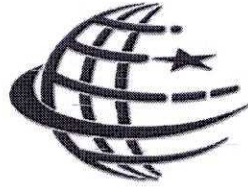




**REPUBLIC OF TURKEY**

**MINISTRY  
OF  
TRANSPORT**



**TRANSPORT  
OPERATIONAL PROGRAM**

**(CCI No: 2007 TR 16 I PO 002)**

**Ankara  
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## Table of Contents

<b>ABBREVIATIONS.....</b>	<b>IV</b>
<b>ORGANISATIONAL CHART OF MOT.....</b>	<b>VI</b>
<b>INTRODUCTION .....</b>	<b>7</b>
<b>1. CONTEXT, CONSULTATION AND COORDINATION .....</b>	<b>9</b>
1.1. NATIONAL POLICY AND SOCIO-ECONOMIC CONTEXT .....	9
1.1.1 <i>National Transportation Policies: Past and Current State.....</i>	<i>10</i>
1.1.2 <i>National Policy Framework on Transport Policy .....</i>	<i>14</i>
1.3. PARTNERSHIP CONSULTATION .....	21
1.4. EX-ANTE EVALUATION .....	25
<b>2. ASSESSMENT OF MEDIUM TERM NEEDS, OBJECTIVES AND STRATEGIC PRIORITIES .....</b>	<b>26</b>
2.1 SOCIO-ECONOMIC ANALYSIS (INCLUDING SWOT ANALYSIS) .....	26
2.1.1 <i>Railway Transport.....</i>	<i>32</i>
2.1.2 <i>Maritime Transport.....</i>	<i>43</i>
2.1.3. <i>Road Transport.....</i>	<i>Error! Bookmark not defined.</i>
2.1.4. <i>Air Transport .....</i>	<i>63</i>
2.2 STRATEGIC PRIORITIES.....	67
<b>3. PROGRAMMING STRATEGY.....</b>	<b>75</b>
3.1 PRIORITY AXES AND MEASURES.....	77
3.2 TECHNICAL ASSISTANCE.....	87
3.3 HORIZONTAL ISSUES .....	90
3.4 COMPLEMENTARITIES AND SYNERGIES WITH OTHER FORMS OF ASSISTANCE.....	94
3.5 INDICATIVE LIST OF MAJOR PROJECTS.....	94
<b>4. FINANCIAL TABLES.....</b>	<b>100</b>
<b>5. IMPLEMENTATION PROVISIONS .....</b>	<b>104</b>
5.1 IMPLEMENTATION PROVISIONS .....	104
5.2 MANAGEMENT AND CONTROL STRUCTURES .....	104
5.2.1 <i>Bodies and authorities.....</i>	<i>104</i>
5.2.2 <i>Separation of functions.....</i>	<i>111</i>
5.3 MONITORING AND EVALUATION .....	112
5.3.1 <i>Monitoring arrangements.....</i>	<i>112</i>
5.3.2 <i>Management Information System .....</i>	<i>116</i>
5.3.3 <i>Monitoring System and Indicators.....</i>	<i>117</i>
5.3.4 <i>Selection of operations.....</i>	<i>118</i>
5.3.5 <i>Sectoral annual and final reports on implementation.....</i>	<i>118</i>
5.3.6 <i>Evaluation arrangements .....</i>	<i>119</i>
5.4 INFORMATION AND PUBLICITY .....	121
5.4.1 <i>Introduction .....</i>	<i>121</i>
5.4.2 <i>Requirements .....</i>	<i>121</i>



5.4.3 Activities .....	122
5.4.4 Indicative budget.....	122
5.4.5 Management and implementation.....	123
5.4.6 Monitoring, evaluation and reporting.....	123
5.4.7 Partnership and networking .....	124
5.4.8 Internet .....	124
<b>ANNEX A .....</b>	<b>125</b>
DETAILED SUMMARY TABLE OF OP.....	125
<b>ANNEX B.....</b>	<b>127</b>
PROJECT SHEETS.....	128

## ABBREVIATIONS

ACC	Area Control Center
AGC	European Agreement on Main International Railway Lines
AGR	European Agreement on Main International Traffic Arteries
BOT	Build –Operate-Transfer
BSEC	Black Sea Economic Cooperation
CEEC	Central and Eastern European Countries
CFCU	Central Finance and Contracts Unit
CIS	Commonwealth of Independent States
CSG	Community Strategic Guidelines on Cohesion
DG	Directorate General
DHMI	DG State Airports Authority
DLH	DG Construction of Railways, Ports, Airports
DTD	Railway Transportation Association
DTO	Turkish Chamber of Shipping
EC	European Council
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EU	European Union
EUROCONTROL	European Organisation for the Safety of Air Navigation
EUROSTAT	European Statistical Institute
EUSG	European Union Secretariat General
FCB	Financial Cooperation Board
GDP	Gross Domestic Product
HPC	High Planning Council
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
IFI	International Financial Institutions
IPA	Instrument for Pre-Accession Assistance
ITS	Intelligent Transport Systems
KGM	DG Highways
KIYEM	DG Coastal Safety
MARMARAY	•stanbul Strait Tube Tunnel Project
MoEF	Ministry of Environment and Forestry
MoIT	Ministry of Industry and Trade
MoLSS	Ministry of Labour and Social Security
MoS	Motorways of the Sea
MoT	Ministry of Transport
MCA	Multi-Criteria Analysis
MIPD	Multi-annual Indicative Planning Document
NAO	National Authorising Officer
NDP	National Development Plan
NF	National Fund
NIPAC	National IPA Coordinator
OECD	Organisation for Economic Co-operation and Development
OIZ	Organized Industrial Zones

OP	Operational Programme
OS	Operating Structure
PPP	Public Private Partnership
PRAG	Practical Guide to Contract Procedures for EC External Actions
RODER	Ro-Ro Vessel Operators and Combined Transporters Association
SCF	Strategic Coherence Framework
SDS	Strategy for Sustainable Development
SEIA	Support to European Integration Activities
SHGM	DG Civil Aviation
SMC	Sectoral Monitoring Committee
SPO	State Planning Organisation
SWOT	Strengths, Weaknesses, Opportunities, and Threats
ToR	Terms of Reference
TA	Technical Assistance
TCDD	DG Turkish State Railways
TEM	Trans-European North-South Motorway
TEN-T	Trans-European Network for Transport
TETEK	Turkey Transit Highway
TEU	Twenty-Foot Equivalent Unit
THY	Turkish Airlines
TINA	Transport Infrastructure Needs Assessment
TMMMB	Association of Turkish Consulting Engineers and Architects
TND	Turkish Transporters Association
TÖSH•D	Turkish Private Aviation Enterprises Association
TRACECA	Transport Corridor Europe Caucasus Asia
TURKSTAT	Turkish Statistical Institute
TÜB•TAK	The Scientific and Technological Research Council of Turkey
TÜRKLM	Port Operators Association of Turkey
UMA	Undersecretariat of Maritime Affairs
UN-ECE	United Nations Economic Commission for Europe
UND	International Transporters Association
UT•KAD	Turkey Freight Forwarders Association



**MINISTER**





## **INTRODUCTION**

The Transport Operational Programme (TOP) is one of the major policy documents under the Instrument for Pre Accession Assistance (IPA) effected by EU Regulation No: 1085/2006 as the European Community's financial instrument for the pre-accession process for the period 2007-2013. IPA envisages five components to facilitate EU convergence. They are:

- 1-Transition Assistance and Institution Building,
- 2-Regional and Cross-Border Cooperation,
- 3-Regional Development,
- 4-Human Resources Development,
- 5-Rural Development.

The first two components apply to both potential candidate and candidate countries. The other three apply to candidate countries only. Turkey, being a candidate country, is, therefore, eligible for funds under all five components. For the TOP which constitutes one of the three sub components within the framework of the Regional Development Component, the Ministry of Transport is designated as the Operating Structure (OS).

The Ministry of Transport (MoT) functions are legislated in The Law on the Organization and Duties of Ministry of Transport No. 3348, dated 09/04/1987. These are the establishment and development of transportation and communication systems and services in line with national needs. The Ministry in its central institutions and related and affiliated bodies has the primary responsibility for transport policies and strategies.

DG Land Transport, the central institution within the MoT, is responsible for policy making and regulating the land transport sector. DG Highways (KGM), which has recently become an attached body of MoT (Presidential Note of 30 August, 2007) is responsible for construction and maintenance for road infrastructure. DG Turkish State Railways (TCDD), which is a State economic enterprise and a related body of MoT, operates and maintains the rail infrastructure. Undersecretariat of Maritime Affairs (UMA) is responsible for all aspects of maritime transport regulation and policy making. DG Civil Aviation (DGCA), an attached Directorate General of the MoT, is in charge of aviation sector policy making and supervision. DG State Airports Authority (DHMI) has the duty of construction and operation of the aviation infrastructure. DG Construction of Railways, Ports, Airports (DLH), a central institution of MoT, is responsible for design, planning and implementation of maritime, air and railway sectors' infrastructure projects.

The TOP has been framed in full compliance with the principle of partnership, taking on board all the contributions made by the relevant stakeholders. The document has been formulated in conjunction with the priority axes of the 9<sup>th</sup> Development Plan (DP) and the objectives and priorities of the Strategic Coherence Framework (SCF) which sets out the basis for receiving assistance from the Instrument for Pre Accession funds in transport for the period of 2007 - 2009.

The priorities and measures of this TOP have been drawn up in response to the key problems and challenges identified both in key national reference documents (9<sup>th</sup> DP, SCF and the Transport Master Plan Strategy) and in the strategic Community documents ( including the Multi-annual Indicative Planning Document, the White Paper "European transport policy for

2010: time to decide", Community Strategic Guidelines). This document, prepared in accord with the prescriptions of MIPD and SCF, also aims to support measures that contribute to decreasing existing regional disparities.

This TOP has also drawn on an important strategic framework Transport Infrastructure Needs Assessment Study (TINA) which identified the core transport network within Turkey by way of assessing transport forecasts to 2020 and identifying the potential bottlenecks as well as priority remedial projects.

Details of prioritised project pipeline and the maps of the core transport network are presented in other sections of this TOP which, overall, sets out three priorities including TA and relevant measures for each of the priorities (see Chapter 3). In this respect, the main priority axes are :

- Priority 1: Improvement of railway infrastructure
- Priority 2: Improvement of port infrastructure
- Priority 3: Technical Assistance to support these priorities

The measures put forward to meet these priorities; which reflect the current project pipeline are:

- New construction and/or rehabilitation of railway lines on future TEN-T railway network and with existing TEN-T
- New construction of ports on future TEN-T with necessary multimodal hinterland connections

Chapter 1 of the TOP gives a brief overview of the national policy and socio-economic context within the community strategy framework, describes the application of the partnership principle and highlights the ex-ante evaluation findings and responses. Chapter 2 addresses both the issue of medium term needs assessment on transport in Turkey and related SWOT analysis. The strategic priorities in line with the MIPD and SCF are also analysed. Chapter 3 outlines the programme strategy of the TOP, comprising the priority axes and measures. This chapter also treats with the horizontal issues and synergies with the other forms of support. Chapter 4 deals with the financial allocations for each measure. Chapter 5 elaborates the implementation provisions specifying the responsible programming structures and IPA implementation.



## **1. CONTEXT, CONSULTATION AND COORDINATION**

### **1.1. NATIONAL POLICY AND SOCIO-ECONOMIC CONTEXT**

The Republic of Turkey with a total area of 814,578 sq. kilometer and 8,333 km of coastal line, lies in the main traffic artery between Asia and Europe having borders with Bulgaria, Greece, Iran, Iraq, Syria, Georgia, Armenia, and Azerbaijan. Surrounded by the Black Sea on the north and the Mediterranean Sea on the south, it connects the Balkans to the Middle East, Central Asia to the Caucasus and the Black Sea countries with the Mediterranean countries. Turkey's location, together with its geostrategic importance, elevates its transport policies and investments to a prime ranking relative to other policies of the Turkish Republic.

Within an international context, contemporary developments in Turkey and its setting affords new opportunities which impact on its transport policies. The disintegration of the Soviet Union gave rise to new economic and geographic scenarios which compelled the opening of new trade routes that connecting Asian, Western European countries and world markets through land routes. Moreover, the ports of Turkey with their potent of becoming hubports, the provision of uninterrupted Europe-Asia railway connections in the by the completion of Marmaray Project and the existence of formerly established free trade zones are other distinct advantages that Turkey possesses. In this immediate context, its EU accession process and integration with TENs represent important opportunities for Turkey to build on these advantages.

The importance of transport sector in Turkey goes further than its location and geostrategic importance. The transport sector plays a vital role across the entire economy, influencing all aspects of production, employment and regional development and permeates through to the every day living conditions and quality of life quality of all citizens.

However, the current poor quality of transport infrastructure and services represents a major obstacle to social cohesion and the economic development in that it impedes competitiveness, movement of goods and passengers, business settlements, investment decisions, etc. Hence, improvement of transport infrastructure is one of the core factors for a country that is striving to increase its competitiveness to international standards.

As competition increased parallel with ongoing world trade liberalisation and as transportation distances became longer with the increasing role of global and regional scale organization, the factor of speed assumes critical importance. In the area of commerce alone, this situation has heightened the importance of efficient and effective transportation of raw materials and processed products to buyers and has led to widespread use of multi-modal transportation systems supported by logistic services.

The main themes of the national transport policy of Turkey, therefore, is to create a balanced, rational and efficient transportation infrastructure where transport modes will maximised within an overall integrated model. In this context, policies which will ensure shifting freight transportation to railways and transforming major ports to logistic centers and which will emphasize safety in transportation modes are followed. Thereby, via enhancing the transport system to be more efficient, safe and integrated to the EU, the level of development of the county will increase.



It is widely acknowledged that there is an urgent need to upgrade the current transport system. This would entail massive investments. Consequently, financial constraints demand prioritisation based on sound pre-investment assessment of the transport sector, allied with defined, clear objectives and an integrated programme strategy.

The transport sector in Turkey faces various problems, the most prominent being the failure, in the past, to develop a coherent inter-modal transport network. The low ratio of investment in railway and port infrastructure and the lack of a sound strategic development framework led to an unequal growth in different modes of transport. The time and cost efficient transportation services provided by the road sector surpassed any other single mode of transport and has come to dominate the domestic transport market both for passengers and freight. The road transport sector provides an uninterrupted and fast, door-to-door transport of passenger and freight services with a modern fleet.

The imbalance between the modes of transport has also led to negative consequences in regard to environment, public health and economic competitiveness. The TOP has been designed to concentrate on the improvement of rail and port infrastructure with a view to strengthening the intermodality between the provided services and, thus, supporting the competitive edge of the Turkish economy by extending the range of efficient transportation options.

The following data are given as an indication of the dynamics of the transportation system in its inter-relationship with other sectors of the economy and demographics :

**Table 1:**

Total Area (km <sup>2</sup> )	814,578
Total Coastal Line (km)	8,333
Population (2005)	72.1 million
Growth Rate in GDP (% , in 2005)	7.4
GDP (in billion USD in 2005)	363.4
Export (FOB, in billion USD, in 2005)	73.4
Import (CIF, in billion USD, in 2005)	116.5
Agriculture Growth Rate (% , in 2006)	5.6
Industry Growth Rate (% , in 2005)	6.5
Services Growth Rate (% , in 2005)	8.2
Tourism Growth Rate (% , in 2005)	7.6
Number of Tourists (in million, in 2005)	21.1
Tourism Income (in billion USD, in 2005)	18.2
Transport Investment (current prices, in 2005) (million euro)	5,042
Transport Inv./GDP (Public) (2005)	1.7

Source: 9<sup>th</sup> Development Plan, SPO 2006 Programme and SCF

### **1.1.1 National Transportation Policies: Past and Current State**

A brief account of its past may help to understand the current situation of the transport sector. In the first decades of the Republic policy focus was on railways and maritime transport investments. Important settlement and production centers were connected by railways. Ports also received priority investment. Following this period, a phase of stagnation



followed as a result of conditions, heavily affected by the war. Only 370-km railways were built between 1940 and 1950. As for the maritime transport, shipbuilding, management and provision of port services were performed by the State. Investments were at a level necessary for day-to-day needs. Road transport was likewise neglected. There was a highway network of 18.365 km. of which 14.000-km was damaged and in need of repair. Thus, until the 1950s, roads were able neither to supplant the railways nor provide effective transport services.

In 1950, in passenger transport, distribution was 49.9% by road transport, 42.2% by rail, 7.5% by maritime transport and 0.6% by air. As regards inland freight, rail had a share of 55.1%, maritime transport had 27.8% and road transport had 17.1%<sup>1</sup>. (See Graph 4 and 5 below)

Following the establishment of the Directorate General of Highways, after the 1950s, road transport developed rapidly with concomitant investment in the road network. The other modes of transport were neglected. Hence, railways and seaways lost out to road transport.

The position remained unchanged in the period of planned development, which began in 1963. In public investments, while the share of roads were increasing up to 80%, share for railways and the share of seaways decreased to 6% and to 4%, respectively. The airways underwent an important development phase, exceeding its shares by 10%. Overall, the shifts in the national transport priorities affecting the investment ratios and the distribution of investments resulted in the current problems of the sector.

Current Turkish transport policy, as articulated in such major policy documents as the Development Plans (Eighth and Ninth DP) and related Medium Term Programme and Annual Investment Plans, Transport Master Plan Strategy, Strategic Coherence Framework and in studies like TINA Turkey, now focuses on alleviating the imbalance among the modes of transport by putting emphasis on railway and port investments.

Establishment of a balanced, rational and efficient transportation infrastructure ensuring the effective use of the transportation modes is the main theme of transport policy of Turkey. To this end, emphasis is placed on the adoption of an integrated approach for the transportation system, with attendant implementation, designed to ensure both an increasing share for railway transport of passenger and freight and the transformation of major ports into logistic centers. Priority is also assigned to safety in all transportation modes.

The inadequacy of traffic safety in Turkey, primarily on the highways, continues to be a serious problem. Importance and priority is being given to increasing traffic safety in all modes of transportation, highways in particular, to protecting and efficiently using the existing infrastructure, and to making maximum use of information and communication technologies. A shift towards a corridor approach in the development of transportation projects is regarded as essential. With an investment and operation approach that will ensure transportation superiority in corridors, where railway and maritime transportation can compete with highways, transporting of freight, exceeding a certain tonnage by railways and sea on a corridor basis will be encouraged. Realization of projects that strengthen the connections with Caucasian countries, Central Asia and the Middle East will be ensured with the priority given to projects that will effect integration of the EU Trans European Transport Networks (TEN-T) with Turkey.

