



**Policy Framework for the Development of
Intermodal Interfaces as part of an Integrated
Transport Network in Asia**

ST/ESCAP/2556

The designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Mention of firm names and commercial products does not imply the endorsement of the United Nations.

This publication has been issue without formal editing.

PROMOTING INTERMODAL TRANSPORT IN THE UNESCAP REGION

TABLE OF CONTENTS

		Page
Chapter 1	INTRODUCTION	1
Chapter 2	FREIGHT INTERMODAL INTERFACES: DEFINITIONS	3
	2.1 Trade growth and development of inland trade distribution systems	3
	2.2 Intermodal transfer terminals : descriptions of facilities and services	4
Chapter 3	ROLE OF INTERMODAL TRANSPORT IN OPTIMIZING SUPPLY CHAIN COSTS IN THE UNESCAP REGION	11
	3.1 Importance of enhanced logistics	11
	3.2 Relationship of logistics, trade and incomes	11
	3.3 Scope for improvement of logistics within the region	12
	3.4 Exploiting modal complementarity for inland trade distribution ...	13
	3.5 Importance of measuring logistics performance	15
Chapter 4	RECENT EXPERIENCE OF INTERMODAL FACILITIES AND INTERMODAL FREIGHT TRANSPORT DEVELOPMENT IN THE UNESCAP REGION	17
	4.1 Northern corridor	17
	4.2 TAR corridor through Southeast Asia	27
	4.3 The North-South corridor	40
	4.4 The Southern Corridor	48
Chapter 5	RELEVANT INTERMODAL FACILITIES AND INTERMODAL FREIGHT TRANSPORT DEVELOPMENT OUTSIDE OF THE UNESCAP REGION	61
	5.1 Europe	61
	5.2 North America	67
Chapter 6	GUIDELINES FOR DESIGN, FINANCING AND ESTABLISHMENT OF FREIGHT INTERMODAL FACILITIES	75
	6.1 Location	75
	6.2 Type	76
	6.3 Layout and area	76
	6.4 Equipment and staffing	83
	6.5 ICD infrastructure investment costs	85
	6.6 Summarized infrastructure and equipment investment costs	87
	6.7 Ownership and method of financing	87
Chapter 7	NET ECONOMIC BENEFITS OF FREIGHT INTERMODAL INTERFACES	89
	7.1 Measuring the economic benefits of freight intermodal interfaces	89
	7.2 Measuring the economic costs of freight intermodal interfaces ...	94
	7.3 Establishing and evaluating indicators of economic worth	95

		Page
Chapter 8	DRAFT RECOMMENDATIONS	96
	8.1 Setting up a proper vehicle to promote the development of intermodal interfaces	96
	8.2 Initiatives to encourage private sector participation in the financing, ownership and operation of intermodal interfaces	96
	8.3 Initiatives to remove institutional barriers to successful operation of intermodal interfaces	98

ANNEX

Annex 1	Busan Declaration on Transport Development in Asia and the Pacific	100
---------	--	-----

LIST OF MAPS

Map 1	Location of inland container handling facilities, Malaysia	33
Map 2	Network of CONCOR'S terminals	55

LIST OF FIGURES

Figure 2.1	Inland trade distribution system	3
Figure 3.1	Road/rail container freight breakeven analysis - Low rail productivity case	13
Figure 3.2	Road/rail container freight breakeven analysis - High rail productivity case	14
Figure 4.1	Malaysia-Thailand container land bridge services, volume trend	34
Figure 4.2	Road and rail volumes at Lat Krabang ICD in total Laem Chabang throughput	37
Figure 5.1	Distribution and Freight Network around Virginia Inland Port	73
Figure 6.1	Example of ICD Layout: reach-stacker served CY	78
Figure 6.2	Example of ICD Layout: RTG-served CY	78
Figure 6.3	Example of ICD Layout: RMG-served CY	79
Figure 6.4	ICD areas and costs (examples from region)	86
Figure 7.1	Container transport cost between Rotterdam and Manheim (500 km)	90

LIST OF TABLES

Table 1	Characteristics of different inland cargo distribution systems	5
Table 2	Characteristics of different inland cargo distribution systems (summary table)	10
Table 4.1	Intermodal transport capability of main TAR routes in China	18
Table 4.2	Double-stack container services operated by Chinese Railways (2007)	21

