

# **INTERMODAL TRANSPORT**



**National  
Peer Review:  
TURKEY**

*Summary Document*

## INTERNATIONAL TRANSPORT FORUM

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Following the discussions with the Turkish authorities, the Peer Review began in September, 2006. Four experts participated and contributed their expertise to the analysis: **Martin Magold**, Chief of the Border Crossing Facilitation Section in the Transport Division of the United Nations Economic Commission For Europe (UNECE) and Secretary of the UNECE Working Party on Intermodal Transport and Logistics, **Christian Reynaud** (France), a private consultant with special expertise in transport infrastructure, **Christoph Seidelmann** (Germany), with special expertise in intermodal transport operations, and **Wouter van Zijst** (Netherlands), senior expert on intermodal transport in the Dutch Ministry of Transport.

This team was assisted by **Martine-Sophie Fouvez**, Principal Administrator in the International Transport Forum Secretariat, **Nurhan Tüfekçioğlu**, Turkish expert on road transport, who drew up the inception report for this study, and **Lale Karayaka** who assisted in the preparation of the final report.

The team was also supported by the relevant Turkish State Institutions as well as private sector actors through the coordination of National Focal Point **İzzet Işık**, Head of International Relations Department, General Directorate of Road Transport of Ministry of Transport, Turkey.

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## INTERMODAL TRANSPORT

### NATIONAL PEER REVIEW: TURKEY

#### EXECUTIVE SUMMARY

The purpose of this Peer Review is to provide a general description and assessment of Turkey's intermodal transport operations. The Review also makes recommendations that are considered necessary to further promote and improve intermodality in Turkey. It has been carried out by a review team supported by the International Transport Forum/ITF Secretariat (formerly ECMT) upon the request of the Turkish Ministry of Transport.

#### **Turkish Economy and International Trade**

Turkey enjoys a strategic location, with the potential to play a pivotal role in regional and global integration. The important energy, trade and transport networks which connect west to east and north to south are keys to unleashing this potential. Recent economic and political developments throughout neighbouring regions -- the Balkans, the Black Sea, the Mediterranean Basin, the Caucasus, Central Asia and the Middle East -- have further emphasized Turkey's role.

In recent decades, Turkey has benefited from a favourable economic environment, which has supported a broad and continuous reform allowing the country to strengthen its position on international markets.

Turkey is fast becoming one of the leading actors in foreign trade in the region, and has extensive trade relations not only with the EU and OECD Member Countries but also with the Black Sea Economic Cooperation (BSEC), the Economic Cooperation Organization (ECO) and with Central Asia and the Middle East. Political progress in opening markets and borders will facilitate Turkey's trade and economic growth.

Turkey has grown rapidly, with an average of nearly 7 % growth in GDP per year over the period 2002-2007. Based on the recent increases in foreign trade volumes, it is expected that the share of foreign trade in GDP will grow steadily.

#### **Turkey's transport system**

A dynamic logistics industry, combined with a large international road vehicle fleet, underscores Turkey's potential to become one of the most significant logistics hubs and transit countries in the region. Turkey has an extensive and well-maintained east-west road network. Among the important international networks and corridors passing over its national territory are TEM Network, BSEC, ECO and TRACECA Corridors, Euro-Asian Transport Linkages and Pan-European Corridor IV.

Following a package of legislative reforms, the legal framework for international road transport is now consistent with the EU policy. The market is fully liberalized, and the private sector is highly involved in road transport operations.



Some 96 % of passengers and 92 % of freight are transported by road in Turkey. This dependence on road transport creates vulnerabilities. Indications such as congestion, environmental downsides, border-crossing problems, road taxation, restrictions on road traffic, permit shortages and customs constraints are some examples.

In order to overcome this vulnerability and become more sustainable, Turkey needs to develop intermodal transport solutions that can rapidly yield results without losing the advantages of its competitive road transport system.

International road transport operators have adapted to the international context by implementing innovative solutions which combine road, sea and Roll-on Roll-off (RO-RO) transport. This is partly explained by the fact that, despite a 138 % increase in Turkish exports to the EU, this sector has seen only a 50% increase in the quota of permits received in the last five years. Turkish operators have started acquiring companies in Europe to overcome permit problems and have also developed RO-RO services to provide alternatives. In addition to this, through the additional and multi-entry permits (such as ECMT permits) obtained during the year, it is targeted to partially minimise the shortage of permit quota in the country.

Other transport modes, however – especially rail -- have shown less inclination to adapt. Despite its geographical features and years of experience, the railway network lacks sufficient capacity and many parts of the infrastructure have not seen new investment. Since the existing railway network is concentrated on a few major routes, the railway services are available only in certain areas and between certain cities. With the recent public investment projects, the quality and technical facilities are being improved.