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<sup>1</sup> Transport Master Plan Strategy, p.15

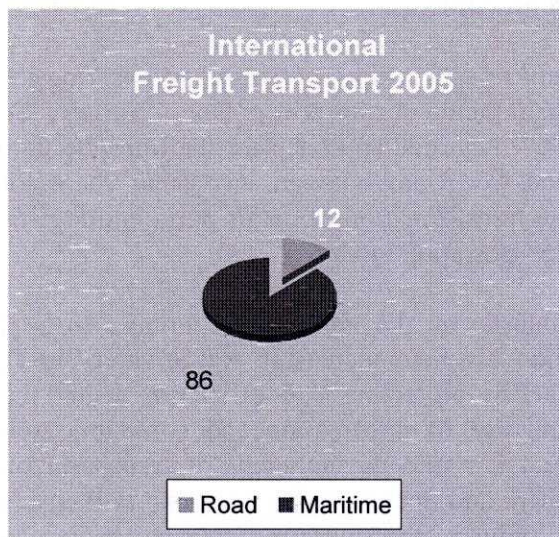


As to the present, according to the 2005 statistics, Turkey has a total internal passenger km traffic of 191 billion and total internal freight traffic of 181 billion ton-km. About 95% of passengers were carried by road and 2.6% by railways. 91% of goods were carried by road, 5% by rail and 3% by maritime. Being the dominant mode of transport in the international freight traffic (681 billion ton-km volume in 2005), the share of maritime transport is 86% (all calculations in ton-km). Despite the fact that maritime lines are dominant in foreign freight transport, their share in total transport decreases because it has a very low share of domestic transport.

**Graph 1 and 2:**

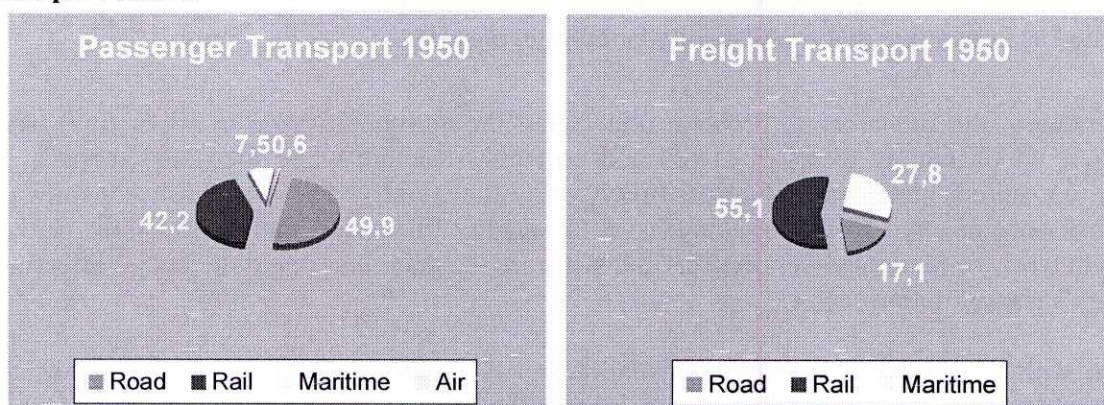


**Graph 3:**





**Graph 4 and 5:**



As a further indicator of the imbalance among modes of transport, a comparison with the EU statistics reveals that, while in Turkey, 95% of passenger and 91% of freight transports are realized through highways in inter-city domestic transportation, the relevant percentages in the average of EU-25 countries are 84.9 and 43.5 for passenger and freight transport, respectively<sup>2</sup>.

There are many sectoral and/or general underlying reasons/problems of this imbalance situation. Because of infrastructure deficits, the railway sector in Turkey lags far behind road transport in both passengers and freight. In terms of total traffic - in million per km which shows the utilization ratio of the network- with a score of 1.7, Turkey is well behind the EU average of 3.2. The fact that rail is environmentally friendly and safe counts for little as service quality is very low as a direct consequence of outworn infrastructure and low level technology.

As regards maritime transport in Turkey; as of end-2005, 3.3 million TEU (Twenty-Foot Equivalent Unit) containers and 200 million tons of cargo were handled. Despite the fact that this seems sizeable, the cargo tonnage handled per port is low compared with EU Mediterranean Ports. Construction of small-scale ports and piers instead of concentrating on the development of large-scale ports in response to increasing trade has led to an unfavourable situation where economies of scale cannot be achieved by small ports and freight traffic tends to be fragmented as a result.

Turkey has a rapidly increasing trade which, in turn, continues to boost the demand for maritime transportation. The freight demand, especially for containerised cargo, has exceeded the capacity of some of the main ports. Containerisation continues to gain in importance as a central element of multimodal transport. Logistically, it is the appropriate means to transport most commodities and particularly where door-to-door transportation is required. According to the projections of the Strategic Coherence Framework (SCF), Turkish trade is expected to grow by 12 % on average up to 2013<sup>3</sup>. However, Turkey's containerised cargo represents

<sup>2</sup> Strategic Coherence Framework, p.14 , 2003 numbers; SPO: 2005 Program and EU Energy & Transport Statistics (2005)

<sup>3</sup> SCF, p.15



only 15% of total cargo at present but should increase by at least 25% by 2015. Against this background, where existing ports lack the capacity to handle the current level of trade, it is regarded as imperative that new capacity be brought onstream.

In summary, the fundamental problem underlying the current situation is arises from past policies, which mainly disregarded rail and port infrastructure while focusing on roads in order to ensure a higher rate of accessibility within the country. The low density of railway network accompanied by the weaknesses in the quality of service and the shortfalls of the ports in terms of hinterland connections and scale are the main pressing deficiencies affecting Turkey's transportation sector.

Allied with the modes of transport imbalance and the problems associated with it, lack of necessary infrastructure also gives rise to issues affecting the life quality of the citizens and the development gap among regions. Thus, deficits in the transport sector also constitute an obstacle for the competitive strength of the country.

### **1.1.2. National Policy Framework on Transport Policy**

The aims of this TOP are in full accord with those of the national transport policies as expressed in authoritative national policy development reports, specifically **the 8<sup>th</sup> Five-Year Development Plan (2001-2005)**<sup>4</sup>, **9<sup>th</sup> Development Plan (2007-2013)**<sup>5</sup>, **Medium Term Programme (2007-2009)**<sup>6</sup>, **Transport Master Plan Strategy (2005)** as the documents which, inter alia, laid the foundations of the transport policies in general as well as with **Strategic Coherence Framework (2007-2013)**<sup>7</sup> which is the major national reference document for the TOP within **the framework of IPA**.

#### The 8<sup>th</sup> Five-Year Development Plan (see Ch. 2.2)

The national policies of Turkey are envisaged in the development plans, covering the period of 2001-2005 identified the major problems of transportation sector as the imbalance among transportation modes, the lack of an up-to-date transportation master plan and the lack of a transportation database. The plan stipulated that a balanced distribution among transportation modes should be brought about to provide a satisfactory transportation infrastructure to serve Turkey's economic and social life and preparation of a transportation master plan.

#### The 9<sup>th</sup> Development Plan (9<sup>th</sup> DP) (see Ch. 2.2)

The 9<sup>th</sup> Development Plan which covers the period of 2007-2013, is the major policy document of Turkey which sets down the priorities of the Country in economic, social and cultural fields. While former Development Plans covered a period of 5 years, the 9<sup>th</sup> DP

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<sup>4</sup> English version of the document is available on <http://ekutup.dpt.gov.tr/plan/viii/plan8i.pdf>

<sup>5</sup> English version of the document is available on <http://ekutup.dpt.gov.tr/plan/ix/9developmentplan.pdf>

<sup>6</sup> English version of the document is available on [http://www.dpt.gov.tr/ing/duyuru2007/medium\\_term.pdf](http://www.dpt.gov.tr/ing/duyuru2007/medium_term.pdf)

<sup>7</sup> Strategic Coherence Framework 2007-2013 for Turkey is prepared under the coordination of State Planning Organisation as the Strategic Coordinator for IPA Components III and IV and its acceptance by the European Commission is confirmed by the letter of June 28, 2006



Development Plan (published on 1 July 2006 in Official Gazette No. 26215) was elaborated for 7 years in the interests of consistency with the timeframe of EU budgeting and IPA programming. The 9<sup>th</sup> DP sets out five development axes:

- Increasing the competitiveness,
- Increasing employment,
- Empowering human capital and social solidarity,
- Ensuring regional development, and
- Increasing quality and efficiency of public services.

Among these axes which support the strategic aim of achieving economic growth and social development in a sustainable way, transport is assessed under the development axis 'Increasing Competitive Power'.

The strategic goal for transport sector is defined as:

*'Establishment of rapid and safe transport infrastructure that will increase the competitive power of the country'.*

In line with this strategic goal, 9<sup>th</sup> DP puts forward four thematic subjects for transport policy:

- Establishment of an Efficient Transport System
- Improved Safety and Security
- Integration with Europe and Neighbouring Economies
- Environmental and Financial Sustainability

Also, sectoral priorities are identified under each thematic subject.

In summary, content of the sectoral priorities; 9<sup>th</sup> DP mainly focuses on the imbalance among transport modes, the insufficiency of physical infrastructure in rail and maritime transportation and the lack of safety in road transport, partly, because of low physical standards.

#### Medium Term Programme 2007 – 2009 (see Ch. 2.2)

The current Medium Term Programme covering the period of 2007-2009 has been formulated for the purpose of incorporating public policies and directing associated resource allocation according to this frame. With its statement of coherent objectives, policies and priorities in various domains, the Medium Term Programme contains major development axes and sectors aligned with macro policies. The main aims of the Medium Term Programme 2007-2009 relating to the TOP are:

- Ensuring sustainable growth
- Enhancement of competitiveness of Enterprises
- Regional Development and Reducing Regional Disparities
- Improvement of physical infrastructure

The Medium Term Programme determines the main objective to be endorsed in transport policies as a transport system that ensures a healthy balance among transport modes in line

with the needs of the economy and social life and the timely development of a transport infrastructure on which economic, safe and speed transportation is realised in accordance with modern technology and international regulation. The Programme specifies the transport priorities as the connection of the transport network of Turkey with the TEN-T, focus on the railways and maritime transport modes in freight transport, introducing high-speed railway transportation, improvement of ports as logistics centers that can realise combined transportation; enhancement of standards of highways and augmenting the traffic safety on all transportation modes, especially on the roads.

Transport Master Plan Strategy (see Ch. 2.2)

This plan was commissioned by the Ministry of Transport as an all-encompassing policy document that would facilitate decisions on sound of future investment in the transport sector, better identify priorities and re-organise legal and institutional structures in the sector, . The document was produced by distinguished academicians, in consultation with all relevant stakeholders and was completed by end 2005.

The goal of Turkish transport policy is set out in the Transport Master Plan Strategy as the provision of an interrupted, safe and environmentally and user friendly transport service with quality standards having regard to the economic and social development of the State and to the needs of national security, and utilising modern technologies.

A primary objective of the project was to identify a strategy for the transport sector and to develop concrete and realisable proposals for the provision of a more balanced structure for the transport sector in which serious imbalances existed among the transport modes. The strategy observed that the road transport markedly stood out in both freight and passenger transport resulting not only in increased transport costs, but also roads congestion and increases in road traffic accidents causing serious life and property losses. Policies developed as a result of these analyses were as follows: focusing on combined transport, improving port capacity with its hinterland; revitalising the railways through restructuring the railway system, construction of new railway lines, maintenance and renewal works, provision of new rolling stock, improvement in the existing and future road accident black points.

In this context, five strategies were presented as follows :

- Establishment of an administrative structure that would secure the coordination of relevant institutions in each mode of transport from one center
- Preparation, implementation and updating of national strategic transport plan
- Collection and update of transport data
- Addressing the problems on the financing of transport projects
- Increase the efficiency of training activities in the field of transport

Strategic Coherence Framework (SCF) (see Ch. 2.2 and Ch. 3.1)

Strategic Coherence Framework (SCF) which is elaborated under the coordination of the Strategic Coordinator, SPO and the contribution of all relevant Turkish authorities in conjunction with the guiding documents and the proposals of the Commission, is the major umbrella document for the Operational Programmes of the components of Regional



Development and Human Resources Development. As the major strategic document of Turkey in the IPA process, SCF is designed in accordance with the priorities of Turkey consistent with the priorities of the EU. SCF aims at providing the necessary level of coherence and consistency between the OPs of components III and IV. The TOP has been framed in conjunction with the SCF.

The overall objective of SCF is *“To contribute both to the Turkey’s approximation to the EU, and to the economic and social development of Turkey by reducing regional disparities and improving the human resources”*.

SCF puts forward three priority axes dealing with the problems of the transport sector which also embodies the main frame of the TOP:

- *Rehabilitation and/or new construction of future TEN-T railway network and improvement/construction of ports as nodal and transit points in the TEN-T network*
- *Construction and improvement of highway network in conformity with TEN-T*
- *Technical Assistance for effective preparation, implementation, monitoring and evaluation of the operational programme and for enhancement promotion and visibility of the activities.*

The TOP Transport fully endorses the priorities of SCF in its own priority axes through the adoption of special measures for the railways and ports, and establishment of their links with the TEN-T. At the same time, due to the extent of the financial resources allocated to the TOP, a measure for *construction and improvement of highway network in conformity with TEN-T* could not be covered under the current TOP Transport under 2007 –2009 programming.

## **1.2. COMMUNITY STRATEGIC FRAMEWORK**

Major Community policy documents underpin the determination of national transport policies in general and the TOP in particular. These documents comprise the Community Sustainable Development Strategy; Community Strategic Guidelines on Cohesion (CSG); White Paper "European transport policy for 2010: time to decide"; IPA Regulation and the MIPD. Particular care has been taken in formulating the TOP to ensure mutual policy and strategy coherence with EU policy in general and the specific requirements enunciated in these documents. Appropriate linkages are described at the end of each section that follows.

Community Sustainable Development Strategy and the Community Strategic Guidelines deal with the sustainability and efficiency of Community policies. Although direct references are not made to the transport sector, TOP honours the principles of sustainability and efficiency by concentrating on railway and maritime transport, which are more sustainable and environmentally friendly than the current dominant transport mode in Turkey - road transport. Moreover, enhancement of transport infrastructure will also contribute to the economic development of the country though facilitating trade between regions and countries. This connection is even more apparent in sector-specific documents like the White Paper and MIPD. In addition to strategy-based linkage, the priorities, measures and the operations of the TOP directly reflect stipulations in the White Paper and MIPD. For instance, by enhancing the rail and port infrastructure and the connection between them, TOP will contribute to improve



intermodality as envisaged in the White Paper. The project list of the TOP also corresponds with the major intervention areas of MIPD, which are listed in the relevant section below.

### **Community Sustainable Development Strategy (see Ch. 2.2)**

Sustainable development was defined by the Brundtland Report in 1987 as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It is the development, which do not degrade natural resources and protects the environment and its objectives can be grouped under three headings : development that is economically efficient, socially fair and environmentally sustainable. Sustainable development which has been a fundamental objective of the EU since 1997 is seen to underpin all EU policies and actions as an over-arching principle. As a complement to the broad EU strategy for socio-economic reforms, defined at the Lisbon European Council in 2000 (the Lisbon agenda), the EU adopted the Strategy for Sustainable Development (SDS) at the Gothenburg Summit in 2001. Promoting sustainable growth was also one of the major issues set out in the renewed Lisbon strategy, alongside competitiveness and employment.

It is obvious that the sustainable development is also a concept that is of crucial importance for the transport sector. To promote sustainable development, appropriate measures to limit the damaging effects of transport must be taken to ensure a form of development that meets present-day needs without compromising the ability of future generations to satisfy their own requirements whilst preserving their environment.

The TOP aims to attain sustainable mobility, which responds to demand for a transport system which is effective, environment friendly, with lower polluting emissions, and with higher integration with the TEN-Ts.

### **Community Strategic Guidelines (see Ch. 2.2)**

The first guideline in the Community Strategic Guidelines on Cohesion (CSG) for 2007-2013 is "Making Europe and its regions more attractive places to invest and work". In this context, the first sub-component of this guideline is to "expand and improve transport infrastructures". Under this sub-component, the provision of efficient, flexible, safe and environmental friendly transport infrastructure is regarded as an essential prerequisite of economic growth. The CSG document also reeferes to the significance of improving the rail infrastructure, increasing the share of maritime transport, with special emphasis on the "Motorways of the Sea" concept, and integration of TEN-T network to other regions. CSG also attach importance to the financing instruments such as those of the European Investment Bank (EIB), which, it is expected, will be one of the financing sources in TOP projects implementation. The means and mechanisms for using International Financing Institutions (IFIs), including EIB, will fall to be decided by the new IPA structure of Turkey.

### **White Paper "European transport policy for 2010: time to decide" (see Ch. 2.2)**

The White Paper "European transport policy for 2010 : time to decide" is one of the major EU policy documents that describes the problems of the transport sector in the Community and puts forward measures to address these problems. Accepted in September 2001, the White Paper raises such urgent issues to be tackled in the transport sector as the provision of balance



among the transport modes until 2010 by vitalizing the railways, maritime transport, inland waterways and by providing connections among these transport modes. The major goal of the Paper is to endorse sustainable development of the sector along with providing a high quality and assured service for European citizens. By this means, the White Paper's broader objective is to support the close relation between the improvement of the transport sector and the economy and to decrease the pressures on the environment, arising from the sector.

Among the major problems that are identified by the White Paper are assurance of balance among transport modes; improvement of passenger rights, enhancement of road safety, preventing congestion, assurance of sustainable mobility though minimising the side effects of transport on the environment and building the Trans-European Network for transport and the realisation of the major infrastructure works on particularly railways.

The TOP accords with the objectives of the White Paper in adopting the overall objective of restoring the balance among modes of transport to ensure a healthy and sustainable transport system in Turkey and it supports the intermodality and connection with TEN-T.

### **IPA Regulations**

As constituting the framework legislation, the Council Regulation 1085/2006 on Instrument for Pre Accession defines the policy area for the Regional Development Component under which the TOP Transport is posited.

