmental cost associated with the intermodal transport mix.

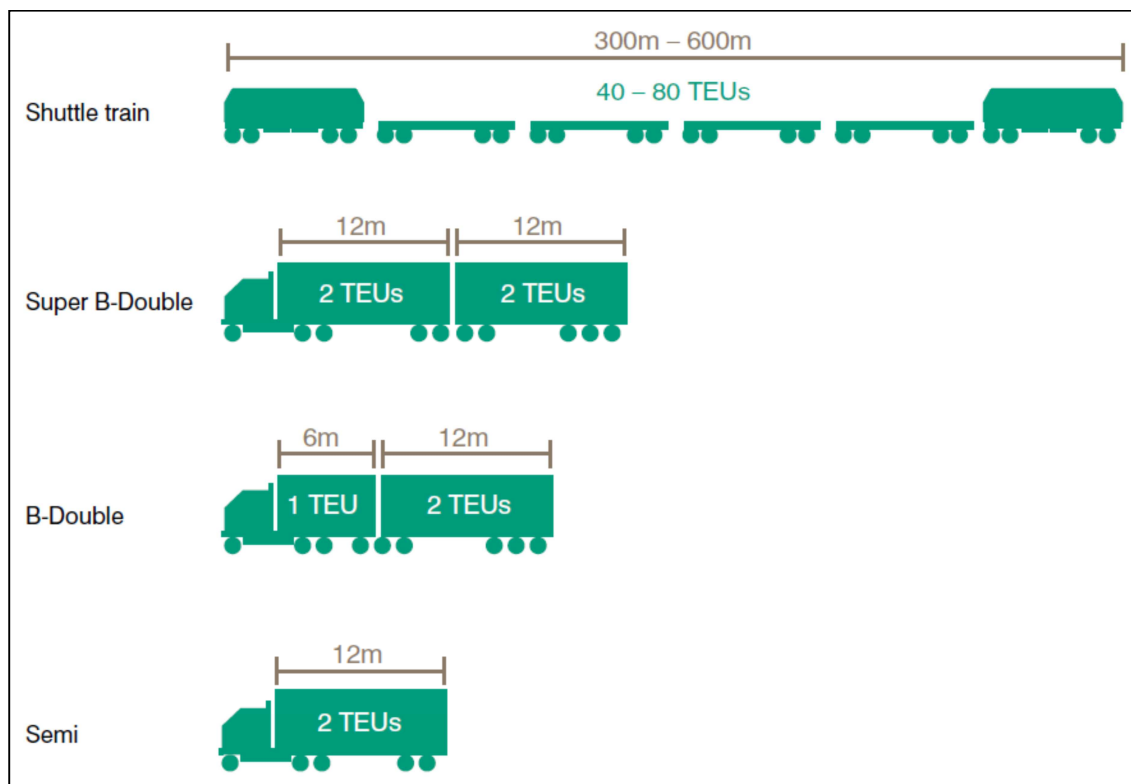
38. It is usually the case that road is more suited for short-haul delivery of container cargo between a shipper/consignee's premises and the dry port or intermodal freight terminal than for line-haul transport of containers over longer distances, and the reverse is usually true for rail. The level of delivery cost can also be influenced by the proximity of a terminal to a shipper/consignee's premises. Similarly, the line-haul cost will be affected by the distance between a terminal and a seaport, or between terminals in the case of domestic freight. Thus, decisions relating to the location of a terminal can be major determinants of transport cost, both as it relates to the short-haul and line-haul components of transport cost.

39. The significance of government transport policies in determining modal choice cannot be overstated, as is well demonstrated by the Australian experience of licensing "B-Double" truck and trailer combinations in the mid-1990s to haul cargo and containers between major inland terminals and the seaports.

40. There are two main types of B-Doubles: a B-Double with a maximum trailing length of 18 m and a carrying capacity of 3 TEU and a "Super B-Double" with a maximum trailing length of 24 m and a carrying capacity of 4 TEU. They were first licensed to enter the Port of Melbourne, via the arterial road network. Subsequently, they were licensed to enter Port Botany, the main port of Sydney, but their use quickly expanded to the Hume Highway linking Sydney and Melbourne. They now dominate freight traffic between those two cities.