Turkey recognizes the need for a balanced transport system rather than one which is overly dependent on road transport. Regulatory reform and investments in a range of infrastructure projects are beginning to bridge this gap in its railway system. Nevertheless, it is important that these go hand in hand with a clear vision on market needs and opportunities.

Maritime transport is one of the most liberalized sectors in Turkey, with a strong private shipping sector. All of the major ports are accessible by railways with a storage capacity of 2 million tones and total throughput around 46 million tons per year. With over 8000 km of coastline, Turkey has five ports which have been registered as international ports/ferry links and container terminals by the European Agreement on Main International Combined Transportation Lines and Related Facilities (AGTC).

In recent years, container traffic at the ports showed a 20% increase annually. This situation has made it clear that public ports could not accommodate the increasing demand within their current infrastructural capacities.

Public ports are thus undergoing a fundamental change in status, at a time when growing demand for service is creating pressure. Consequently, Turkey is pursuing a port privatization process with the aim of increasing efficiency and infrastructure capacity. The continuation of this process of commercialization and privatisation of ports is recommended and should subsequently improve service capacity and efficiency.

In a few years' time, private ports are expected to handle around 50% of the container traffic. In the long term, port developments should certainly comply with more global land use strategies, particularly in dense areas, such as the industrial base in the Marmara Region.

Turkey has a large airspace (almost 1 million km<sup>2</sup>) with a total length of controlled ATS routes of over 50 thousand km, over the three continents: Europe, Asia and Africa. The sector has grown significantly in the past four years, in part owing to the successful application of build-operate-transport (BOT) models which contributed to the opening of several new modern airports. The combination of new

regulatory measures and new infrastructure policies using BOT, along with the entry of new airlines into the market, has helped make the Turkish air transport system meet a rapidly growing demand.

Turkey has significant potential, and several projects are underway to develop intermodal transport. Among these are the Kars-Tbilisi project, Marmaray Project, Mersin Container port project, and Çandarlı and Filyos port projects.

### **Current Intermodal Systems**

Intermodal transport is the set of technologies that facilitates the transfer of loading units from one mode of transport to another. Intermodal transfer allows *en route* change from a given transport mode (such as road transport) to another (such as train or ship) in order to carry larger volumes in one transport operation.

The changing context of international transport has prompted Turkish international road hauliers to adopt innovative solutions to expand their intermodal fleets and develop new Roll-On Roll-Off (RO-RO) lines between Turkey and several European ports. At present, these solutions typically combine road, sea and RO-RO and Rolling Road (Rollende Landstrasse/Ro-La) transport.

There are frequent and regular domestic RO-RO ferry services across the Marmara Sea linking the industrialized north with the Asian side of Turkey. The increasing traffic congestion in the İstanbul metropolitan area, together with the abolition of the excise tax on fuel prices for ferry vessels, has led to a rapid increase of competitive RO-RO ferry services in this region.

International RO-RO ferry boat operations to Western European markets have existed since the early 1990s. Originally, they were a result of the conflicts that arose in the Balkan area which made road transport by Turkish operators to and from Western European markets increasingly difficult.

There are a considerable number of RO-RO services plying the Black Sea. Regular RO-RO services exist between the Turkish, Ukrainian, Russian and Georgian Black Sea ports. The volume transported by road on these Black Sea links is estimated at 20 000 vehicles annually.

A regular intermodal transport service using swap-bodies operates four weekly block trains in both directions between Germany and Turkey. There is also a market for automobile transport on special railway wagons. Two weekly block trains that carry around 200 automobiles each have operated between Romania and Turkey since 2006.

Regular rail-ferryboat services operate with the Russian Federation and Romania. Another domestic rail-ferry link crosses Van Lake and is part of the important international railway and intermodal line to Iran. Intermodal transport by rail in the form of containers is undertaken by the TCDD, which also operates regular container block trains to and from Europe and Central Asia.

In national transport, railways do not carry intermodal transport units, such as containers, swap-bodies or semi-trailers. Partly because of the strong position of long-haul domestic road transport in Turkey, there does not seem to be a market for such intermodal services, even though distances between main economic centres within Turkey are often more than 500-600 km. At these distances, intermodal transport operations are considered to be viable in Western European countries.

In terms of intermodal services, air transport does not have an important share in cargo transport volume. New strategies are being developed for the transport of high-value goods, express transport and the transport of perishable goods for export. Logistics services are developing in major airports to adapt to the expected high demand for specialized air market segments.

Recent incentives in Turkey, such as those for conventional block train operations, imply that there are potential supply and demand factors in the market in favour of an intermodal system, provided that there are several options which can sufficiently meet the needs of stakeholders in terms of speed, reliability and flexibility. A 20% increase in the use of rail ferries for national transport between 2005 and 2006 offers another example of the potential demand for intermodality in Turkey.