Commission Regulation (EC) No. 718/2007, also comprehends the areas of assistance under the Regional Development component of IPA, where transport infrastructure, in particular interconnection and interoperability between national networks, and between national and trans-European networks is designated as one of the areas eligible for support.

### **Multi-annual Indicative Planning Document (MIPD)<sup>8</sup> (see Ch. 2.2, Ch. 3)**

The Multi-annual Indicative Planning Document, for the period 2007 - 2009, sets out the European Commission's view of the main priorities and areas of intervention to be supported in the pre-accession context and their rationale, on the basis of EU and Turkish strategic documents and analyses. MIPD submits the following points as the major intervention areas in the transport sector:

- On the main axes to links with European Union. They will be the basis for the development of the Trans-European Network in Turkey.
- Railway infrastructure will be focal as its share in the transport system of Turkey is currently very weak.
- Motorways of the Sea can be considered (port facilities with links to economic development).
- Support to relevant key studies and necessary related services.

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<sup>8</sup> Commission Decision C(2007)1835 of 30/04/2007 on a Multi-annual Indicative Planning Document (MIPD) 2007-2009 for Turkey



Moreover, the prioritised measures for transport in MIPD are as follows :

- Rail connection in the West with EU Member States ;
- Multi-modal transport;
- Trans border and national interconnection and interoperability projects, deriving from the TINA study ;
- Intelligent transport systems (ITS) where required for the above infrastructure;
- Support to relevant key studies and necessary related services

The horizontal concerns of MIPD such as the geographical and sectoral concentration of OPs are also reflected in the TOP. In this respect, the geographical implementation area of TOP is the whole of Turkey in which integration with the TEN-T network is regarded as of central interest. The sectoral concentration is assured by prioritising railway and maritime sectors as given in MIPD.

The TOP has taken the priority axes and expected results of MIPD into account while developing its programme strategy – process is explained in Chapter 2 and a comparative table has been developed to show how the priority axes of MIPD and SCF have been integrated in the TOP, which are also in conformity with the more general strategies and policies of the 9<sup>th</sup> DP.

In the following tables, conformity of the Transport OP with the MIPD, 9<sup>th</sup> DP, SCF priorities can be gauged.

### **Lessons Learned from Previous EU Financial Assistance**

The Ministry of Transport (MoT) has undertaken four EU-funded projects in the rail, maritime and road transport sectors, namely, the “Strengthening and Re-Structuring of Turkish Railway Sector” (between 2004-2006), “Assistance to the Turkish Road Transport Sector” (ongoing since 2006), “Support to Enhancement of Maritime Safety in Turkey” (between 2005-2006), “Improvement of Maritime Safety in Coasts and Coastal Areas in Turkey” (started in 2007). ‘Transport Infrastructure Needs Assessment (TINA) Study for Turkey’ (MoT as beneficiary) was an important TA project.

All these projects made positive contributions to the administrative- institutional and human resource capacity and expertise of the MoT.

From the institutional and administrative aspect, the Ministry has significantly improved its capacity to manage and implement projects. The planning, scheduling and project management skills of the Ministry have greatly developed throughout projects execution periods. As a result, the Ministry fully appreciates the importance of institutional ownership for the success of a project and the high utility of inter- and intra-institutional communication, coordination and cooperation at all levels.

In respect of human resource capacity, it is appreciated that the dedication of sufficient human resources with relevant experience and expertise and sufficient time is vital for the effective implementation of plans and programs developed for the project. It can also be said that the Ministry has learned that a premium should be placed on encouraging project team spirit as impacting positively on project outcomes.

In the light of these lessons learnt from previous and ongoing EU-supported projects, the MoT plans to launch “Safer Seas: Upgrading of Coastal Radio” and “Reforming and Strengthening of Institutional Capacity of Turkish Railway Sector” for 2007 programming year.

### **1.3. PARTNERSHIP CONSULTATION**

The Partnership principle entails that the OP is elaborated, implemented and evaluated in consultation with all stakeholders relevant to the sector comprising beneficiaries, public authorities, and other economic and social partners including other appropriate institutions dealing with other OPs.

In the knowledge that consultation is essential to ensure that the OP addresses genuine issues in the sector and the OP is endorsed by all the stakeholders, all relevant partners were involved from the early stage of the preparation of the programme. As the compilation of the TOP required technical information of different sectors and levels, great importance was placed on the direct involvement of all public stakeholders at expert and decisional level, especially while framing the first draft, where the general strategy of the TOP was formed. In this connection, substantial segments on sectoral assessments, priorities and technical details were prepared by the sectoral representatives themselves. On completion of the first draft, where the strategy, priorities and the projects were objectively determined, extensive communication was initiated with all related interests.

In subsequent meetings, the focus of discussion was on the sectoral assessments within the TOP, especially the statistical base and the indicative project list. As regards the project pipeline, representatives of the NGOs expressed opinions on the projects and their possible benefits to the sector. Private stakeholders also agreed with the validity of the indicative list.

In this context; at the initiative of MoT :

- An OP Preparation Team and a Sectoral Monitoring Committee (SMC) consisting of the following institutions has been established by way of official letters from the Ministry (dated 8 March, 2006 and 30 March, 2006, respectively)
  - Undersecretariat of Maritime Affairs (UMA);
  - DG Construction of Railways, Ports and Airports (DLH•)
  - DG Land Transport (KUGM)
  - DG Civil Aviation (SHGM)
  - DG State Airports Administration (DHMI)
  - DG Turkish State Railways (TCDD)
  - DG Coastal Safety (KIYEM)
  - DG Highways (KGM)
  - Secretariat General for European Union Affairs (EUSG)
  - State Planning Organisation (SPO)



In addition to these sector-related stakeholders, participation of other Operating Structures (Ministry of Environment and Forestry, Ministry of Industry and Trade, Ministry of Labour and Social Security) and Undersecretariat of Treasury (as representing the National Authorising Officer and National Fund) was ensured so as to provide coherence and complementarity among all the OPs. In this way, all relevant institutions were informed and consulted about the entire content of the TOP including priorities, measures, indicative project list and the implementation structure and they actively participated in the process from the outset.

The members of OP Preparation Team, comprising public stakeholders and appointed by way of official communication, are as follows:

Ministry of Transport: Dr. Mustafa Kaya, Burcu Özcan, Selen Günel, Serkan Korkmazarslan, Serkan Çelik, Kazim Kartal, İlhan Ceylan, Ouzhan Akdemir, Zeynep Türker.

Lale Karayaka (responsible from coordination with Regional Competitiveness OP)  
Emrah Onur (responsible from coordination with Human Resources Development OP)

Undersecretariat of Maritime Affairs: Kemal Battal, Murat Sinan Başaran, Emre Dinçer

DG Construction of Railways, Ports and Airports: Musa Tuncay, Ülker Yetgin, Senem Tunaboylu Sert, Özgür Akarsu, Erdem Gözpernar, Rem Elvan  
Afife Ülkü Koçer (responsible from coordination with Environment OP)

DG Land Transport: Bülent Süloğlu, Beril Pamukçu

DG Civil Aviation: Ayegül Doğan, Ufuk Can Akın, Ufuk Erol, Onur Tutulmaz

DG State's Airports Administration: Mehmet Uurlu, Zerrin Kurt, Ouz Tanrıku

DG Turkish State Railways: Safi Çatal, Filiz Yılmaz, Mehmet Uygur, Tevfik Yeilçam, Abdullah Çorak

DG Coastal Safety: H. Burcu Çalır

DG Highways: Mücahit Arman, Ali Yazıcı, Ouz Sehtiyancı, S. Nedret Maden, Kenan Kayacı, İrfan Ünal, Orhan Yüce, Murat Doğan

Secretariat General for EU Affairs: Sevinç Yaman

State Planning Organisation: Sedef Yavuz Noyan, Ekrem Karademir, Serdinç Yılmaz, Cem Galip Özenen, Ahmet Karakuş, Muzaffer Açıkgöz

Ministry of Environment and Forestry (MoEF) : Murat Turan

Ministry of Industry and Trade (MoIT): Özgür Aygen

Ministry of Labour and Social Security (MoLSS) : Esat Aktaoğlu

One of the first steps taken by the was to participation in training sessions delivered by independent experts under the coordination of State Planning Organisation. The training was administered over two phases - OP Preparation and OP Implementation.

The participation of the private sector was also secured via exchange of official letters and meetings. First and second drafts of the TOP were distributed to all sectoral NGOs and Universities. Comments were duly integrated into second and final versions of the TOP.

The the private stakeholders consulted after the completion of the first draft of the TOP were:

- The Scientific and Technological Research Council of Turkey (TÜB•TAK)
- Association of Turkish Consulting Engineers and Architects (TMMMB)
- Turkish Chamber of Shipping (DTO)
- Port Operators Association of Turkey (TÜRKL•M)
- Railway Transportation Association (DTD)
- Ro-Ro Vessel Operators and Combined Transporters Association (RODER)
- International Transporters Association (UND)
- Turkey Transporters Association (TND)
- Turkey Freight Forwarders Association (UT•KAD)
- Turkish Private Aviation Enterprises Association (TÖSH•D)
- Middle East Technical University
- İstanbul Technical University
- Gazi University
- Atılım University

As regards the methods of communication, exchange of letters, e-mails and meetings were utilised. In the process, towards December 2005, preparations for the TOP were accelerated under the coordination of Ministry of Transport. In the interests of ease and expedition, most of the communication between OP Preparation team was done via e-mail. Nevertheless, since all team members were civil servants, major activities/requests were organised by official letter as complementary to the e-mails. In addition, all plenary meetings were attended by all the members including the bilateral ones. In bilateral meetings, staff of the EU Department of MoT paid visits to the institutions to discuss ongoing details of the TOP. A list of official communication between the members and a list of plenary meetings is given as follows :

- In the official letter dated 29 December 2005, all listed public stakeholders were informed about the IPA process, preparation and implementation of Operational Programmes.
- In the official letter dated 10 February 2006, comments of the stakeholders were sought
- With official letters of March 8 and March 30, OP Preparation Team and Monitoring Committee were established.
- On March 10, 2006, in a meeting organised by the State Planning Organisation, all stakeholders were briefed about the process.
- With an invitation in the form of an official letter of 12 April 2006, OP Preparation Team was assembled in Ministry of Transport (on 18 April 2006) as the first step in the preparation of TOP
- The second stage meeting - sectoral assessments and SWOT analyses on each sub-sector – was organised by official letter dated 2 May 2006.



- After the completion of the training in July-August and September, 2006, revisions and views on the sectoral evaluation and SWOT analyses were requested by official letter dated 19 October 2006.
- On November 16, 2006, a second plenary meeting was organised at which the general structure of, and the roadmap for, the completion of the TOP was agreed.
- By an official letter of 26 December 2006, the contributions of stakeholders regarding priorities and measures of TOP were sought and subsequently compiled.
- Three meetings were held with the ex-ante evaluator with EU Department (responsible for the coordinating the OP) and with the broader participation of all related public stakeholder. As a result, studies for revision of the initial draft of TOP were accelerated. An official letter issued to the stakeholders on proposed OP revisions on 22 January 2006.
- A meeting was also held in MoT with the representatives of the Scientific and Technological Research Council of Turkey (TÜB•TAK) to discuss their possible contribution to the OP.
- By an official letter dated 6 February 2007, Project Identification Sheets of the projects in the indicative list were furnished by the technical departments.
- Comments of public stakeholders were drafted (23 February, 2007). Further revision of the initial draft from the technical departments were carried through (12 April 2007).
- Views and comments of all relevant public and private stakeholders the first draft of the T OP (sent to Commission on 1 May, 2007) were requested : stakeholders' meeting arranged.
- Meeting held with the participation of public and private stakeholders (26 June, 2007)
- For the final round of ex-ante evaluation, a meeting between the ex-ante evaluator and the OP Preparation Team was held on 24 July, 2007.
- Second draft of TOP circulated (15 August, 2007).
- Meeting with relevant public and private stakeholders on the second draft and final version of TOP (on 29 August, 2007).
- Alongside with this communication focusing on the drafting of OP, in order to ensure consistency and complementarity with other OPs, one representative from MoT for each OP have been determined to take part in their studies. Moreover, MoT participates in the Communication Group established under the coordination of State Planning Organisation.

Also, sub-sectoral meetings have also been realised in December 2006 and January 2007 among small groups composed of 5-6 experts in an unofficial manner, for instance between the representatives of UMA and DLH• (Port Department) while organising the priorities and measures.

For the implementation period, participation of relevant stakeholders including NGOs will be ensured via the establishment of Sectoral Monitoring Committee. As stipulated in chapter five of Transport OP, Sectoral Monitoring Committee will comprise of:

- The National IPA Coordinator or his/her representative;
- The National Authorizing Officer
- A representative of the National Fund

- A representative of the Commission
- A representative of the Strategic Coordinator for Components III and IV
- Undersecretariat of Maritime Affairs (UMA);
- DG Construction of Railways, Ports and Airports (DLH•)
- DG Land Transport (KUGM)
- DG State Airports Administration (DHM•)
- DG State Railways (TCDD)
- DG Coastal Safety and Salvage Administration (KEGM)
- DG Civil Aviation (SHGM)
- DG Highways (KGM)
- Ministry of Industry and Trade (MoIT)
- Ministry of Environment and Forestry (MoEF)
- Ministry of Labor and Social Security (MoLSS)
- Ministry of Agriculture and Rural Affairs (MARA)
- Vessel Operators And Combined Transporters Association (RODER)
- International Transporters Association (UND)
- Rail Transportation Association (DTD)
- Port Operators Association of Turkey (TÜRKLM)
- The Union of Chambers and Commodity Exchanges of Turkey (TOBB)
- Association of Turkish Consulting Engineers and Architects (TMMMB)
- Universities

#### **1.4. EX-ANTE EVALUATION**

As an integral part of the process, the ex-ante evaluation of the TOP was organised by the State Planning Organization as the Strategic Coordinator for Component III and IV using the services of an independent expert team (under a project entitled “Capacity Improvement in the Field of Economic and Social Cohesion”)

Concomitant to the drafting of the Transport OP, the ex-ante evaluation of the document has officially started in January 2007 and ended in July 2007. Mr. Klaus Jürgen Uhl has been the ex-ante evaluator for the Transport OP, whom has been accompanied by Ms. Firüzan Sıkah•ör for the final round of the ex-ante evaluation.

Interim evaluation reports were made in January and May 2007. The third and final round was carried through in July 2007 and a final report was submitted. (An electronic copy of the final report is annexed to this TOP)

In summary, the current situation analysis, the rationale and the overall consistency of the strategy of the TOP were found to be satisfactory. The identification of priorities, measures and the project pipeline were also found to be appropriate and consistent with the findings of



the TINA-Turkey Study and overall national and EU transport policies. The TA priority was also judged to be crucial to the success of the TOP.

The report also drew attention to the need of addressing legal alignment, especially in case of the railway sector, so as to achieve greater market impact for the pipeline projects. In this regard, the issue of the restructuring of TCDD is dealt with below (see. Chapter 2.1.2). Moreover, the project indicators, the section on partnership consultation and on the TA priority were revised in line with the report. Institutional sustainability is aimed to achieve via attaching more importance of the Technical Assistance priority.

Horizontal impact of the strategy and the measures of TOP on environment is also handled in the final ex-ante evaluation report. It is assessed that measure 3 of the 3<sup>rd</sup> priority deal with the horizontal impact on environment during implementation period. Nevertheless, as to the impact of 1<sup>st</sup> and 2<sup>nd</sup> priorities, an examination on EIA and Habitat and Birds Directives is suggested.

In this respect, TOP focuses on railway and maritime transport to alleviate the dominance of road transport vis-a-vis other modes of transport. Railways are presented as an energy-saving, clean and safe mode of transport. The first and second priority axes concern the improvement of railway and maritime infrastructure. Environmental impact assessment is given as one of the selection criteria of the projects. In this context, projects with EIA documents are prioritised among other projects. Moreover, in order to meet the standards stipulated in relevant EU acquis, a technical assistance project under Support to European Integration Activities (SEIA) funding has been initiated to revise the current EIA studies. Also, under Priority 3, studies for the enhancement of the project pipeline for next period including environmental impact assessments are envisaged..

The TOP demonstrates an appropriate awareness of environmental standards and the impacts of the transport sector and sub-sectors are identified through EIAs. Assistance provided in the framework of SCF must fully respect compliance with sustainable development principles and meet relevant environmental norms, and the relevant environmental acquis such as directives on EIA, Habitats and Birds (in order to avoid negative impacts on areas to be determined as Natura 2000 sites) as appropriate. The projects to be financed must be appraised case by case in order to be coherent with the relevant obligations of the environmental acquis.

## **2. ASSESSMENT OF MEDIUM TERM NEEDS, OBJECTIVES AND STRATEGIC PRIORITIES**

### **2.1 SOCIO-ECONOMIC ANALYSIS (INCLUDING SWOT ANALYSIS)**

In the 1990s, Turkey went through a decade of high inflation, increasing public deficits, high debt interest payments, and debt stock and unstable growth. Despite this and the deep economic crisis of 2001, the stabilization programme and the structural reforms that were undertaken initiated a profound transformation of the Turkish economy.



Within the framework of the Economic Programme, and with the political stability created following the crisis, tight monetary, fiscal, and incomes policies were implemented. Consequently, during the 2002-2005 period, GDP grew at an annual average rate of 7.5%-8.9% in 2004, 7.4% in 2005, 6.1% in 2006, all of which testified to ongoing high growth performance.<sup>9</sup> For the period to 2020, the rate of increase in GDP is projected at 6% (TINA-Turkey Study) building on the stabilisation of Turkish economy since 2001, and taking a perspectives of world trade which directly influences Turkish GDP<sup>10</sup>.

In addition to the macro-economic development, Turkey's population has also grown significantly in the last ten years, from 63 m in 1995 to more than 72 m in 2004, a growth rate of almost 2%. It is expected that population growth will continue to reach 86 m in 2020 and 93 m in 2030.

The highest contributions to growth of the GDP are attributed to the services and industry sectors. Productivity increase was high compared with the preceding two decades due to policy and structural reforms carried out after the 2001 crisis. On the demand side, the ratio of total investment expenditures to GDP increased from 22.8% in 2003 to 24.8% in 2005 and realized 23.9% in 2006 with an increasing share attributed to the private sector.