	Page
Table 4.3	Inland container handling facilities in the Republic of Korea 24
Table 4.4	TEU throughput at major ports of the Russian Federation, 2003-2007 25
Table 4.5	Facilities and operations of four inland ports, Malaysia 32
Table 4.6	Facilities and operations of ICDs in Myanmar 35
Table 4.7	Facilities and operations of Lat Krabang Inland Container Depot 37
Table 4.8	Basic characteristics of Azerbaijan's intermodal facilities 42
Table 4.9	Basic characteristics of Tajikistan's rail-served intermodal facilities ... 44
Table 4.10	Basic characteristics of Tajikistan's road-served intermodal facilities . 45
Table 4.11	Basic characteristics of Turkmenistan's inland container facilities 45
Table 4.12	Basic characteristics of Turkey's planned freight villages 49
Table 4.13	Main characteristics of Tughlakabad ICD 54
Table 4.14	CONCOR's container traffic in TEUs, fiscal year 2003-04 to 2007-08 56
Table 4.15	Design characteristics and functions of planned ICDs in Sri Lanka 59
Table 4.16	Design characteristics and functions of planned ICYs in Sri Lanka 59
Table 5.1	Characteristics of freight intermodal interfaces in the United Kingdom 63
Table 6.1	Determination of CY area 80
Table 6.2	Determination of CFS area 81
Table 6.3	ICD area requirements – summary 83
Table 6.4	Productivity factors and costs of container handling equipment 83
Table 6.5	Unit cost of ICD development for selected projects in UNESCAP region 85
Table 6.6	ICD infrastructure investment cost 86
Table 7.1	Economic benefits of investment in freight intermodal interfaces 89
Table 7.2	Emissions other than CO2 for road and rail transport 92

Chapter 1. Introduction

- 1.1 There is wide consensus among transport policy-makers in the UNESCAP region that modern transport networks are a condition to political stability, economic growth and social development. Efficient road and rail networks and their connection to international ports are also a concern for industry to reach worldwide markets. Access to mobility also contributes to better quality of life for Asia's growing population. It is with these principles in mind that UNESCAP and its member countries decided to identify the Asian Highway and Trans-Asian Railway networks as important tools for their economic integration and future prosperity. They carried out related actions within the framework of the Asian Land transport Infrastructure Development (ALTID) project launched in 1992 by the UNESCAP Commission at its 48th session. The project also comprised a transport facilitation component.
- 1.2 As the networks were taking shape through a series of corridor studies, member countries recognized the ALTID project as a flexible mechanism which stimulated joint and coordinated actions by governments of the region to improve conditions and procedures for international trade and transport across its extensive land borders. This recognition led to the formalization of the networks through two related Intergovernmental Agreements, namely: the "Intergovernmental Agreement on the Asian Highway Network" which entered into force in July 2005 and the "Intergovernmental Agreement on the Trans-Asian Railway Network" which was opened for signature in November 2006 during the Ministerial Conference on Transport held in Busan, Republic of Korea.
- 1.3 At the Conference, the Ministers acknowledged the progress made by UNESCAP and its member countries since the launch of ALTID and decided to use the popularity of the project with member governments as a thrust towards new achievements. In particular, recognizing that the continuing evolution of logistics had caused transport to become an integral part of the production process of industry, the Ministers requested that the Asian Highway and Trans-Asian Railway networks be used as the two building blocks for an international integrated intermodal transport and logistic system covering the region. To this effect, on 11 November 2006, they adopted the *Busan Declaration on Transport Development in Asia and the Pacific* (Annex 1).
- 1.4 The Busan declaration provides strong support for the development of dry ports and logistical activities at intermodal interfaces, by resolving that:

"...in order to meet the growing challenges of globalization effectively, respective government authorities will develop and implement transport policies at the national, sub regional and regional levels in line with the following principles:

- a) *Formulating integrated policies and decision-making frameworks based on strategic assessments of economic, environmental, social and poverty-related aspects;*
- (b) *Developing an **international integrated intermodal transport and logistics system** that contributes to the long-term objective of regional cooperation in support of production and distribution networks and of international trade;*

- (c) ***Giving priority to investment in the Asian Highway and Trans-Asian Railway networks, including intermodal interfaces to link them with water and air transport networks;***
- (d) ***Promoting the development of economic and logistical activities at intermodal interfaces, particularly at production and consumption centres, and around seaports and dry ports;***
- (e) *Mobilizing financial resources for the development of the transport system, its maintenance and operation from all possible sources, including public private partnerships and other financial arrangements”.*

1.5 Under the title of “Intermodal Interfaces – Focus for Development in the UNESCAP Region” this study is part of a wider programme of action being carried out by UNESCAP to facilitate the development of intermodal transport and logistics in the region under the mandate provided by the Busan Declaration. It has been initiated at a time when world trade volume is at its highest ever. However, the acceleration of international trade in recent years and the globalization process has mainly benefited the coastal areas of the region, with trade to and from the landlocked countries and the more remote hinterland areas of coastal countries trailing behind, due to excessive transport and logistics costs.