At present, there is no specific national legal framework or provisions in Turkey to govern national and international intermodal transport or to facilitate a shift from long-haul road transport to rail and/or coastal shipping.

Turkey also does not yet have financial or regulatory incentives in place to foster intermodal transport operations, such as the tax exemptions and subsidy schemes in Western European countries that provide contributions to investments and initial operational costs for intermodal transport and terminal operations considered as “public services”. The only exception seems to be the exemptions from excise tax on fuel for RO-RO vessels plying the Marmara Sea.

### **What should be done?**

While it is clear that Turkey is already operating intermodal transport, whether as road-rail, Ro-La, RO-RO and rail ferry services in its international transport and logistics activities, the country still needs a comprehensive intermodal strategy and framework. In other words, a roadmap is needed which would allow a more efficient and sustainable growth of intermodal operations.

Turkey has a great potential to build up intermodal solutions engaging maritime and railway resources with other modes of transport to increase its international freight volumes and viability. What remains to be done is to promote and maintain emerging intermodal demands through the provision of a legal framework and financial/regulatory incentives so as to foster intermodal transport.

To achieve these objectives, this Review has established the following policy recommendations:

1. The Turkish Government should elaborate a National Master Plan providing a framework for the introduction of intermodal transport and logistics, in cooperation with all public and private stakeholders and interest groups. This Master Plan should define a network of intermodal corridors, nodes and gateways for inland transport and for transit through Turkey.
2. The establishment of a clear policy and legal framework would ensure a level playing field for the private sector. Financial and regulatory measures and incentives to promote intermodal transport can be very effective.
3. The creation of an intermodal transport and logistics department under the Ministry of Transport could fill the gap to oversee and co-ordinate the activities of all stakeholders, including both public organizations and private companies, in an equitable manner.
4. The development of intermodal transport would be ill-served by a process of isolated decision-making; it should instead be part of a progressive and global transport policy. It is therefore necessary to involve all the public and private stakeholders in the promotion and facilitation of a sustainable intermodal system for Turkey.
5. Regulatory and financial measures can be implemented by the Turkish government in order to attract private capital for the development of intermodal transport services.



6. Intermodal transport requires long distances and high cargo volume corridors in terms of commercial viability. Such corridors in Turkey should be identified by a market analysis.
7. The infrastructural capacities of the major ports should be increased to respond to future demand, which could grow significantly in the next 15 years.
8. Owing to the uncertainty of the commercial viability of Ro-La services to and from Turkey, this technique is not recommended for Turkey's intermodal transport operations. Therefore, it should not be a priority for public intervention.
9. The Turkish RO-RO system and its connection to Southern Europe are highly successful. Turkish transport authorities should therefore encourage its extension, particularly for domestic trade flows, to other areas of Mediterranean and Black Sea trade.
10. Domestic RO-RO coastal shipping should be able to make an inroad into the domestic road transport markets in Turkey for longer distance operations and for destinations along the Turkish coasts. Such a concept would be in line with the "Motorways of the Sea" initiatives pursued and supported in the framework of the European Union.
11. In creating an extensive and competitive intermodal transport system for Turkey, the essential connections from and to the maritime and air freight logistics centres and their integration to urban distributions should also be taken into account.
12. One of the primary measures should be to maintain and improve the hinterland connections of ports with the other modes of transport, in particular railways which would provide advantages for logistics markets.
13. To improve railways' share in intermodality, the railway network should be upgraded, not only for high-speed passenger transport, but also to allow for competitive and reliable goods transport services. Financial support for rolling stock and terminals should also be prioritized.
14. While six locations have been selected as rail freight logistic centres, prospects to develop such services are not yet very clear. Thus, the uncertainties which affect the perspective of development of intermodal services need to be solved.
15. The trade and transport promotion policy could include a supportive attitude towards transit traffic. Transit trade could be further used as an instrument for additional economic growth.
16. The active participation of Turkey in international organizations has resulted in a series of agreements that identify transport corridors. Because of Turkey's size, more national links should be included, in addition to these corridors.
17. A schedule and a monitoring process should be set up to ensure necessary changes are implemented and to highlight areas where special efforts must be made.

If the above-mentioned recommendations are acted upon, Turkey will greatly facilitate its own trade and will play a central role in providing access to Europe on Middle East, Asian and Caucasian markets. Progress in and promotion of intermodal transport will also contribute to Turkey's aim to achieve a sustainable and more balanced national and international transport system.