Although considerable productivity increases were recorded, Turkey's competitiveness remains far from realising its full potential due to a wide range of deficits including inadequacies in the the business environment, accessing development finance, energy infrastructure, insufficient protection of the environment and urban infrastructure, lack of development of R&D and innovation, weaknesses in disseminating information and communication technologies and, not least, bottlenecks in transportation.

Improvement of transportation infrastructure is one of the major components of the macroeconomic policy of Turkey in order to achieve a higher level of competitiveness. For instance, the freight transport demand will significantly increase in the period 2004 – 2020, because of high GDP growth (6% p.a.) and the related growth in production and consumption, where industry plays a major role. For the domestic market, this results in a growth factor of 2.38 or 138%. The 6% growth of GDP and the underlying growth rates of the production and consumption sectors also have a significant affect the international flows with imports growing by 132% and exports by 209%.

Without necessary infrastructure improvement, Turkish transportation sector cannot possibly meet the increasing demand and will obviously impede the country's major goal of increasing its competitiveness. Conversely by increasing its competitiveness, Turkey will become significantly more in convergence with the EU Member States, which represents another major goal of Turkey for the period of 2007-2013. Hence, it is of vital importance that Turkish transport infrastructure should be developed to ensure a time and cost efficient transport system, while integrating itself with the TEN-T.

To this end, the Transport Infrastructure Needs Assessment (TINA) Study for Turkey was commissioned to analyse authoritatively the needs of the Turkish transport sector and to bring forward realistic and systematic courses of solution. Identifying the Core Transport Network

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<sup>9</sup> 9<sup>th</sup> Development Plan

<sup>10</sup> TINA-Turkey Study Draft Final Report



of Turkey, which will ensure the integration of Turkish transport infrastructure with TEN-T, the Study which authoritatively identifies the transport infrastructure in Turkey for next 15 years is very much a validation of this TOP. As with this TOP, the overall objective of TINA-Turkey Study was to initiate the development of a multi-modal transport network within Turkey, which would also incorporate an extension of the European Union's TEN-T.

TINA-Turkey Study commenced December 2005 (completed in May 2007) with the essential tasks of bringing forward feasible proposals to:

- enable transport sustainable mobility of persons and goods
- ensure freedom of movement of goods, services and people
- offer user high-quality infrastructure on acceptable economic terms
- include all modes of transport, taking into account their comparative advantages
- allow the optimal use of existing capacities
- be interoperable within modes of transport and encourage intermodality

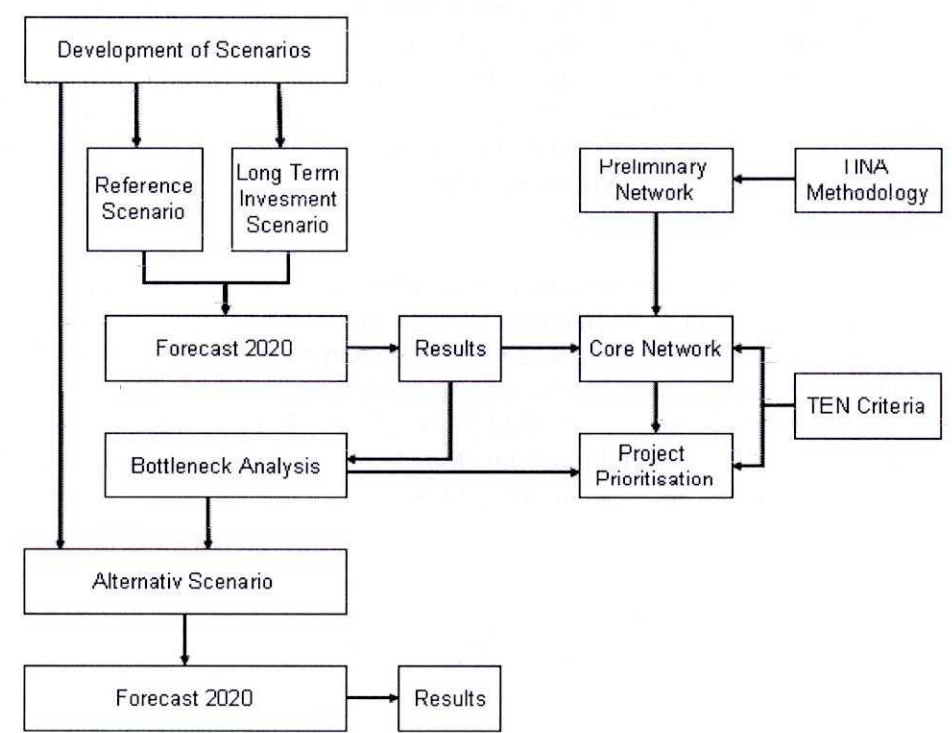
The Study defined and assessed a multimodal transport network comprising roads, railway lines, seaports and airports which was also capable of serving all the important international traffic flows from/to Europe through Turkey, as well as the main national traffic flows within Turkey.

The more specific objectives of the study were :

- Identification of the transport infrastructure in Turkey for next 15 years
- Project prioritisation according to TEN-T criteria
- Transportation forecasts with the time horizon of 2020

The methodology of the TINA study is briefly summarised in the chart below

**Graph 6: TINA-Turkey study steps:**



The definition of a preliminary network based on TINA methodology is the basis for the definition of the Core Network. In this sense, the 'preliminary network for Turkey' was reached by

- Identifying the alignment the Pan-European Transport Corridors (i.e. Corridor IV)
- Identifying the alignment of the Transport Corridor Europe Caucasus Asia (TRACECA) connecting Europe through the Caucasus to Central Asia that has been developed since 1991 playing an important role in the continued development of these regions.
- Identifying the sections of the Black Sea Economic Cooperation (BSEC) network not covered by the networks
- Identifying network elements of the European agreement on main international traffic arteries (AGR) and the European agreement on main international railway lines (AGC) of 1975 and 1985, respectively, the E-road and E-rail networks as elaborated by United Nations Economic Commission for Europe (UN-ECE).
- Identifying major seaports and airports relevant for international long-distance transport
- Ensuring the connection of the seaports and airports to the rail and road network wherever possible
- Ensuring the connection of peripheral regions to the main network

In order to assess the "Preliminary Network for Turkey" on a sound basis, a traffic forecast was projected for the year 2020, i.e., transport demand for each link on the network to be determined under existing conditions and projected forward to the year 2020. Future traffic flows were estimated using a transport demand model with a single socio-economic scenario and three different infrastructure scenarios. Once the network scenarios were defined, the transport demand model was used to develop the forecasts. Traffic flows were related to the flows within and between the different Turkish zones, and between Turkey and other countries. Passenger and freight transport flows for the base year (2004) were grounded as much as possible on observed data. Where available data were not sufficient, models were used to address the lacunas.<sup>11</sup>

The developed socio-economic scenario was based on the following assumptions;

- the population of Turkey will reach 86m inhabitants in 2020 and 93m in 2020.

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<sup>11</sup> THA traffic forecast methodology is summarised in the TINA Final Report as follows:

"In order to generate passenger forecasts, the base year origin-destination (O/D) matrix is adjusted, mainly based on forecasts of socio-economic and demographic conditions at the regional level. Next, generalized travel costs are adjusted based on the assumed changes to the transport networks and other level-of-service components. This results in changes to modal split that are used to forecast future traffic. In order to generate freight forecasts, the pivot point method is used to adjust the base year O/D matrix. This is done by first applying the trade forecasting model making use of forecasted socio-economic variables. In this process a separate growth factor is determined for each O/D relation depending on the expected production and consumption growth in the region (or country/country group when forecasting international transport flows). After developing this trade forecast, the modal split model (which uses the relative changes of travel time and costs of the modes as input) is applied to develop the forecasts. The resulting passenger and freight O/D matrices are then assigned to the three different transport network scenarios. The results of these forecasts are used to help define and assess Turkey's Core Network."



- GDP growth rate will be 6%
- increase in car ownership from about 80 cars per 1000 inhabitants today to almost 600 cars per 1000 inhabitants in 2020

The three distinct model scenarios differentiated between the state of implementing current projects that had high probability of implementation and State projects involving some further longer term infrastructure investment. A third scenario consisted of all of these projects and a mix of some alternative ones.

Following the assessment of the 'Preliminary Network' by traffic forecast, Core Transport Network was identified on the below listed assumptions:

- the technical standards of the future infrastructure should ensure consistency between the capacity of network components and their expected traffic using the recommendations of the UN/ECE Working Party on Transport Trends and Economics (WP.5) in the definition of transport infrastructure capacities (Trans/WP.5/R.60)
- the time horizon for achievement of the network should be 2020
- the cost of the network should be consistent with forecasted availability of financial resources

Table 2:

Proposed Core Network for Turkey			
Infrastructure Lines	Description	Length (km)	Cost Estimate (millions)
	Core Railways - 2020	10,912	€ 8,878
	High Speed Rail Lines (included in Core Network)	3,508	
	Potential Network Extensions (not yet part of the Core Network)	1,438	
	Core Roads - 2020	11,978	€ 8,595
	Potential Network Extensions (not yet part of the Core Network)	350	
Infrastructure Nodes	Description	Number	Cost Estimate (millions)
	Airports (Category A)	7	
	Airports (Category B)	7	
	Airports (Category C)	6	
	Total	20	€ 1,185
	Seaports (Category A)	27	
	Seaports (Category B)	7	
	Seaports (Category C)	5	
	Total	39	€ 1,488
Total Cost			€ 20,145

Linkage to the EU, strategic assessment, linkage of major economic centers, international trade facilitation, traffic forecast, and environmental implications were also included as justified criteria for appropriate sections of the Core Network.

As stated, the outcomes of the TINA-Turkey Study constitute the basis for the programming strategy of this TOP. While the defined Core Network was taken as a reference point for the geographical concentration, the integration of TINA Study itself enables TOP to be directly linked with the overall Pre-Accession process of Turkey. Traffic forecasts, bottleneck analyses and project prioritisation provide a solid scientific basis for the TOP priorities, measures and projects.

As traffic forecasts demonstrate; the implementation of high-speed rail projects in the scenarios would double rail passenger performance and, without major infrastructure investments, the lines would continue to suffer from passenger shifts to other modes. The traffic forecasts also confirm that rail is not used to its maximum capacity in Turkey. Furthermore, the forecasts highlight that seaports will be under the pressure as a result of increased international trade. By 2020, some 407 million tons will need to be transported through Turkish seaports. These assessment and conclusions emphasise the need to give priority to rail and maritime sector so as to contribute to the overall objective of the TOP to achieve a balanced transport system.

At the same time, as bottleneck analyses demonstrated, there will be capacity problems in the defined Core Network and, to meet this problem, new infrastructure investment in railways and ports is required.

TINA-Turkey Study also postulated that Turkey's unique geographic location offers tremendous multi-modal transport opportunities. It found that, to make maximum use of these opportunities, priority should be given to:

- improving transport in the North-South and East-West axes to better integrate Turkish transport with international transport networks;
- improving intermodal transport facilities and services, to take advantage of the strong growth in container transport; and,
- improving maritime connections and nodal points (seaports), to take advantage of their potential strategic role as industrial and logistic platforms.

The TINA-Turkey Study also played an important role in defining and assessing the sector's project pipeline relative to its. In this regard, besides traffic forecast, bottleneck analyses and investment scenarios for the determination of the projects to be realised till 2020, a project prioritisation task was undertaken. For this, the TINA-Turkey Study used eight priority criteria of the TEN-T guidelines of 2004 (Art. 5) as the basis for evaluating the general relevance of the planned projects. As additional information, the selection criteria from the TINA guidelines of 1999 were also considered. For project prioritisation, multi-criteria analyses (MCA) were used which represent a combination of the criteria previously mentioned. Detailed information and the results of the project prioritisation is given in Chapter 3.5



### 2.1.1 Railway Transport

Regarding the institutional structure of public bodies responsible from the railway sector in Turkey, DLH and TCDD are the main bodies sharing the responsibilities. In this context, while train operations, maintenance and management of railway infrastructure are the responsibility of TCDD, affiliated to the Ministry of Transport, the construction of new railway lines are the responsibility of the Directorate General of Railways, Ports and Airports Construction (DLH), a central DG under the Ministry of Transport. As the main body concerning the infrastructure investment, DLH determines new railway line needs according to regional demands and studies. After assessing the needs of the regions, projects for new lines are prepared through tendering. Line construction follows regular tendering processes. When the construction phase is completed, the new line is then transferred to TCDD for management of the infrastructure and train operations.

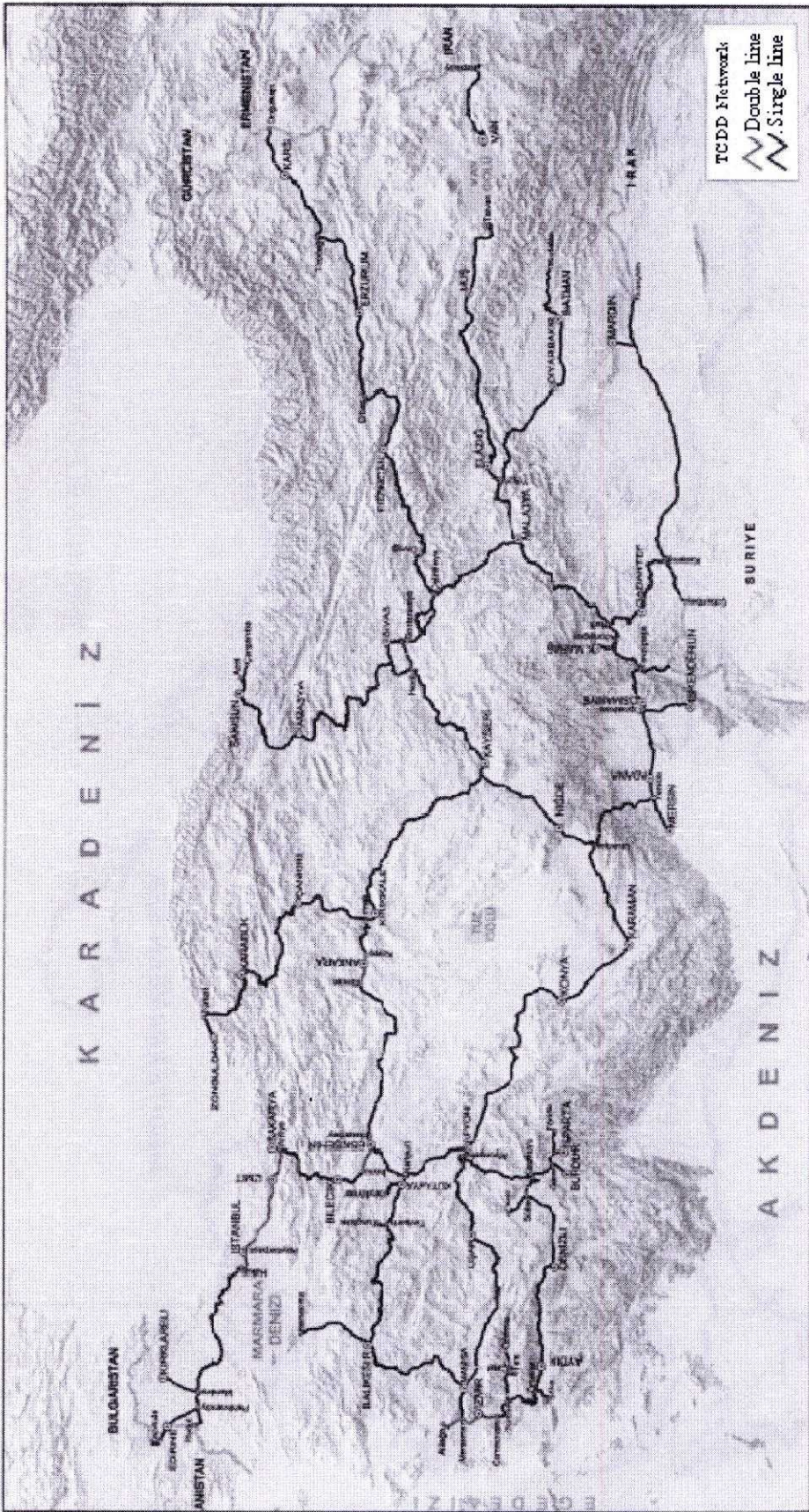
As regards the current situation of railways in Turkey, at end 2006, total railway network was 10.984 km length, of which 2.336 km was electrified, with a mainline of 8.697 km of which 1.920 km was electrified.