1.6 The study examines the potential for alleviating the trade and transit cost disadvantages of landlocked countries and the remote hinterlands of coastal countries by promoting the wider use of intermodal transport and the development of supporting infrastructure - in the form of freight intermodal interfaces and inland ports. Similarly, it considers the advantages of intermodal interface development in terms of stimulating economic growth in regions and countries located far from seaports.

1.7 In particular, the study:

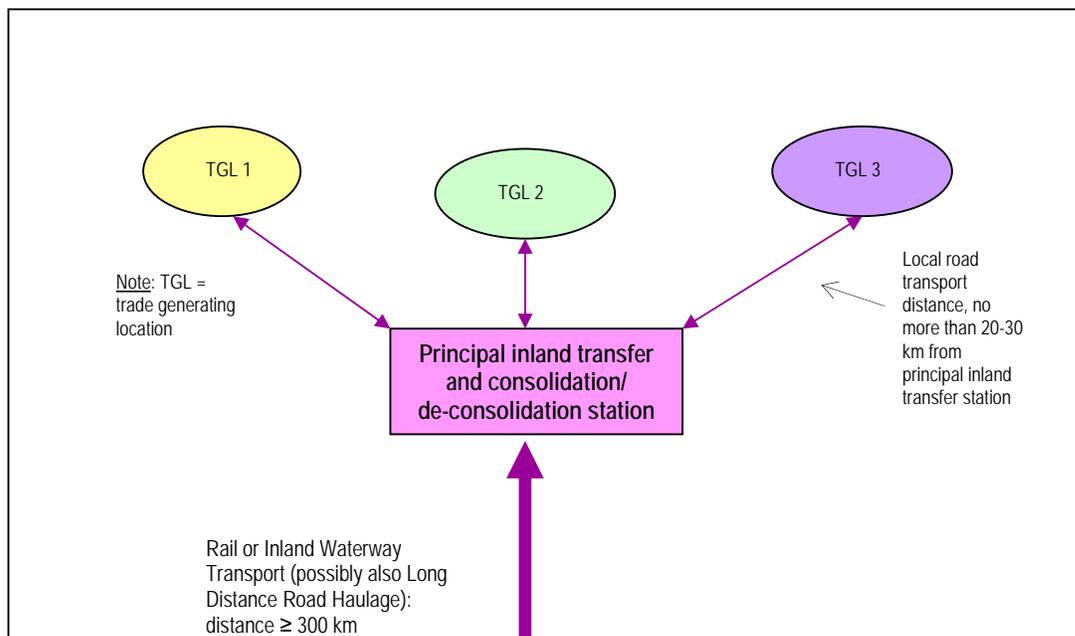
- identifies and defines the most suitable forms of infrastructure for this purpose (*Chapter 2*);
- evaluates the role of intermodal transport in optimizing supply chain costs in the region (*Chapter 3*);
- reviews progress in the development and application of intermodal transport and intermodal interfaces in the UNESCAP region (*Chapter 4*);
- reviews international best practices in the application of intermodal transport, intermodal interfaces and logistics management outside of the UNESCAP region (*Chapter 5*);
- develops and recommends guidelines for the design, financing and establishment of intermodal interfaces in inland areas (*Chapter 6*);
- recommends an approach to the measurement of the net economic benefits of intermodal interfaces (*Chapter 7*); and
- recommends policy initiatives and offers guidelines for consideration by governments of the region to formulate their own programmes of action for the expanded application of intermodal transport practices and systems (*Chapter 8*).

Chapter 2. Freight intermodal interfaces: definitions

2.1 Trade growth and development of inland trade distribution systems

Many countries within the UNESCAP region depend on their hinterlands as a source of foreign trade. Rapidly increasing foreign trade in many of these countries, especially over the past decade, has generated a requirement for long distance transport feeder services between major inland trade generating centres and the seaports. Further, the emergence of the landlocked economies of Central Asia after the break-up of the Soviet Union has generated a requirement for the connection of the sources of trade within these countries and seaports in neighbouring countries. Since the distances involved tend to be substantial, rail which can offer cost efficiency over distances greater than 300 km is assuming an increasingly important role in trade feeder transport. It is being supported in this role by truck transport which assumes a local feeder role, involving the local distribution of traded commodities between principal inland transfer stations and the trade originating and terminating locations, designated as Trade Generating Locations (TGL). Effectively these facilities operate respectively as “hub” and “spoke” facilities, as shown in Figure 2.1.

Figure 2.1: Inland trade distribution system



预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/报告?reportId=5_8110