## TABLE OF CONTENTS OF THE FULL PUBLICATION

<b>LIST OF ACRONYMS.....</b>	<b>7</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>11</b>
<b>INTRODUCTION .....</b>	<b>17</b>
<b>PART I. TURKEY: AT THE CROSSROADS OF EUROPE, ASIA AND THE MIDDLE EAST.....</b>	<b>21</b>
<b>Chapter 1. MAIN ECONOMIC INDICATORS OF TURKEY .....</b>	<b>21</b>
1.1. Turkey’s Foreign Trade .....	21
1.2. Exports and Imports by Country Groups .....	24
1.3. Market Shares of Transport Modes in Foreign Trade.....	31
<b>Chapter 2. THE SOCIO-ECONOMIC AND TRANSPORT CONTEXT .....</b>	<b>35</b>
2.1. The Socio-Economic Context and Transport Needs.....	35
2.2. The Spatial Development of Turkey .....	38
<b>PART II. FREIGHT TRANSPORT AND THE CHALLENGES AHEAD.....</b>	<b>41</b>
<b>Chapter 3. TRADITIONAL FREIGHT TRANSPORT IN TURKEY .....</b>	<b>41</b>
3.1. Road Transport.....	41
3.2. Railway Transport.....	53
3.3. Maritime Transport and Ports .....	70
3.4. Air Transport.....	80
3.5. Pipelines.....	85
3.6. Logistic Centres: Freight Villages and Intermodal Terminals.....	99
<b>Chapter 4. INTERMODAL TRANSPORT OPERATIONS IN AND WITH TURKEY.....</b>	<b>101</b>
4.1. Definitions and Context .....	101
4.2. Road-Rail Intermodal Transport Operations.....	102
4.3. Roll-On-Roll-Off (RO-RO) Ferry Services .....	105
4.4. Rail Ferry Services.....	109
4.5. International Maritime-Pipeline Transportation .....	110
4.6. Intermodal Transport Actors in Turkey .....	110
4.7. Existing Legal Framework.....	112
<b>PART III. REQUIREMENTS FOR EFFICIENT INTERMODAL TRANSPORT SYSTEMS.....</b>	<b>115</b>
<b>Chapter 5. WHY CHOOSE INTERMODAL TRANSPORT? .....</b>	<b>115</b>
5.1. Main Scenarios for Future Development .....	115
5.2. The Functions of Intermodal Transport .....	116
5.3. The Commercial Basics of Intermodal Transport.....	117
5.4. The Basic Techniques of Intermodal Transport.....	118
5.5. The Choice of Technique.....	119
5.6. Recommendations.....	120

<b>Chapter 6. THE CHOICE OF THE BEST INTERMODAL TRANSPORT SYSTEM .....</b>	<b>121</b>
6.1. The Potential Markets for Freight Container Transport.....	121
6.2. Semi-Trailers in Intermodal Transport.....	124
6.3. The European Domestic Container .....	126
6.4. Ro-La Operation .....	129
<b>PART IV. STRATEGY FOR A COMPETITIVE INTERMODAL TRANSPORT SYSTEM IN TURKEY .....</b>	<b>133</b>
<b>Chapter 7. A SYSTEM ADAPTED TO NETWORK PERSPECTIVES AND TRANSPORT PROJECTION FOR EURO-ASIAN TRANSPORT LINKS .....</b>	<b>133</b>
7.1. The International and Transit Corridors Across Turkey .....	134
7.2. The TINA Project on Major National and International Corridors.....	136
7.3. Transport Prospective and Traffic Projections.....	136
7.4. AGTC.....	142
<b>Chapter 8. PROMOTION OF INTERMODAL TRANSPORT OPERATIONS AND LOGISTICS .....</b>	<b>145</b>
8.1. National Transport .....	145
8.2. International Transport.....	149
8.3. Reorganisation of Customs Treatment in the Gateways .....	151
8.4. Regulatory and Financial Support Measures for the Development of Intermodal Transport .....	152
<b>Chapter 9. RECOMMENDATIONS FOR AN INTERMODAL TRANSPORT SYSTEM.....</b>	<b>155</b>
9.1. Development of an Intermodal and Logistics Master Plan .....	155
9.2. Creation of a Department of Intermodal Transport and Logistics .....	160
<b>CONCLUSIONS.....</b>	<b>163</b>
<b>ANNEXES</b>	
Annex I. AGTC Agreement.....	169
Annex II. Model Action Plan and Partnership Agreement for the Development of Intermodal Transport at the Pan-European Level [CEMT/CM(2005)10] .....	171
Annex III. Developing Intermodal Transport in the Netherlands.....	183
Annex IV. National Measures to Develop Combined Transport: The Case of Austria [CEMT/CS/TIL(2007)1/REV1].....	187
Annex V. Guide to Intermodal Transport Road/Rail Cost and Price Calculation.....	193



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