**Table 3. Railway statistics**

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2006
Electrified (km)	1.033	1.093	1.093	1.824	2.065	2.065	2.133	2.122	2.122	2.122	2.336
Total (km)	10.413	10.386	10.466	10.508	10.508	10.508	10.993	10.922	10.940	10.948	10.984



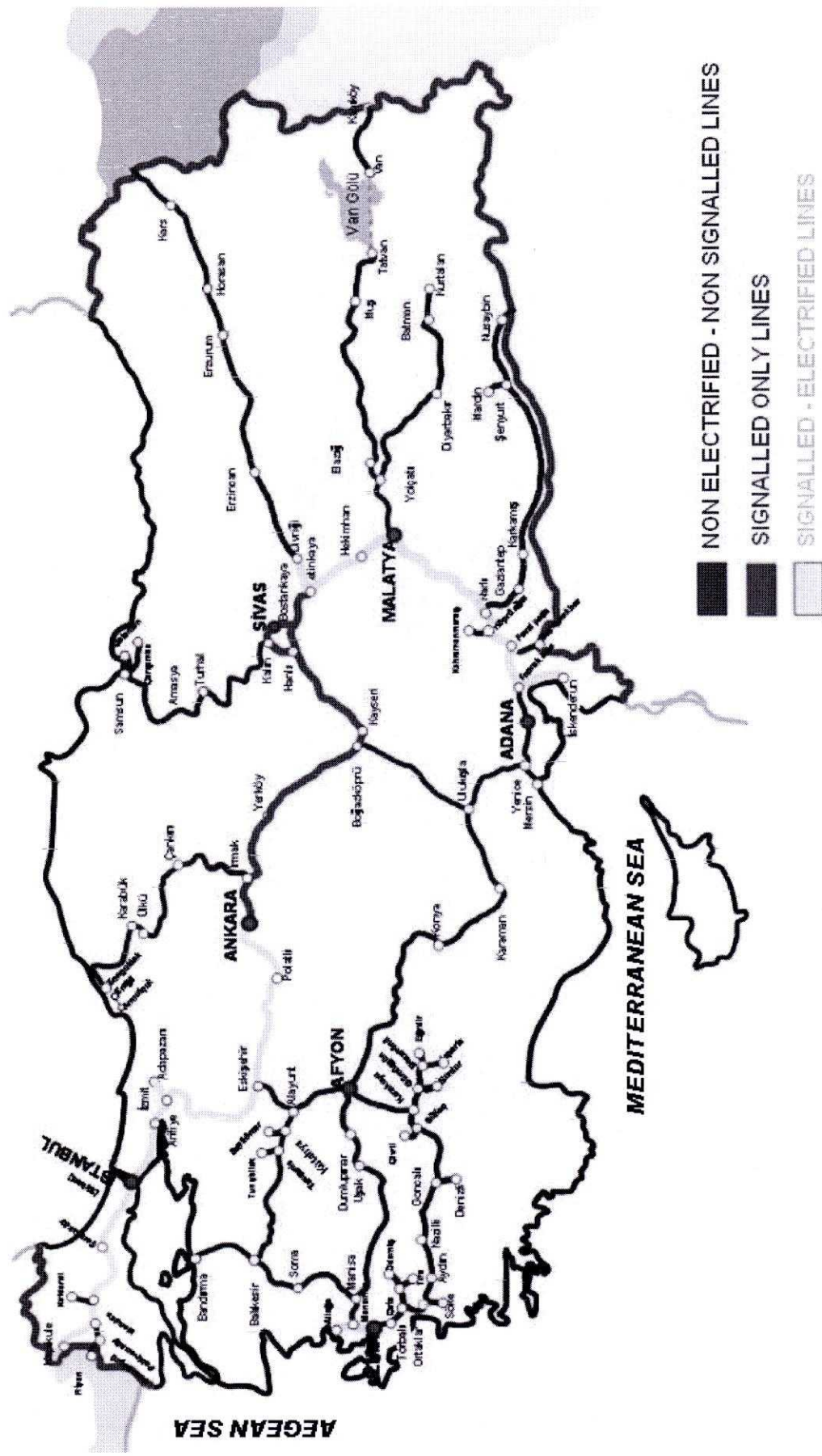
Map 1: TCDD Network



Map 1 . TCDD Network



Map 2: Lines with electrification, signalisation



In terms of passenger transport, the most important problem of the railway sector is the lack of railway lines capable of high quality and high-speed transport for connecting big cities, which are densely populated and economically developed. According to the statistics in Final Report of the TINA Turkey Study, expected population growth for Turkey between 2000 and 2010 is 1.33%, compared with an estimated 1.03% for the period 2010-2020. Thus, under these assumptions, it is projected that the population of Turkey will reach 86m in 2020 and 93m in 2030<sup>12</sup>.

It is evident that if the necessary investment is not undertaken in real time to shift the passenger demand towards rail transport, the modal imbalance will get worse as the motorisation rate continues to increase. Again, based on the TINA Turkey Study traffic forecast, the share of rail transport will decrease to 2.2% in 2020 from 3.3% (2004 statistics) domestically, if high-speed train investment is not made.<sup>13</sup> On the other hand, according to the outcomes of the TINA scenarios that assume high-speed train investment, the ratio of the market share of rail transport for passenger will rise to 4.1%. As regards passenger transport, longer period of travel with lower quality of service compared with that of road transport are the major reasons for the low demand to railways. With the realisation of high-speed train projects, these reasons would be removed, thus positively affecting rail passenger demand.

As regards the freight transport, in spite of the apparent advantages for rail freight transport where, the East to West distance is approximately 2.000 km and the North to South distance is approximately 1.500 km, railway transport is not preferred except for a few group of commodities. As rail freight for distances of over 300 km. is regarded as having a cost advantage, it is evident, all other things being equal, that rail freight transport would have considerable commercial potential. In this context, except some mountainous places that renders investment more costly, the geography of Turkey is favourable for rail transport. For instance, with their geographical position and the type of transported goods, the Divri•i – •skenderun railway line, the Irmak – Zonguldak railway line, the Elaz• – Tatvan railway line and the Nar• – Nusaybin railway line can be regarded as lines that have considerable advantages.

At present, though, the railway infrastructure is not sufficiently modernised for door-to-door transport services ensuring time and cost efficiency for the customer. The logistics service in the railway sector is inadequate. Insufficiency of rolling stock, both in quality and quantity, is another negative factor in the deficiencies of the railway infrastructure in terms of capacity and speed. On the issue of the significance of foreign trade (export and import transports) by rail, ensuring the hinterland connections with the production centers and major ports is of paramount importance. It would obviously be seriously unproductive to construct many ports and kilometers of railways, unless the linkage between them is provided. Consequently, railways connecting the ports and production sites, mostly the Organised Industrial Zones (OIZ) is an important element in the railways' share in freight transport. At present, Turkish railway infrastructure lacks this connection to the OIZs and, most importantly, to ports. This has the obvious affect of ensuring the dominance of road freight, through which timely and door-to-door transport can be provide.

Establishment of links can be secured either by way of constructing new lines with high standards or rehabilitation of existing ones. Without realising such links, , failure of the rail

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<sup>12</sup> TINA Turkey Study, Draft Final Report, p.24

<sup>13</sup> TINA Turkey Study, Draft Final Report, p.28



transport will continue. Against a background where GDP is estimated to grow 6% per year up to 2020 and exports and imports will rise by an estimated 209% and 132%, respectively,<sup>14</sup> it is regarded as imperative that the railway infrastructure should be improved at least to meet the increasing demand.

In addition to ensuring internal links, integration with the TEN-T network is at the heart of Turkish transport policy. In this respect, TINA-Turkey Study is highly relevant not only in assessing the needs of the sector but also in defining the Core Transport Network in accordance with TEN-T guidelines for integrating Turkish transport network to TEN-T. For the **rail network**, TEN-T guidelines define the main characteristics of rail network as follows:

- The rail network shall comprise high-speed rail lines and conventional rail lines.
- Essential requirements and technical specifications for interoperability applicable to high-speed rail lines using current technology shall be defined in accordance with Council Directive 96/48/EC of 23 July 1996 on the interoperability of the trans-European high-speed rail system.
  - The conventional rail network shall comprise lines for conventional transport by rail of passengers and freight, including the rail segments of combined transport, access links to sea and inland ports of common interest and those freight terminals which are open to all operators.
- The rail network shall include the infrastructure and the facilities, which enable rail and road, and, where appropriate, maritime services and air transport services to be integrated.
- The rail network shall fulfil at least one of the following functions:
  - play an important role in long-distance goods and passenger traffic;
  - permit interconnections with airports, where appropriate;
  - permit access to regional and local rail networks;
  - facilitate freight transport by means of the identification and development of trunk routes dedicated to freight or routes on which freight trains have a priority;
  - play an important role in combined transport;
  - permit interconnection via ports of common interest with short sea shipping and inland waterways.

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<sup>14</sup> TINA Turkey Study, Draft Final Report, p.30

**Table 4: Alignment of Core Rail Network of Turkey:**

Alignment	Length
<b>Continuation in Turkey of the TEN-T in Greece and Bulgaria</b>	
border to Bulgaria - Kapıkule - Edirne - Pehlivan köy - Mandıra - Çerkezköy - Halkalı - İstanbul	318.60 km
border to Greece - Uzunköprü - Pehlivan köy	30.18 km
<b>TRACECA, AGC</b>	
İstanbul - İzmit - Arifiye (Adapazarı) - Bilecik - Eskişehir - Ankara - Irmak - Kırıkkale - Boğazköprü - Kayseri - Hanlı - Kalın - Sivas - Bostankaya - Tecer - Kangal - Çetinkaya - Erzincan - Erzurum - Kars - Mezra - Akyaka	2,021.66 km
Boğazköprü - Niğde - Ulukışla - Yenice	280.20 km
Mersin - Yenice - Adana - Toprakkale - Osmaniye - Fevzipaşa - Köprübaşı - Narlı - Gaziantep - Karkamış - Şenyurt - Nusaybin - border to Syria (Iraq)	777.84 km
Çetinkaya - Malatya - Narlı	321.67 km
Malatya - Yolçatı - Elazığ - Muş - Tatvan - Van - Kapıköy - border to Iran	575.33 km
Samsun - Amasya - Kalın	377.76 km
Hanlı - Bostankaya	46.00 km
Balıkesir - Kütahya - Alayunt	262.65 km
<b>Hinterland connections (to seaports and airports) and Strategic Connections (accessibility)</b>	
Zonguldak - Karabük - Çankırı - Irmak	415.19 km
Toprakkale - İskenderun	58.91 km
İzmir - Menemen - Manisa - Soma - Balıkesir - Bandırma	341.72 km
Manisa - Uşak - Afyon	355.68 km
İzmir - Aydın - Denizli - Afyon	512.49 km
Eskişehir - Alayunt - Afyon	161.23 km
Konya - Karaman - Ulukışla	237.63 km
Fevzipaşa - Hudut	36.96 km
Afyon - Konya	272.46 km
<b>TOTAL Existing Lines</b>	<b>7,404.16 km</b>
<b>New construction (planned lines)</b>	
<b>Conventional Lines</b>	
Kars - Çıldır - border to Georgia	76.00 km
Muratlı - Tekirdağ	31.00 km
Aliağa - Çandarlı	30.00 km
Adapazarı - Karasu - Zonguldak - Bartın	281.00 km
Aydın - Güllük	160.00 km
<b>High-Speed Lines</b>	
İstanbul - Ankara	533.00 km
Polatlı - Konya	212.00 km
Bandırma - Bursa - Osmaniye - Ayazma - İnönü	278.00 km
Ankara (Polatlı) - İzmir (Menemen)	511.00 km
Halkalı - Kapıkule	230.00 km
Ankara - Sivas	466.00 km
Sivas - Kars	700.00 km
<b>TOTAL New Construction</b>	<b>3,508.00 km</b>
<b>Envisaged Core Network Extensions (depending on ongoing and planned feasibility studies)</b>	
Afyon - Isparta - Antalya	250.00 km
Karaman - Silifke - Mersin	220.00 km
Trabzon - Tirebolu - Erbaşı - Genç - Kurtalan - Iraq	650.00 km
Yolçatı - Diyarbakır - Batman - Kurtalan	317.97 km
<b>TOTAL Core Network Extensions</b>	<b>1,437.97 km</b>



TINA Turkey study also conducted a traffic bottleneck analysis i.e. how well the network will serve the forecasted year 2020 transport demand (bottleneck or capacity analysis). The traffic bottleneck analysis was designed to identify locations in the Core Network where the proposed capacity would be insufficient to meet the expected 2020 traffic demand.

For the **railways**, the bottleneck analysis concludes that the new projects introduced by the Study would significantly reduce the bottlenecks of numerous *existing* line sections. Thus, the new projects of the TINA scenario would have a significant positive impact particularly on the following *existing* line sections:

- Balıkesir-Kütahya, due to the high-speed connection to Bursa (from Osmaneli and Bozüyük)
- Eskişehir-Alayunt, due to the high-speed line (Ankara-) Polatlı-Afyon (İzmir)
- Afyon-Konya, due to the high-speed line (Ankara-) Polatlı-Afyon (İzmir)
- Halkalı-Pehlivan Köyü, due to the Halkalı-Edirne high-speed line
- Konya-Uluköy, due to the high-speed line Ankara-Sivas
- Irmak-Kaya, due to the high-speed line Ankara-Sivas

Policy making in the railway sector should also be mentioned as one of the reasons for sectoral deficiencies'. The major factor in policy making is the shift in national policy towards roads especially after 1950. National policies implemented from the 1950s onwards failed to attach importance to the railway sector. Passenger transport by rail decreased from 40% to 3%, and freight transport decreased from 55.1% to 4.5%. In effect, failure to invest in rail transport infrastructure and concentration of investments towards road transport contributed to transferring passengers and freight to road transport. Overall, the severe imbalance in investment among the modes of transport seriously disadvantaged the railways.

Railways also have important advantages over roads that are too often unacknowledged. Road transport with its very high share of passengers and freight (95% for total passenger numbers and 91% of freight) inevitably cause serious traffic congestion on the roads and cause environmental pollution including noise, air, water and soil pollution especially in the big cities. The implications of road traffic accidents become more serious with each passing year. By contrast, a well maintained railway system is much more reliable - 500 km of rail lines are maintained annually –and is highly environmental friendly.

In summary, the main strategy of the country in the railway sector is a) promoting construction of high standard railway projects, which would especially alleviate the modal imbalance in passenger transport as well as the freight transport b) highlight the projects which will provide interconnections with existing TEN-T network and c) provide the hinterland connection with ports to increase rail freight transport. In order to give effect to these strategies, the budgetary funds allocated to the railways the target increase in necessary investment amounts to 360% between the years 2003 and 2006. The funds allocated to the railway sector in 2003 was 250 million YTL (appr. 157 million euro), The 2006 allocation was 1145.6 million YTL (appr. 616 million euro) Current works for restructuring and modernization of railways, assign priority to high-speed train projects both in order to increase the rail passenger share and modernising for greater interoperability.

There are also ongoing studies about the construction of new railway lines mainly aimed at connecting Europe to the Caucasus. The main route reaches from the border of Bulgaria to the

border of Georgia (border of Bulgaria-Istanbul-Ankara-Sivas-Erzincan-Erzurum-Kars-border of Georgia). With the completion of this project, which is managed by DLH, an uninterrupted and high standard connection between Europe and Caucasus through Turkey will be established.

In the light of current strategy and as a result of the increased funding devoted to the railway sector, four main targets have been determined in order to revitalize the railway sector:

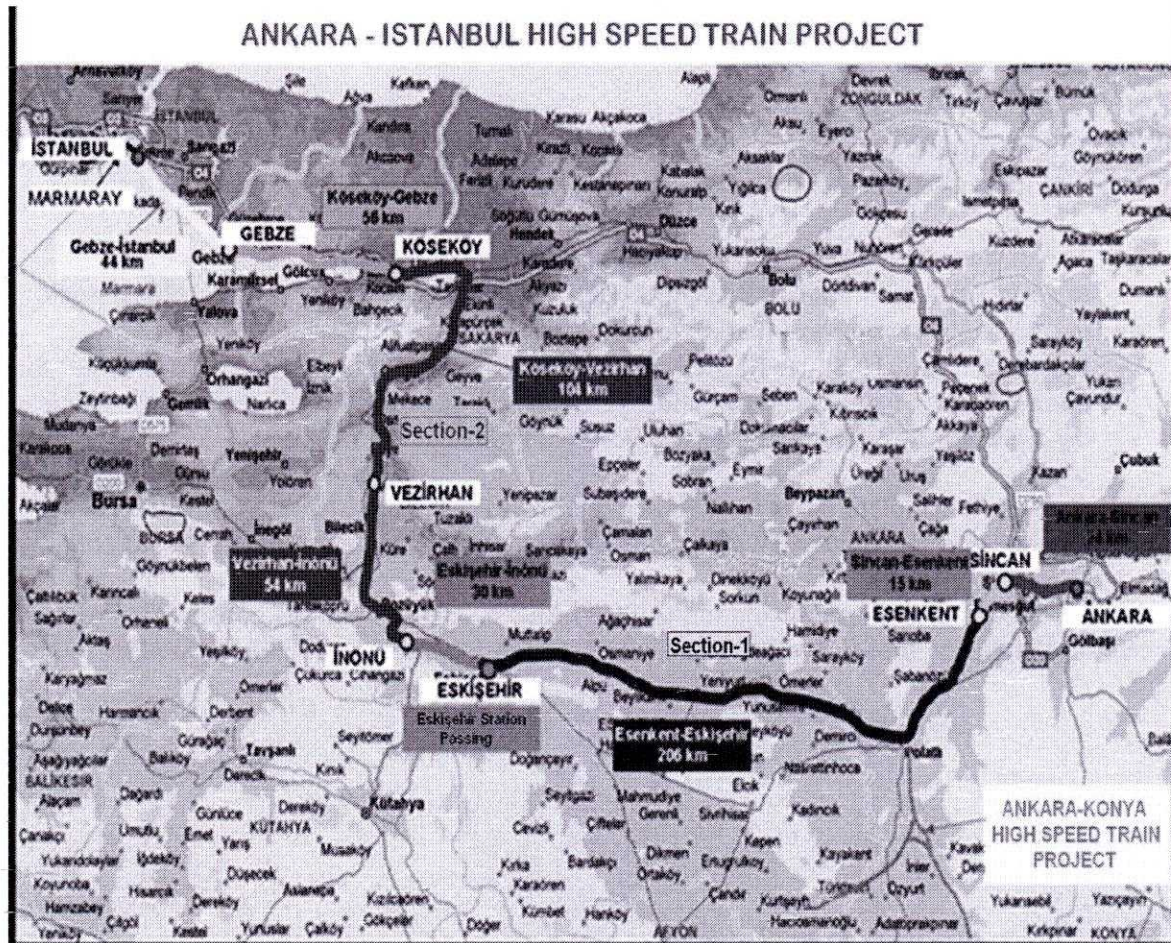
- to introduce high-speed trains for the populace constructing necessary line(s),
- to speed up current trains by rehabilitating existing lines and renovating rolling stock,
- to open railway transport market to the private sector
- to make Turkish State Railways (TCDD), the public enterprise responsible for management of infrastructure and operation of lines, a more effective and efficient organization by restructuring it in accord with universal standards

To obtain a more complete picture of the rail sector in Turkey and its development over the 4 years, recourse may be had to relevant studies carried out between the years 2003 and 2006.

In regard to the target of introducing high-speed trains in Turkey with the construction of high speed train lines, the first project of note is the Ankara - Istanbul High-Speed Train Project.