41. While these new road vehicles dramatically reduced road unit operating costs as compared with the conventional semi-trailer units previously used for inland terminal-port container transfers, they clearly cannot match the efficiency and operating economics of shuttle rail services proposed for Melbourne (as illustrated in the figure below).

Intermodal transport system equipment configurations and capacities



Source: Department of Transport, *A Discussion Paper: Shaping Melbourne's Freight Future. Proposals for an intermodal solution to service Melbourne's growing containerized freight task* (Melbourne, Australia, 2010).

Note: TEU stands for "twenty-foot equivalent unit".

42. To a major extent, the advent of the B-Double extended the role of road transport to providing line-haul movement to/from the seaports and in so doing displaced rail transport from this role. In the case of the Port of Melbourne, this role was reinforced by the removal of some of the rail access lines to the port. There is now recognition that this major shift in transport policy may not have been in the public interest and the present Government of the State of Victoria has authorized the resumption of planning for rail container shuttle services to be accommodated within the port.

43. In China, government transport policy remains focused on large-scale development of the intermodal rail network, in particular on the development of major intermodal rail hub terminals at the 18 inland locations already mentioned above, connected both to seaports and other inland industrial centres. The first of these was established at Kunming in 2006, and to date nine are in operation. It is expected that, in the longer term, all intermodal hubs will be connected by double-stack rail container services, thereby substantially expanding their use and reducing their unit operating costs. The use of alternative transport modes, namely road and inland waterway transport, for the line-haul movement of containers is now generally restricted to corridors which are not connected to the railway network, of which the corridor for international trade between China, via Kunming, and the Lao People's Democratic Republic is an example.

44. In the Republic of Korea, while all inland terminals are connected by rail with Busan Port, and some with Gwangyang Port, rail has faced steadily increasing competition from road transport, which is dominated by owner-drivers who, since 2003, have had the advantage of access to cheap fuel through a diesel subsidy provided by the central Government.¹⁰ Initially, the subsidy was offered to compensate drivers for the rapid rise in fuel prices at that time, but has remained in place even after world oil prices started to collapse from mid-2014 onwards.

45. Of the five inland terminals, only Uiwang attracts a significant volume of rail-hauled containers, but even there road transport has been capturing an increasing share of the overall line-haul container volume between Uiwang and Busan Port. In 2014, approximately 56 per cent of the overall volume of 1.01 million TEU was moved by road transport between Uiwang and Busan Port. The proximity of the Uiwang terminal to Busan Port (410 km by rail and 380 km by road), coupled with the greater flexibility of road transport to allow later loading cut-off times, the apparent inability of rail to control its costs and the freight rate advantage said to be enjoyed by road, in large part explains the declining rail share.

46. In the case of most member countries of ESCAP, Governments have the ability to influence the level of competition between road and rail by restricting the gross vehicle weights, and hence payloads, of heavy road vehicles. The purpose of such restrictions is mainly to avoid the damage to road pavements from operation of overloaded vehicles, but they have been shown to have a significant impact on competition between road and rail, particularly in the haulage of containers. Many member countries, including most countries of South-East Asia and the Republic of Korea, now apply a gross vehicle weight restriction of 40-45 tonnes on prime mover and trailer combinations using national highways. If the tare weight of these vehicles is about 12 tonnes, then the maximum allowable payload is 28-33 tonnes.

47. A trend which has recently become apparent throughout the region is that the average gross weights of 20 ft containers have been increasing to something in excess of 20 tonnes. At these weights, with such restrictions in place, carrying capacity of a 40 ft trailer unit would be restricted to only a single 20 ft container per trailer unit.¹¹ Effectively, this would double the road operator's haulage costs and significantly reduce profit margins. No such load restrictions apply to railways, giving them a substantial advantage over road transport for the haulage of 20 ft containers. In some countries, for example, Thailand, this competitive advantage has been used by railways to sustain high charges for the movement of 20 ft containers, but to apply discounted charges for the haulage of 40 ft containers, where they remain vulnerable to competition from road. In this case, market conditions, combined with regulatory control, favour a transport solution which is environmentally sustainable.