Map 3: Ankara – Istanbul High Speed Train Project

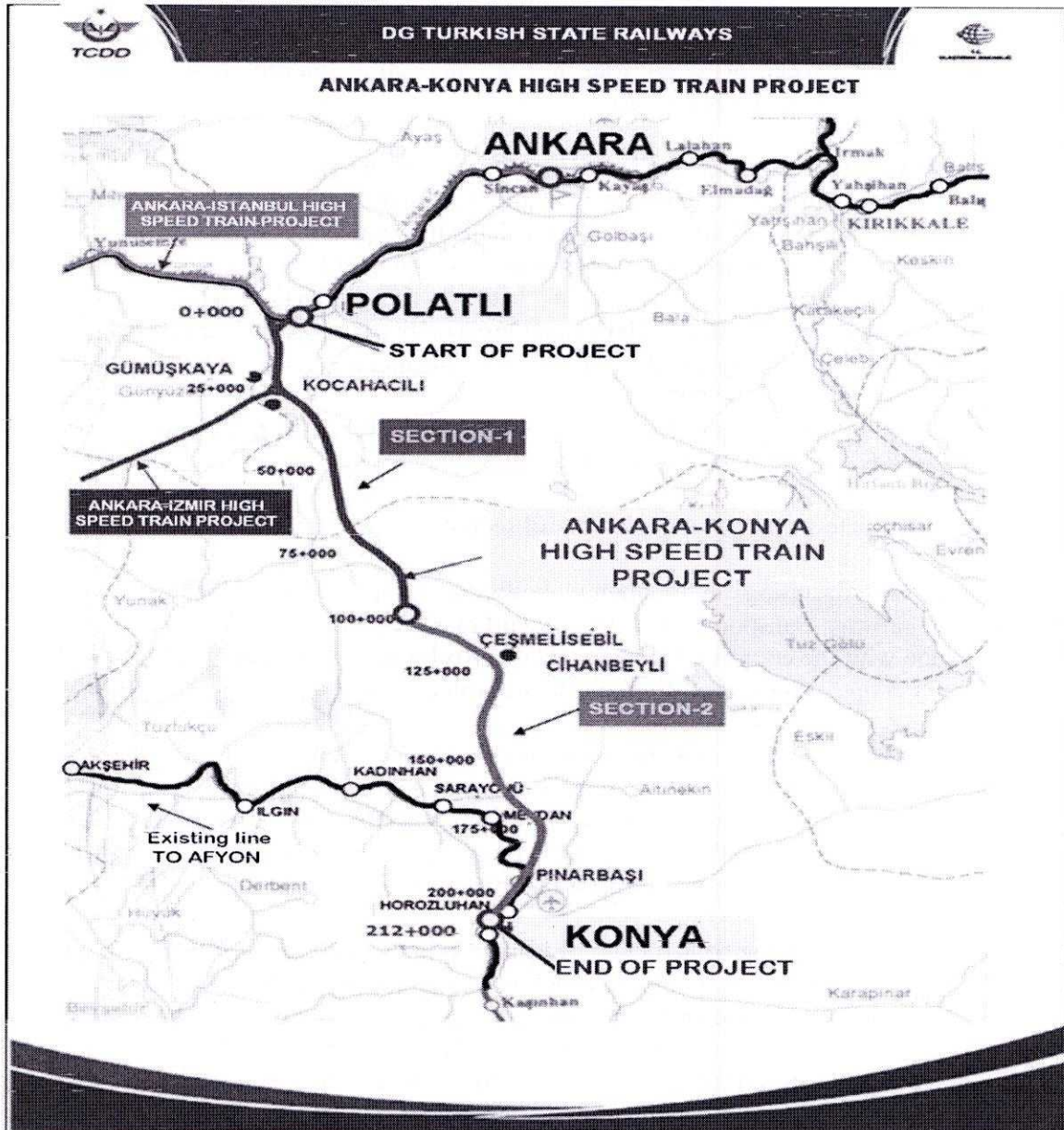


After the completion of this extensive project, scheduled for completion in the year 2008, (also mentioned in the TINA study), the travelling distance between Ankara and Istanbul will be reduced to 533 km and the traveling time between Ankara and Istanbul will be reduced to 3 hours from 7 hour 30 minutes in safety and comfort.

The second project within this framework is the Ankara - Konya High-Speed Train Project: This project by connecting Ankara to Konya and to the Mediterranean coast and also by reaching to Black Sea over Konya would contribute to establishment a very important line in an axis between Mediterranean Sea and Black Sea. After completion of the new line, journey time on the Ankara-Konya line will drop to approximately 1 hour and 15 minutes compared with some 3 hours 30 minutes for the Istanbul-Konya line. (See Map 4)



Map 4: Ankara – Konya High Speed Train Project



In regard to the target of speeding up the trains through rehabilitation of the existing lines and the renovation of the rolling stock; the rehabilitation of the 1.312 km of Ankara-Istanbul, Izmir-Bandırma, Adana-Mersin lines have already been completed. Through cooperation with the private sector, 800 km of line should be rehabilitated annually and the whole network shall be maintained regularly.

To illustrate some projects within the frame of this target: one is the Sivas - Divriği (Tecer - Kangal) Railway Construction Project in which the studies for the completion of the superstructure including signalisation facilities is proceeding. Another relevant project in this respect is the signalisation of Bozazköprü-K. Gediği (Uluköle)- Yenice, Mersin-Yenice-



Adana-Toprakkale lines, which would increase capacity of the line by 25 – 30 % and which is part financed by the World Bank (IBRD) loans.

To describe what has been done for the improvement of rail freight transport the following measures can be quoted:

- Block train application in the freight transport started in 2004 which led to an increase of 30 % in the speed of freight transport; a reduction in shunting costs of 25 % and annual fuel savings of 10.000 tons
- Establishment of Logistics Villages are planned in the regions with a high loading capacity which are conducive to technological and economical developments and close to the Organized Industrial Zones where the industrial activity level is higher than other areas. Construction works have been initiated for the logistic village in Samsun. By creating the transport link between the production sites, which means door-to-door transport, more efficient and less costly transport will be possible and the competitiveness of the region generally will be enhanced.
- Block trains are being operated bilaterally between Turkey - Europe, Turkey – Middle East, Turkey – Central Asian countries

In the matter of private sector participation in rail sector;

With the aim of preventing environmental pollution, improving combined transport and enhancing the railway transportation between Turkey-Europe, Ro-La transport agreements have been made with the countries located en route. Ro-La Transport started in 2006 with the Private Sector Co-operation in the Istanbul - Austria route.

In order to increase the share and involvement of private sector in railways, research on various financing models (Build and Operate, Build and Operate and Transfer, etc.) within the frame of Public Sector and Private Sector Co-operation for the purpose of the realisation of the new railway connections (Public Private Partnership -PPP) is being carried out. As an example, the Bursa-Osmaneli line is a project that would be realized through a PPP.

Another significant step is the construction of private sidings to connect Organized Industrial Zones (OIZ) and factories to the mainline, which will facilitate the assurance of faster services to the customers and in transporting raw materials and manufactured for the firms by rail. Enabling regulations were made to promote the construction of private sidings. At present, a total of 25 Organized Industrial Zones (OIZ) and factories have been connected to the mainline by constructing 25.5 km sidings in the years 2003 – 2006. It is planned to construct 140 kms of more sidings in 2006-2010 period.

In Adapazarı, a new factory is planned to be established with domestic and foreign associates for the production of high-speed train sets and high speed passenger wagons.

Necessary administrative structural reforms are also seen as important to programme realisation. In this connection, the transformation of TCDD into a more effective and market and customer-oriented enterprise is a key element in itself. It also marks a significant contribution to Turkey's accession process. The EU alignment policies in the rail sector aims at liberalising and opening the market to third parties.

Reference should also be made to the railway sector Twinning Project with Germany (notably with Deutsche Bahn) which started in February, 2005 and was completed in October, 2006. Arising from the Project, draft legislation was approved by Project Leaders and submitted to the MoT in January 2007. A "Framework Law" and a "TCDD Law" which cover harmonisation of Turkish legislation with the EU Acquis and the implementing regulations on Railway Safety, Interoperability, Licensing and Access to the Infrastructure (Allocation and Charging) were prepared and approved by the Project Leaders on 25 January, 2007 and submitted to the Ministry of Transport.

The legislative process continues. In this context, in accord with the Cabinet Decree no.2005/9986, draft laws need a common justification and also justifications for each article. There is also a need for a Regulatory Impact Assessment. Subsequently, there will be a consultation process with all parties (NGOs, Universities, and Public Bodies).

In the the timetable for these activities, an Action Plan has been prepared by MoT for completion of the technical studies. Draft laws will then be submitted to the Prime Ministry to initiate its passage. In accordance with the "Turkey's Programme for Alignment with the EU Acquis 2007-2013"<sup>15</sup>, it is foreseen that draft laws will come into force within parliamentary session 2008-2009

Apart from these, the necessary agencies / bodies that are required under EU legislation (Regulatory Body, Safety Authority, License Issuing Body, Accident Investigating Body and etc.) and an Infrastructure Manager will be appointed with defined roles, responsibilities and locations (TCDD, the Ministry of Transport, etc.). In addition, the formation of main business units and sub-sectors at TCDD, definition of the Public Service Obligations, preparation of the Public Service Contracts, rearrangement of the financial relations with Government are also envisaged within the "New TCDD Organisation" and "the Rearrangement of Financial Relations with Government and Installation of Financial Management Information System Project" under the scope of the "Turkish Railway Sector Restructuring and Strengthening" studies. This Project was finalised in June 2007.

### **2.1.2 Maritime Transport**

Like the railway sector, there is a division of functions between public institutions in the maritime transport sector. DG Construction of Railways, Ports, Airports (DLH) is responsible

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<sup>15</sup> Turkey's Programme for Alignment with the EU Acquis 2007-2013, which is prepared in cooperation with all relevant public bodies, is the roadmap of Turkey indicating the harmonisation for the period. Electronic version of the document is available on [www.abgs.gov.tr/index.php?p=6&l=1](http://www.abgs.gov.tr/index.php?p=6&l=1) in Turkish



for the infrastructure projects in maritime transport as well as air and rail transport. The Undersecretariat of Maritime Affairs (UMA), a related body of MoT, is responsible for the maritime affairs with the exception of construction, i.e., determination, coordination and implementation of the national maritime transport policy, identification of the needs of the sector, regulation of the merchant marine in Turkey, provision of maritime safety and security.

In the general framework, the formulation of transport policy is the main task of Ministry of Transport. The following planning studies were carried out by the Ministry :

Transport Master Plan 1983-1993

Master Plan of Ports Development in the Sea of Marmara (1998) - target year 2015

Nationwide Ports Master Plan (2000) -- target year 2020

National Transport Strategy Plan (2005)

Apart from these, the State Planning Organisation coordinates 5-year development plans (recently extended to 7-year plans) as the responsible body for overall sectoral planning.

Since the 1960's, the worldwide transportation system has experienced rapid progress both in methodology and technology resulting in accelerated cargo handling, containerisation transportation and multimodal transport. Ports comprise an important component of the multimodal transport system. Likewise, railway-connected Turkish ports serve intermodal transport not only for the benefit of Turkey itself, but also, given the geographic its location, they serve as gateways to the Middle East, Caucasian landlocked Asian and the Commonwealth of Independent States (CIS) countries.

In regard to infrastructure, there are more than 400 coastal facilities in Turkey- ports, boat harbours, docks, fishermen's shelters - distributed along a coastline of 8,333 kilometers. The handling capacity of the docks, which have a total length of more than 33 kilometers, in dry cargo, oil and petroleum products, exceeds 350 million tons per year. Among these facilities, there are 167 ports that can handle ships above 500 GRT, within the scope of the ISPS Code, and open to international traffic.

There are three types of ports divided according to their operating body. There are ports operated by DG Turkish State Railways (TCDD), private sector ports, and piers belonging to municipalities. 7 ports belonging to TCDD and 13 ports belonging to a mix of public and private enterprises handle most of the goods traffic in Turkey. These 20 ports handle around 60% of the total ports volume and 70% of dry cargo. Overall activity, on average, increases by 10% p.a. in these ports. For dry cargo, however, the annual increase is in the order of 15% and this increase is almost totally due to container traffic.

The following tables list the public and private ports, the total volumes handled and the level of increase on 2003:

**Table 5: List of Existing Public Ports, Extension Works and New Port Projects**

figures in million tons per year

Name of Port	Existing Capacity	Capacity After Extension	Total Capacity
Hopa Port	1,4		1,4
Rize Port	1,5		1,5
Trabzon Port	4,0		4,0
Giresun Port	2,5		2,5
Ordu Port	1,0		1,0
Samsun Port	2,2		2,2
Sinop Port	1,0		1,0
•nebolu Port	1,2	1,3	2,5
Bart•n Port	1,5		1,5
Filyos Port <sup>16</sup>		25,0	25,0
Haydarpa•a Port	5,0		5,0
Derince Port	1,5	10,0	11,5
Kuzey Marmara Port		10,0	10,0
Band•rma Port	3,0		3,0
Çanakkale Port <sup>17</sup>	1,0		1,0
Gökçeada Kuzu Port	1,0		1,0
Kuzey Ege (Çandarlı Port)		20,0	20,0
•zmir Port <sup>18</sup>	5,0		5,0
Güllük Port <sup>19</sup>	4,0		4,0
Antalya Port	2,5		2,5
Akçansa Port Ambarlı		2,0	
Akçansa Port Çanakkale		3,0	
Akport		4,8	
Aksa Port	0,3		0,3
Altıntel Port	1,0		1,0
Batıçim Port	3,0		3,0
Borusan Port	3,35	15,65	19,0
Delta Petrol Port	6,0		6,0
DP World Port		12,0	12,0
Diler Port	6,0		6,0
Ege Gübre Port	6,5		6,5
Evyap Port	2,8	2,5	5,3
Gemport Port	3,0	3,6	6,6
•çda• Port	5,0		5,0

<sup>16</sup> BOT model will be applied

<sup>17</sup> Infrastructure is implemented by public; completed by BOT model

<sup>18</sup> Dredging and extension work will be implemented under privatization process (related additional capacity is not included in the list)

<sup>19</sup> Completed by BOT model



Kızılirmak Port	2,0			2,0
Koruma Klor Port	1,0			1,0
Kroman Çelik Port	2,5			2,5
Kumport Port	8,0	3,0		11,0
Rota Port	2,5			2,5
Lima Port	1,0			1,0
Marda Port	5,5			5,5
Marport Port	9,0			9,0
Marta Port	2,2			2,2
Nuh Çimento Port	3,0			3,0
Poliport	2,8			2,8
Set Çimento Port	1,0			1,0
Solventa Port	2,0			2,0
Toros Tarım Samsun Port	4,5			4,5
Toros Tarım Ceyhan Port	18			18
Yalıport	4,0	2,25		6,25
DP World Yarmouk			12	12
Asya Port			10	10
Dilmar			15	15
TOTAL	155,05	28,3	114	297,35

Source: TCDD and Port Operators Association of Turkey

According to the findings of the TINA Study for Turkey, freight transport demand will increase significantly in the period 2004 – 2020, fuelled by high GDP growth (6% p.a.) and by the related growth of the production and consumption sectors (calculated as a 138% growth of domestic market). Consequently, there will be a significant increase in both international and domestic trade. In this regard, a 132% growth of imports and 209% growth rate of exports are projected. The highest rate of growth is calculated to be in metal products and chemicals for both imports and exports. Hence, ports will be called on to accommodate very substantial increases in international trade. In 2020 alone, it is estimated that around 407 million tons will need to be transported through Turkish seaports.<sup>20</sup>

With the aim of ensuring the integrating Turkish transport network with TEN-T network, Core Transport Network is presented in the TINA-Turkey Study. Ports are also a vital part of the Core Network, which are categorised by TEN-T guidelines (Decisions 1692/96 and 84/2004) as A, B and C according to their traffic flows.

<sup>20</sup> TINA Turkey Study, Draft Final Report, p.53

**Table 6: Categorisation of Seaports according to traffic forecast 2020:**

Category A			Category B	Category C
Hub Ports	Public Ports	Private Ports		
Mersin	Trabzon	Erdemir	Rize	Hopa
Çandarlı (Planned)	Samsun	Ambarlı	Ünye	Giresun
	Filyos (Planned)	Gemport	Bartın	İnebolu
	Derince	Izmit Bay	Zonguldak	Gökçeada
	Tekirdağ	Ceyhan	Mudanya	Bozcaada
	Çanakkale	İsdeir Oil Terminal	Dikili	
	Bandırma	İskenderun Bay	Çeşme (P & Ro-Ro)	
	İzmir	Karabiga		
	Kuşadası (P)	Aliağa-Nemrut Bay		
	Güllük			
	Bodrum (P)			
	Marmaris (P)			
	Antalya			
	Alanya (P)			
	Taşucu (P)			
	İskenderun			

The bottleneck analysis carried out in TINA-Turkey study reveals important conclusions with regard the capacity of the ports and the likelihood of their meeting future demand:

- All ports in Turkey face a dramatic growth of cargo volume by 2020.
- On average, the increase in volume amounts to 150-200% by 2020 for each of the main ports of TCDD (except for some Black Sea ports like Samsun where the growth would reach about 80%).
- Except for İskenderun, the available capacities of TCDD ports would be vastly exceeded in 2020, particularly in İzmir and Mersin where the available capacity is exceeded already.
- For the seven main public ports operated by TCDD, the estimated *additional* cargo volume to be handled in 2020 amounts to about 70 million tons, compared the current throughput of some 44.6 million tons.
- The available capacity reserves of some ports and the current plans of MoT for extension and new construction of ports would provide an *additional total* capacity of approximately 95 million tons by 2020. This additional capacity would ensure that the public ports would continue to play a major role in the port sector in Turkey. The planned additional capacities are broken down as follows:
  - Reserve capacities in total 6.5 million tons (though this includes reserve capacity at the port of Haydarpa•a, which may not be available on policy grounds).
  - Extension of Mersin (in 2 stages) : 20 million tons
  - New construction of Çandarlı : 20 million tons
  - New construction of Filyos : 25 million tons
  - Extension of Derince : 10 million tons
  - Extension of various ports in the Marmara Sea : 10 million tons
  - Extension of İskenderun : 4 million tons



The bottleneck analysis also assessed the affects of these projects in terms of capacity, as follows:

- The extension of Derince and some Marmara Sea ports amounting to a total of 20 million tons is fully required to cope with the cargo growth of the Greater Istanbul area and to decongest the port and land traffic situation of the Istanbul area.
- The additional capacity of 20 million tons to be provided by the construction of Çandarlı is fully required to cope with the expected cargo growth of İzmir port, which has already reached its capacity limit.
- The extension (new construction of Mersin Container Port) of Mersin by 20 million tons would meet the traffic growth expected for this port until 2020.

The development of Filyos meets the port requirements of the region of Zonguldak and its hinterland and can support the decongestion of the Istanbul area by attracting transport destined for Istanbul and/or for passing the Turkish Straits.

Currently, both in case of exports and imports, maritime transport has the highest share of the transport trade at 83.0% and 94.1%, respectively. According to the scenarios of the TINA Turkey Study, in 2020 total throughput of the ports will be 398 million tons compared with 153.60 million tons in 2004.<sup>21</sup>

These data clearly demonstrate an urgent need for the enhancement of port capacity in order to meet increasing market demand and also act as the transit/nodal point between Europe and Asia. The remarks of the TINA Turkey Study in this respect are given as follows:

The importance of candidate hub-ports (**Çandarlı Port with a capacity of 2 million TEU and Mersin Container Port with a capacity of 4 million TEU**), which are planned as nodal points of entry within international transport corridors and which also are seen as creating environment friendly cost effective transport means between international markets should be identified precisely.. Both ports are designed to provide min 16 m of water depth at the berthing facilities with large stacking areas and long quays equipped with high capacity handling equipment and technically fulfilling the requirements of hub ports.

#### **Ports in the Izmir region**

Sea transport via the Izmir region will increase from 36.4 million tons in 2004 to some 103.0 million tons in 2020 (by all scenarios). Sea transport via the Izmir port location was 12.5 million tons in 2004. When the growth of the region is taken into account, outcome demand for the location is 35.4 million tons. However that would mean that almost 70 million tons would be transported via other locations in the region. The volume of transport via the port of Çandarlı will presumably follow the capacity that will be made available.<sup>22</sup>

Even if the findings of the TINA Study on the future demand of the Turkish maritime transport were ignored, there is compelling evidence in historic performance data that port usage demand has continued on an upward curve (see Table 7 below)\_and simply relating these increases to port capacities would raise questions as to port infrastructure improvements not only in relation to national competitiveness but also the impacts on the development of the Mediterranean region as a whole.

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<sup>21</sup> TINA Turkey Study, Draft Final Report, p.40

<sup>22</sup> TINA Turkey Study, Draft Final Report, p.46



Table 7:

<b>FREIGHT HANDLING IN TURKISH PORTS</b>								
<b>CONTAINER (in TEU)</b>								
	2003	%	2004	%	2005	%	2006	%
Private Ports	1.080.336	43,28	1.424.655	46,23	1.579.295	47,84	1.930.324	50,50
TCDD Ports	1.416.054	56,72	1.656.696	53,77	1.721.845	52,16	1.892.403	49,50
<b>TOTAL</b>	<b>2.496.390</b>	<b>100</b>	<b>3.081.351</b>	<b>100</b>	<b>3.301.140</b>	<b>100</b>	<b>3.822.727</b>	<b>100</b>
<b>GENERAL CARGO</b>								
	2003	%	2004	%	2005	%	2006	%
Private Ports	22.334.234	53,35	40.663.400	66,46	47.829.751	71,45	57.046.602	74,43
TCDD Ports	19.531.400	46,65	20.522.682	33,54	19.107.512	28,55	19.594.116	25,57
<b>TOTAL</b>	<b>41.865.634</b>	<b>100</b>	<b>61.186.082</b>	<b>100</b>	<b>66.937.263</b>	<b>100</b>	<b>76.640.718</b>	<b>100</b>
<b>LIQUID BULK FREIGHT</b>								
	2004	%	2005	%	2006	%		
Private Ports	3.086.428	24,63	4.465.337	36,33	4.642.719	41,3		
TCDD Ports	9.442.492	75,37	7.825.044	63,67	6.599.263	58,7		
<b>TOTAL</b>	<b>12.528.920</b>	<b>100</b>	<b>12.290.381</b>	<b>100</b>	<b>11.241.982</b>	<b>100</b>		

Source: Port Operators Association of Turkey

Again, Turkey's progress in international freight transport by the modes of transportation between the years of 2002-2005 (see Table 8 below) where 86% of the foreign trade transportation in 2005 was effected by shipping affords an important indicator of the potential of maritime transportation in international freight transport. .

Table 8: Foreign Trade Transport by Modes (in tonnage)

Years	Sea %	Rail %	Road %	Air %	Other %
2002	87,3	0,7	9,7	0,2	2,1
2003	87,6	0,8	10,5	0,1	1
2004	87,4	1,2	10,3	0,1	1
2005	86,0	1,2	11,9	0,2	0,7

Source: TURKSTAT

This is further reinforced by the statistics (see Table 9 below) of seaborne transport for the four year period, 2002-2005, where export shipments recorded an increase up to 54 million tons and import shipments showed an increase up to 127 million tons in 2005. As the share of the Turkish Flag vessels accounted, on average, for some 26% of total trade cargoes, it is clear that the state of Turkish ports carry international significance.



**Table 9: Developments in Seaborne Transport (million tons)**

Years	Total	Export	Import	Turkish flag %	Foreign flag %
2002	125	39	86	33	67
2003	140	41	99	25	75
2004	152	47	105	23	77
2005	182	54	127	24	76

Source: TURKSTAT

In fact, regional dynamics also play a significant role in the evolution of transport sector in Turkey. The Mediterranean region has a considerable share of the worldwide container traffic throughput, while Eastern Mediterranean where Turkey is located, including the Black Sea Region, shows a rapid increase in demand comparison with the West. It is obvious that Southeast European transportation demand will place increasing emphasis on the infrastructure investment decisions in the coming years. As the dominant mode of transport concerning foreign trade in Turkey is maritime transport, which has the lowest ton/km cost ratio, the increase in the container traffic of Mediterranean means that the increase in the maritime transport of Turkey will continue.

At present, the containerisation ratio of the Turkish cargo at ports is only 15% percent. This leaves much room for further and rapid containerisation of cargo in Turkey. As containerisation gives way to easy intermodal transport, and as port-railway transport is encouraged by the EU through the Marco Polo Programme, it is vital that Turkey can accommodate containerisation by constructing new container terminals on the Aegean and the Mediterranean Coasts. These ports will be important gateways for the traffic from Europe to Caucasus and Middle East via Turkey and represent key points on the Motorways of the Sea.

According to all the studies conducted since 1990s, and the findings of the TINA study, the North Aegean Çandarlı Port (hub), the Mersin Container Port and the Filyos Port (on the Black Sea) are the ideal centres to be developed in order to meet the increasing maritime trade. From these ports, cargo traffic will find the shortest route from Filyos Port via existing railways, highways, and motorways down to Mersin Container Port to reach Mediterranean boundary, to North Aegean or İzmir Port to reach Aegean boundary or be directly connected to Middle East markets.



**Table 10: Container Traffic in TCDD and Private Ports as of end of 2006**

	PORT	2003	%	2004	%	2005	%	2006	%
Private Ports	AKPORT	4000	0,16	4.434	0,14	1,292	0,04	235	0,01
	BORUSAN	80.909	3,24	82.806	2,69	90,513	2,74	94.772	2,48
	EVYAP			0		14.007	0,42	32.972	0,86
	GEMPORT	172.806	6,92	204.893	6,65	240.953	7,3	274.559	7,18
	KUMPORT	439.993	17,63	483.831	15,7	438.849	13,29	531.382	13,9
	MARDA•	85.914	3,44	132.566	4,3	158.099	4,79	194.282	5,08
	MARPORT	250.126	10,02	462.009	14,99	589.644	17,86	720.603	18,85
	YILPORT	31.731	1,27	34.180	1,11	33.785	1,02	35.830	0,94
	ANTALYA	11.196	0,45	18.387	0,6	11.843	0,36	40.247	1,05
	TRABZON	3.661	0,15	1.549	0,05	310	0,01	5.442	0,14
	<b>TOTAL</b>	<b>1.080.336</b>	<b>43,28</b>	<b>1.424.655</b>	<b>46,24</b>	<b>1.579.295</b>	<b>47,84</b>	<b>1.930.324</b>	<b>50,5</b>
TCDD	DER•NCE	1.936	0,08	1.509	0,05	550	0,02	609	0,02
	HAYDARPA•A	244.467	9,79	316.982	10,29	340.629	10,32	400.067	10,47
	•SKENDERUN	1.745	0,07	607	0,02	0	0	52	0
	•ZM•R	700.795	28,07	804.563	26,11	784.377	23,76	847.926	22,18
	MERS•N	467.111	18,71	532.999	17,3	596.289	18,06	643.749	16,84
	<b>TOTAL</b>	<b>1.416.054</b>	<b>56,72</b>	<b>1.656.660</b>	<b>53,76</b>	<b>1.721.845</b>	<b>52,16</b>	<b>1.892.403</b>	<b>49,5</b>
<b>TOTAL FOR TURKEY</b>		<b>2.496.390</b>	<b>100</b>	<b>3.081.315</b>	<b>100</b>	<b>3.301.140</b>	<b>100</b>	<b>3.822.727</b>	<b>100</b>

Source: Port Operators Association of Turkey

Ro-Ro traffic in Turkish ports is also of high significance as Ro-Ro transportation is one of the important aspects of intermodality. In regard to Ro-Ro traffic in Turkey, for the purpose of transporting TIR vehicles to Europe by maritime transport, a Ro-Ro company (UN Ro-Ro Enterprises Co.) was established between Italy (Trieste) and Turkey (•stanbul) in 1994. This line has since developed into the biggest company engaged for short distance maritime transport in Mediterranean as well as now being one of the largest in the world. This line has continued to expand in accord with constantly rising demand. Other ports such as •e•me, Ambarl• are also used by this line.

At present, twelve Ro-Ro ships – 6 from Pendik, 3 from Ambarl•, 3 from •e•me – are sailing regularly to Trieste Port - Italy and more than 190.000 vehicles are carried both for export and import. This volume approximates half of the export transports to the EU. Departure from return to ports takes 6 days (loading and unloading time of the vehicles included). The vehicles carried on this line can be either Complete Units (tractor + semi-trailer) or only semi-trailers. In 2006, semi-trailer transport accounted for 64,32% of the Ro-Ro transports to Trieste.

Firms using semi-trailer transports, created through the Ro-Ro lines and using the advantages of this type of transportation, have started gradually to reduce investments on tractors as there is not any necessity for one-to-one matching between tractors and semi-trailers for Intermodal Lines as there is for road transport. Studies indicate that a firm engaged in semi-trailer transportation can easily maintain its operations with half number of the tractors as compared



with a firm engaged in conventional road transport. Through this advantage of intermodal lines, firms can make substantial savings on the towing vehicle investments

The lines that are established in the Mediterranean pioneered the establishment of other Ro-Ro lines enabling the carriage of approximately 20.000 vehicles one way between Samsun-Novorossisky (Russia), Zonguldak-Evpatoria (Ukraine), Zonguldak-Skadovsk (Ukraine) and Trabzon-Sochi (Russia) in the Black Sea. Among these Ro-Ro lines, Samsun-Novorossisky Ro-Ro line, which was established in response to Black Sea geographical conditions, has been operating since 1995. By resolving the infrastructural problems and improving Zonguldak port and also by the improving the Ukraine ports, Zonguldak-Ukraine Ro-Ro lines' potential of one-way vehicle carrying could expand to 20.000 units per year.

While the 86% of our foreign trade is carried out by maritime transportation, the cabotage freight by maritime transportation is only about 3 percent. There is still scope for increasing cabotage maritime transport. In line with the short sea shipping policy with the EU, upgrading the ports with their hinterlands will also help the internal maritime trade to increase. Total volume of cargoes of Turkey's cabotage transportation in the years 2000, 2001, 2004 and 2005 are shown in the table below.

**Table 11: Maritime Cabotage (million tons)**

Years	Loaded	Unloaded
2000	16,5	21
2001	13,5	12,5
2004	14,5	14,5
2005	14,2	13,8

Source: TURKSTAT

It should also be noted that during the last few years, maritime tourism and cruise navigation have been steadily developing and expanding throughout the entire Mediterranean Sea, thus generating economic and cultural collateral benefits in the seashore countries. Turkey itself has put great emphasis on the creation of new marina capacities in yacht and cruiser terminals. Ship and yacht building industry has also become one of the most promising development sectors.



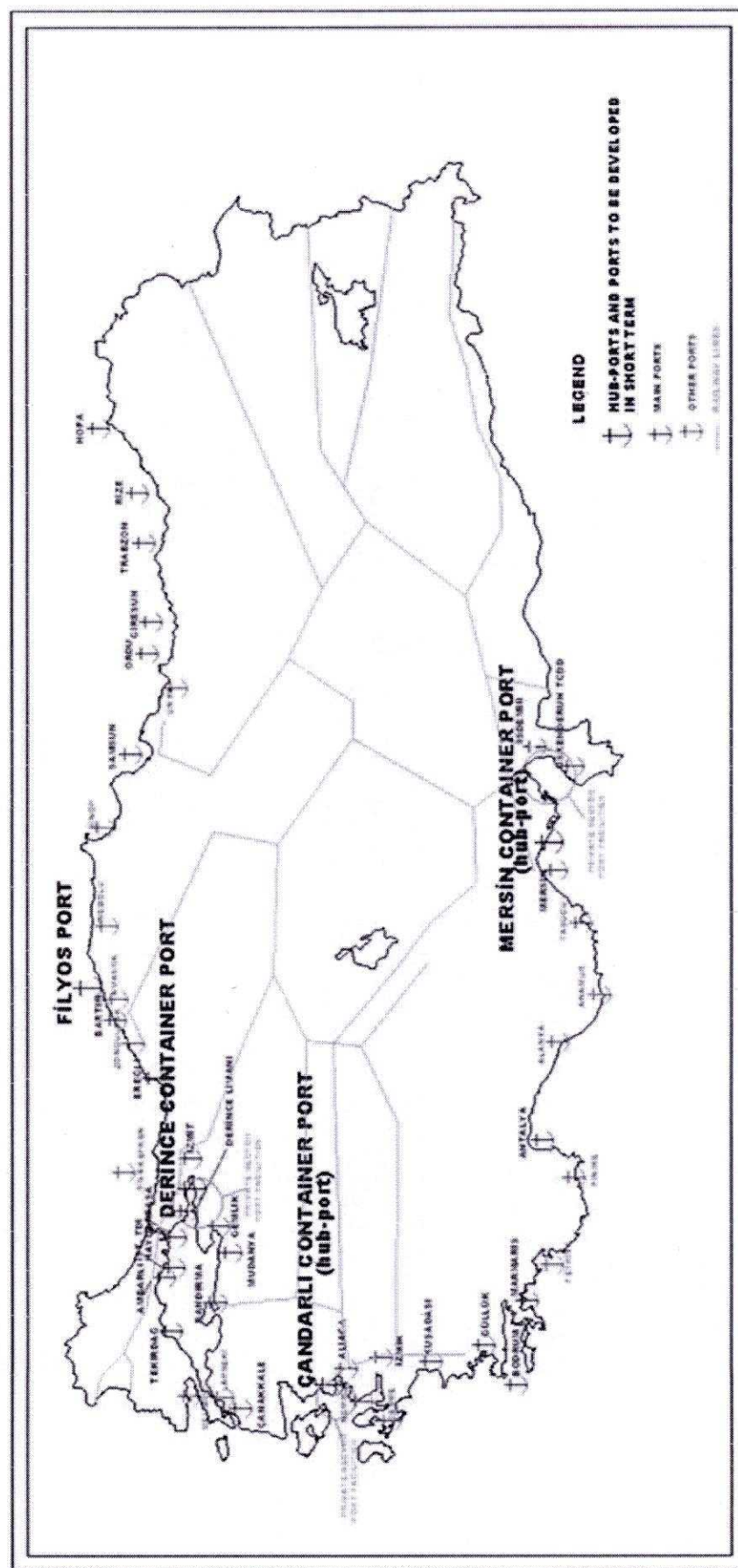
Table 12 : Export Transportation on Ro-Ro Lines

	2006			2005			2004		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
Pendik/ Haydarpaşa- Trieste	53,653	4,039	57,692	50,760	2,869	53,629	52,271	3,335	55,606
Çeşme- Trieste	17,304	982	18,286	16,385	855	17,240	15,073	1,149	16,222
Ambarlı- Trieste	19,139	2,587	21,726	16,339	2,253	18,592	17,530	2,457	19,987
Samsun- Novorossisky	12,134	1,751	13,885	11,731	1,897	13,628	9,734	1,506	11,240
Zonguldak- Ukraine	5,231	4,426	9,657	4,352	3,434	7,786	3,541	1,905	5,446
Rize-Poti	470	11	481	2,561	41	2,602	2,903	141	3,044
Trabzon- Sochi	2,957	0	2,957	1,553	0	1,553	1,609	0	1,609
<b>Total</b>	<b>110,888</b>	<b>13,796</b>	<b>124,684</b>	<b>103,681</b>	<b>11,349</b>	<b>115,030</b>	<b>102,661</b>	<b>10,493</b>	<b>113,154</b>

Source: Ro-Ro Vessel Operators and Combined Transporters Association



Map 5: Turkish Port infrastructure



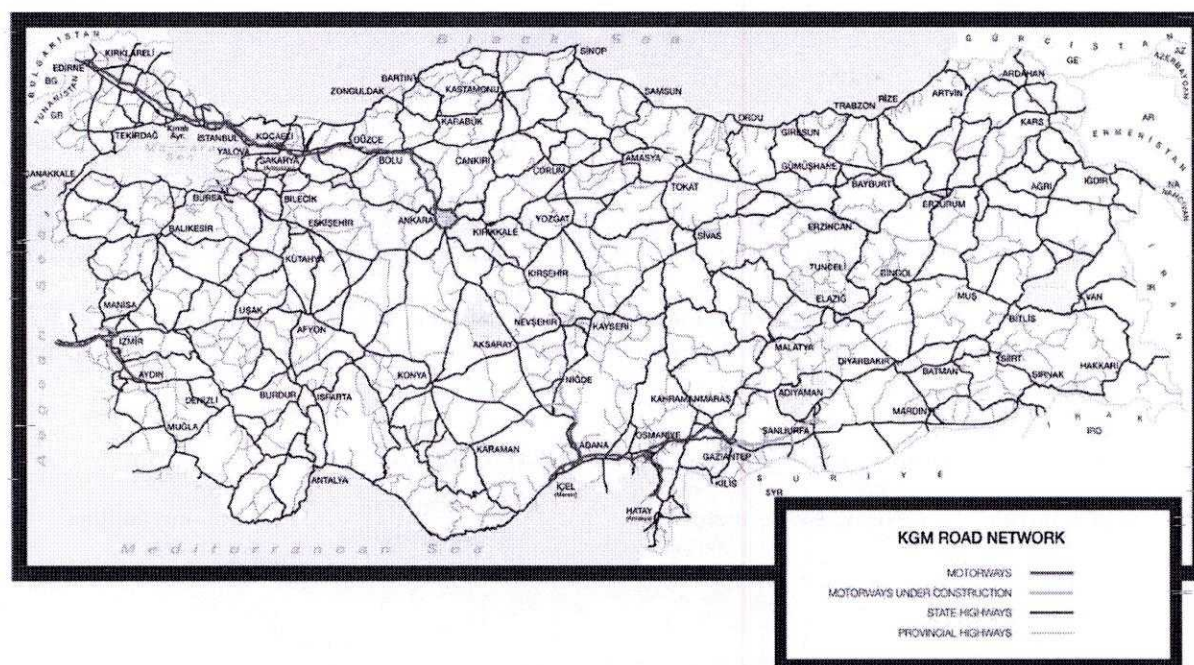
### 2.1.3. Road Transport

As already reported, road transport is the predominant sector among the other modes of transport with 95% of total passenger transport and 91% of total freight transport.