¹⁰ This subsidy is provided through monthly rebates which are proportional to truck size. The average rebate now stands at 0.30 United States dollars (US\$) per litre, or 25 per cent of the average fuel price of 1,400 won (₩), or US\$ 1.20 per litre.

¹¹ Interview with a manager of the Thailand International Freight Forwarders Association terminal at Lat Krabang, 2 April 2013.

IV. Issues for consideration

48. The fact-finding missions to Australia, China and the Republic of Korea have identified a number of significant issues and policies which affect the establishment, development and sustained operation of dry ports and related intermodal freight terminals throughout the region. Issues and policies that affect dry port development include the following:

(a) **Function and location issues.** As dry ports are seen to have a primary function of supporting the movement of international trade between inland origins or destinations and seaports, they need to be located within, or close to, the sources of trade and accessible by rail to seaports;

(b) **Ownership issues.** Private ownership of dry ports is not necessarily a pre-condition for their sustainability. However, existing experiences show that they could benefit from an infusion of logistics expertise from the private sector and an injection of private and public capital in the form of public-private partnership contracts for their development and operation;

(c) **Dry port development incentives.** Governments can encourage the establishment of dry ports through a range of incentives designed to attract private sector investment, specifically through the provision of low-cost land and through tax holidays or waivers.

49. Issues and policies that affect the sustainability of dry port operations include the following:

(a) **Reform of customs and other border control procedures.** Reforms can result in the reduction of delays to trade consignments and accelerate the turnaround of containers in terminals, with a commensurate reduction in their unit operating costs and an improvement to their profitability;

(b) **Measures to minimize total logistics costs.** Policy interventions are necessary to ensure least-cost intermodal solutions to container and cargo haulage between trade sources and seaports. In particular, planning of terminal development, regulation of road vehicle dimensions and weights, and more rail-friendly port layout plans should aim to optimize the use of road for local delivery and of rail for line-haul transport of containers and cargo. This will be necessary in order to ensure that terminal and transport operations are both financially and environmentally sustainable.

50. The Working Group on Dry Ports is invited to review the present document and to consider the above-mentioned policy options and approaches. The Working Group may also wish to encourage all member States to become Parties to the Intergovernmental Agreement on Dry Ports, expedite plans to further modernize or build the dry ports listed in annex I to the Agreement, and communicate to the secretariat regarding related projects with estimated costs and projected time frame for completion. Finally, the Working Group may wish to provide guidance to the secretariat on the areas where it feels the secretariat may be most useful in promoting dry port development in the region.

Annex I

Intergovernmental Agreement on Dry Ports

Signatories/Parties

To date, 17 member States have signed the Intergovernmental Agreement on Dry Ports and 3 have deposited their instrument of ratification, acceptance, approval or accession with the Secretary-General of the United Nations.^a

| <i>Member States</i> | <i>Date of signature</i> | <i>Date of ratification, acceptance, approval or accession</i> |
|----------------------------------|--------------------------|--|
| Armenia | 7 November 2013 | |
| Bangladesh | 25 September 2014 | |
| Cambodia | 7 November 2013 | |
| China | 7 November 2013 | |
| Indonesia | 7 November 2013 | |
| Iran (Islamic Republic of) | 7 November 2013 | |
| Lao People's Democratic Republic | 7 November 2013 | |
| Mongolia | 7 November 2013 | |
| Myanmar | 7 November 2013 | |
| Nepal | 7 November 2013 | |
| Republic of Korea | 7 November 2013 | 22 April 2014 |
| Russian Federation | 7 November 2013 | |
| Sri Lanka | 16 May 2014 | |
| Tajikistan | 7 November 2013 | |
| Thailand | 7 November 2013 | 7 November 2013 |
| Turkey | 15 December 2014 | |
| Viet Nam | 7 November 2013 | 29 October 2014 (approval) |

^a In accordance with articles 4(4) and 5(1) of the Agreement, the Agreement shall enter into force on the thirtieth day following the date on which the eighth instrument of ratification, acceptance, approval of or accession to the Agreement is deposited with the Secretary-General of the United Nations.

Annex II

Excerpts from the reports of legislative meetings related to the development of dry ports

| <i>Legislative meeting</i> | <i>Decisions and recommendations</i> |
|---|--|
| Commission, seventieth session, Bangkok, 23 May 2014 (Phase I) and 4-8 August 2014 (Phase II) | <ul style="list-style-type: none"> • The Commission expressed its continued support for the work of the secretariat in the implementation of the Regional Action Programme for Transport Development in Asia and the Pacific, phase II (2012-2016), including development of the regional networks of the Asian Highway, the Trans-Asian Railway and dry ports, as well as promotion of international carriage along Euro-Asian transport linkages.^a • The Commission welcomed the signing of the Intergovernmental Agreement on Dry Ports, which would usefully supplement the Asian Highway and Trans-Asian Railway networks, contribute to economic prosperity and enhance the future environmental sustainability of transport. It observed that the intergovernmental agreements on the Asian Highway, Trans-Asian Railway and dry ports had laid the groundwork for cooperation in regional connectivity and that, in general, related transport activities had spearheaded infrastructure development in the region.^b |
| Committee on Transport, fourth session, Bangkok, 15-17 October 2014 | <ul style="list-style-type: none"> • The Committee noted with satisfaction the work of the secretariat in the implementation of the Regional Action Programme for Transport Development in Asia and the Pacific, phase II (2012-2016).^c • The Committee reaffirmed its support for the development of the Asian Highway, Trans-Asian Railway and dry ports, and recognized their role in supporting the development of an intermodal transportation and logistics system. In that respect, the Committee noted the progress being made in developing/upgrading transport infrastructure in member countries, including the Asian Highway and Trans-Asian Railway.^d |

*Legislative meeting**Decisions and recommendations*

Commission,
seventy-first
session, Bangkok,
25-29 May 2015

- The Commission noted the efforts made by member States to implement the Intergovernmental Agreement on Dry Ports through the continued development of dry ports to improve supply chain management and logistics and support a modal shift from road to rail.^e
- The Commission indicated the potential of public-private partnerships as a way to channel more resources towards infrastructure development and noted that the establishment of new financing initiatives, such as the Asia Infrastructure Investment Bank and Silk Road Fund, could also contribute to strengthened regional connectivity. It also acknowledged the continued role played by the existing bilateral and multilateral financial institutions, such as the Asian Development Bank.^f
- The Commission recognized that connectivity was a multi-stakeholder issue that required enhanced regional cooperation and the development of synergies with the assistance programmes undertaken by subregional groupings such as the Association of Southeast Asian Nations (ASEAN), the Bangladesh-China-India-Myanmar Forum for Regional Cooperation, the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation, the Greater Mekong Subregion, the South Asian Association for Regional Cooperation (SAARC) and the South Asia Subregional Economic Cooperation.^g
- The Executive Secretary noted that the secretariat was taking steps to advance holistic regional connectivity. Regional integrated intermodal and multimodal transport and logistics systems could combine the strengths of the Trans-Asian Railway and Asian Highway networks into a single integrated intermodal system, with the inclusion of dry ports and maritime transport.^h

Notes:

^a E/ESCAP/70/35, para. 91.

^b E/ESCAP/70/35, para. 256.

^c E/ESCAP/CTR(4)/7, para. 9.

^d E/ESCAP/CTR(4)/7, para. 10.

^e E/ESCAP/71/43, para. 64.

^f E/ESCAP/71/43, para. 68.

^g E/ESCAP/71/43, para. 69.

^h E/ESCAP/71/43, para. 201.