As regards the institutional structure, DG Land Transport under the Ministry of Transport is responsible for the economic, social, technical and international aspects of policy making for road transport and regulating access to the road transport market and profession. The Directorate General of Highways (KGM), under MoT, is in charge of the policy making on road infrastructure and has the duty of planning, designing, constructing, maintaining and operating motorways, state and provincial roads.

Today, the sector has one of the largest transport fleets in Europe and comprises well-organized firms with high capacity. In total, there are 1,507 companies, 32,930 tractors, 17,431 lorries, 37,571 semi-trailers and 2,486 trailers used in international freight transport by road constituting 1,278,553 tons capacity in aggregate. 174 companies are engaged in international passenger transport with 2,079 buses and 95,774 seat capacity. There are 1,013 firms involved in domestic passenger transport with 10,903 buses and 430,552 seat capacity.

Map 6



Country wide, road network accessibility is not a problem in Turkey. General road policy is to improve and rehabilitate the existing network according to the traffic demands. At the beginning KGM carried out roadworks directly on its own account, today design, construction and supervision works are being contracted to the private sector. Thus, the design, construction and supervision of motorways are completely carried out by private companies.



Apart from national funds, from 1980s onwards KGM has been utilizing foreign credits provided through contractors, in addition to international finance institutions such as the World Bank and the European Investment Bank.

Over recent years, the share of transport and communication sectors amounted to some 30 % of fixed public capital investment. About half of that amount was being allocated for KGM who, nevertheless, represent that it is insufficient for the needs of the country.

The rural roads in Turkey are classified into a four-tier system: motorways (multi-lane access-controlled highways), State roads, provincial roads and village roads. Directorate General of Turkish Highways (KGM) is responsible for the administration of motorways and State and provincial roads. Village and forest roads are the responsibility of provincial administrations. Additionally, there are urban roads which are under the administration of municipal authorities.

The road network excluding village roads, is about 63,714 km in length. Current road network of Directorate General of Turkish Highways is as follows;

**Table 13: Road Network of KGM** (as of January 1, 2006)

Road type	Asphaltic concrete (km)	Surface treatment (km)	Stone blocked (km)	Stabilized (km)	Earth (km)	Other (km)	Total (km)
Motorways	1.775	-	-	-	-	-	1.775
State roads	6.199	24.541	42	254	86	249	31.371
Prov. Roads	881	25.761	91	1.953	1.243	639	30.568
Total	8.855	50.302	133	2.207	1.329	888	63.714

The multi-lane road network in Turkey currently stands at 11.500 kms, including 1.775 kms of motorway. The new divided highways have been paved mostly with surface treatment.

**Table 14: Comparison of Road and Motorway Densities (2003)**

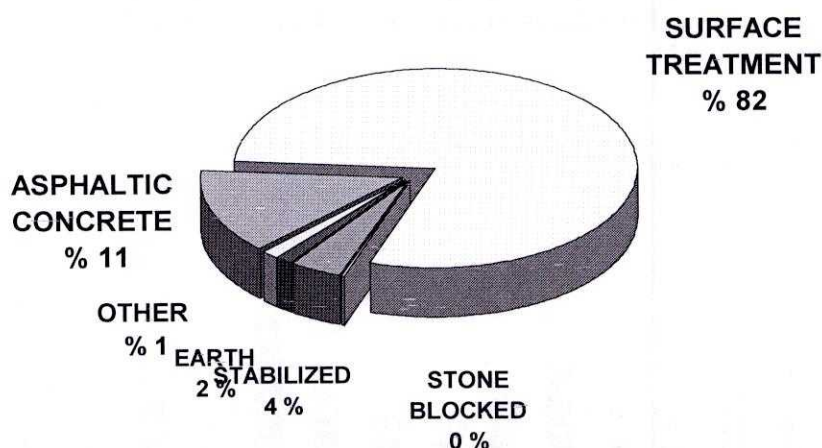
Countries	Km of highway/ 100 km <sup>2</sup>	Km of motorway/ 1000km <sup>2</sup>	Km of highway/ million population	Km of motorway/million population
Czech Republic	70.3	6.6	5,436	50.8
Poland	56.2	1.3	4,600	10.6
Germany	64.8	33.7	2,805	146.0
France	72.8	19.1	6,614	173.3
EU-25	47.5	14.9	4,045	127.3
EU-15	42.1	17.5	3,472	144.0
Turkey	20.1 (1)	2.3	885	24.7

Source: EU Energy-Transport Statistics (2005) and Road Transport Statistics (2003), Eurostat.

(1) Village roads with asphaltic pavement are included



Graph 7:



Low physical standard and insufficient maintenance due to inadequate funding and inappropriate management procedures are serious road network problems. Only 8,855 km. of the national road network (63,714 km.) are paved with bituminous hot mixture and there is a perceived serious need to convert all surface treatment to bituminous hot mixture.

All motorways and some parts of the road network with high standards, consisting of some 8,878 km., are defined as e-road, an extension of the Southeast European International Road Network in the framework of "European Agreement on Main International Traffic Arteries (AGR)".

The Trans-European North-South Motorway (TEM) Project is a regional transport infrastructure project starting from Gdansk (Poland) and going to Asia through Turkey in which central eastern and south-eastern European countries are involved. TEM network in Turkey is approximately 6,937 kms as of January, 2006.

The existing Turkish part of the Pan - European Corridor IV, starting from Kapıkule (the Turkish-Bulgarian border crossing) and ending in İstanbul, was constructed as a motorway with a total length of 261 km.

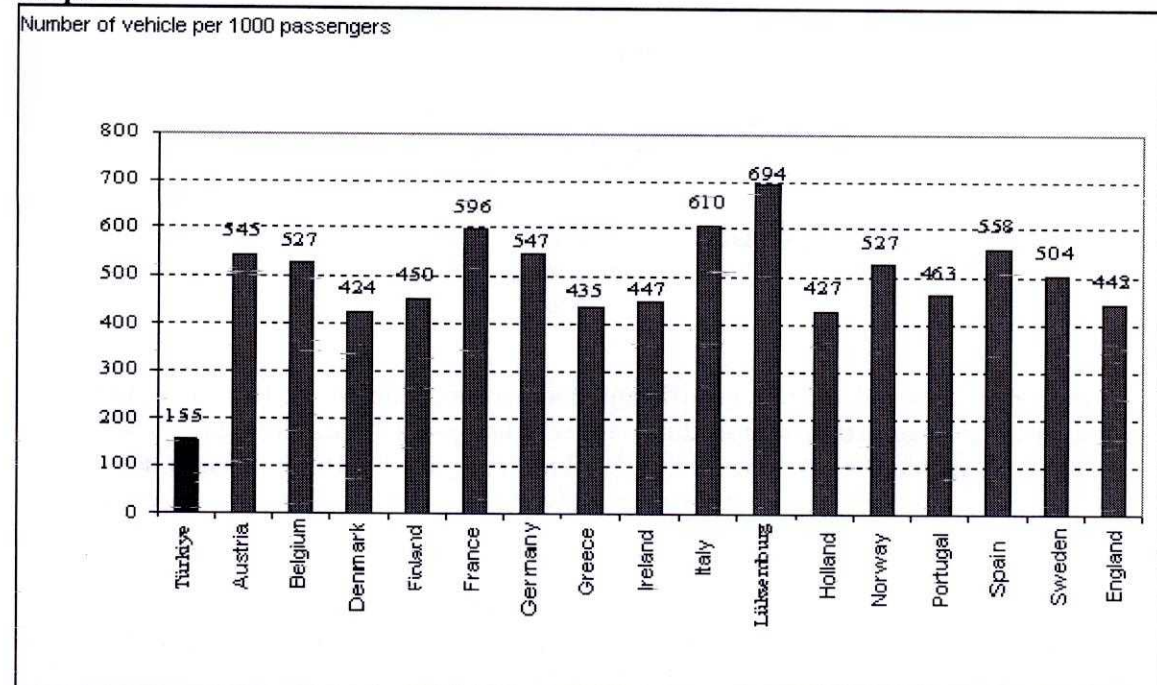
One of the more pressing problems with increasing road transportation is the high ratio (approximately 35%) of heavy vehicles in the traffic composition. Heavy loaded trucks, which make up 22% of total trucks and excessive axle load (20% of total heavy vehicles), cause deterioration of the roads before normal expiration of its economical span and, thus, repair demands are heavy. Studies on the establishment of weight control stations as a possible management measure are continuing.

In the light of these and other considerations including environment and road safety, it is obvious that as much as possible of international and long distance freight transport should be shifted from highways to railways and maritime transport. Provision of a balance among transportation modes would lead to a decrease in transport tariffs and, thus, impact positively on transportation costs. Furthermore, the level of road deterioration would automatically will fall and the level of utility for other road users will increase.



The number of cars per 1000 people in Turkey is 80. Given that this is well below saturation level, it is likely to increase over the next 10 years. Hence, the improvement in the geometric and physical standards of road network is needed both to meet future demand and to enhance road safety.

**Graph 8:**



Source: "World Road Statistics, 2005", IRF (International Road Federation), (Data Year:1999-2003) Data of Turkey was brought up to 2005.

On the issue of road safety, latest figures indicate a total of 11.2 million motor vehicles on the roads of which 5.8 million are automobiles. A total of 621.183 traffic accidents occurred on the roads in 2005. A total of 4.525 people died and 154.094 were injured. It is estimated that the total economic cost alone due to traffic accidents on the roads is nearly 2 % of GDP.

To illustrate the severity of the situation, a comparison of Turkish statistics with two EU member countries. While the number of death per 100.000 vehicles in Turkey is 43, it is 21 in Spain and 12 in Germany, although the number of the vehicles is 1 per 6.95 people in Turkey, 1 per 1.7 in Spain and 1.53 in Germany. These differences clearly point to traffic safety being deficient in Turkey compared with EU countries. The table gives a detailed comparison among various countries.



Table 15: Traffic data comparison of various countries (2003)

Country	Accident Number (Injured)	Death Number	Vehicle Number (x1000)	Population (x1000)	Death per 100.000 vehicles
Austria	43 426	931	5 114	8 118	18
Belgium*	47 619	1 353	5 980	10 356	23
Czech Republic	27 320	1 447	4 490	10 203	32
France	90 220	6 058	36 198	59 625	17
Finland	6 907	379	2 657	5 206	14
Germany	354 534	6 613	53 656	82 537	12
Holland	31 635	1 028	8 387	16 192	12
Spain	99 987	5 399	25 170	42 196	21
Sweden	18 365	529	4 998	8 941	11
Switzerland	23 840	546	4 888	7 318	11
Iceland	787	23	207	290	11
Japan	947 993	8 877	80 970	127 619	11
Korea	240 832	7 213	17 519	47 925	41
Hungary *	19 686	1 326	3 141	10 142	42
New Zealand	10 615	461	2 801	4 009	16
Norway	7 921	280	2 752	4 577	10
Slovakia *	7 866	610	1 834	5 379	33
Slovenia	11 910	242	1 065	1 996	23
Turkey	73 600	4 428	10 236	71 152	43

Source: International Road Traffic And Accident Data Base (September 2005)

(\*): 2002 year data.

Data on Turkey is based on 2004.

Due to its strategic location, all land connections between Europe and Asia passes through Turkey. The international routes such as E-roads (United Nations European Economic Commission Main Arterials Europe Agreement), TEM (North-South European Motorways) TRACECA (Transportation Corridors European – Caucasus - Asia), Pan- European Corridors and TETEK (Turkey Transit Highway) are parts of its net.

The TINA-Turkey Study also identified the Core Network according to the TEN-T guidelines, indicating the connection with TEN-T network. In this context, the main characteristics of **road network** are:

The trans-European road network shall comprise motorways and high-quality roads, whether existing, new or to be adapted which:

- play an important role in long-distance traffic, or
- bypass the main urban centers on the routes identified by the network, or
- provide interconnection with other modes of transport, or
- link landlocked and peripheral regions to central regions of the Community;



The network shall guarantee users a high, uniform and continuous level of services, comfort and safety.

**Table 16: Alignment of Core Road Network**

Alignment	Length
<b>Continuation in Turkey of the TEN-T in Greece and Bulgaria</b>	
Border to Bulgaria - Kapıkule - Edirne - İstanbul	261.00 km
Border to Greece - Ipsala - Keşan - Tekirdağ (Including Tekirdağ Peripheral Road) - Kınalı Junc.	182.00 km
<b>TRACECA, AGR, BSEC</b>	
İstanbul - Bolu - Gerede - Merzifon - Refahiye - Erzincan - Erzurum - Doğubayazıt - Gürbulak (border to Iran)	1,493.00 km
Horasan - Kars	121.00 km
Doğubayazıt - Iğdır - Dilucu (border to Azerbaijan)	134.00 km
(Merzifon - Amasya) Junction - Samsun (including Peripheral Road) - Trabzon - Rize - Hopa - Sarp (border to Georgia)	642.00 km
Gerede - Ankara - Pozantı - Gaziantep - Şanlıurfa - Silopi - Habur (border to Iraq)	1,312.00 km
Ankara K1 - Esenboğa K12 - Samsun 2 K91 - Konya Yolu 2 K71	71.00 km
İskenderun K6 - Belen K71 - Belen - Kırkhan - Reyhanlı - Cilvegözü (border to Syria)	91.00 km
Çeşmeli D400 K9 - Mersin K6 - Tarsus Doğu 1 K2	67.00 km
Samsun 2 K91 - Kırıkkale - Kırşehir - Kayseri (including Kayseri North Peripheral Road) - Sivas - Refahiye Junction	700.00 km
Trabzon - Gümüşhane - Aşkale - Erzurum - Bingöl - Diyarbakır - Mardin - Kızıltepe	720.00 km
Şanlıurfa - Diyarbakır - Silvan - Bitlis - Van - Kapıköy (border to Iran)	658.00 km
İzmit Batı 1 K9 - İzmit batı 2 K191 - Gölçük - Bursa (including Bursa Peripheral Road) - Balıkesir - Akhisar - Manisa - İzmir	504.00 km
(Bursa - Mustafa Kemal Paşa) Junc. - (Mustafa Kemal Paşa - Susurluk) Junc.	39.00 km
Ankara - Eskişehir - Bursa - Bandırma - Lapseki - Çanakkale	625.00 km
Keşan - Gelibolu - Çanakkale - İzmir - Aydın - Denizli - Antalya	899.00 km
Sivrihisar - Afyonkarahisar - Uşak - Salihli - İzmir (Üniversite K10)	438.00 km
<b>Hinterland connections (to seaports and airports) and Strategic Connections (accessibility)</b>	
Aydın - Yatağan - Bodrum	152.00 km
Bilecik - Bozüyük - Kütahya - Afyonkarahisar - Kızılören - Keçiborlu - Burdur - Antalya	559.00 km
(Salihli - Kula) Junc. - (Buharkent - Denizli) Junc.	107.00 km
Afyonkarahisar - Akşehir - Konya - Karapınar - Ereğli - (Ulukışla - Aksaray) Junc.	400.00 km
Antalya - Manavgat - Alanya	122.00 km
Konya - Seydişehir - (Manavgat - Alanya) Junc.	231.00 km
Denizli - Dinar	107.00 km
Pozantı - Niğde - Kayseri - Himmetdede - Boğazlıyan - Yozgat - Çorum - Merzifon	530.00 km
Kırıkkale - Sungurlu - Çorum	167.00 km
Narlı 1 K11 - Pazarcık - Malatya - Elazığ - Diyarbakır	453.00 km
Yeniçağa K21 - Yeniçağa - Mengen - Devrek - Çaycuma - Hisarönü (Filyos)	114.00 km
İskenderun junc. Batı K4 - İskenderun port	67.00 km
İskenderun Doğu K5 - Gözenler K2	12.00 km
<b>TOTAL Core Network</b>	<b>11,978.00 km</b>
<b>Envisaged Core Network Extensions (depending on ongoing and planned feasibility studies)</b>	
Kayseri - Malatya	350.00 km
<b>TOTAL Core Network Extensions</b>	<b>350.00 km</b>

In addition to the Core Network, the TINA-Turkey Study conducted traffic bottleneck analyses. As regards the capacity of the road infrastructure, the growth of the road

traffic flows will have a strong impact on the national roads, being more than 1,500 km of the road network in 2002 with a traffic load of more than 10,000 trucks per day. This heavy load will have a strong impact on the capacity and the occurrence of bottlenecks, as well as on the structure of the road network itself. In this context, **road** bottlenecks will continue to occur because existing dual carriageways and several 2-lane roads will need widening and upgrading as their capacity continues to be exceeded.

#### **2.1.4. Air Transport**

In the air transport sector, the Directorate General of Civil Aviation (DGCA) and Directorate General of State Airports Administration (DHM•) are the main institutional agencies. The operation of airports and air traffic control services are performed by DHM• and the DGCA is responsible for policy making and market regulation in air transport sector.

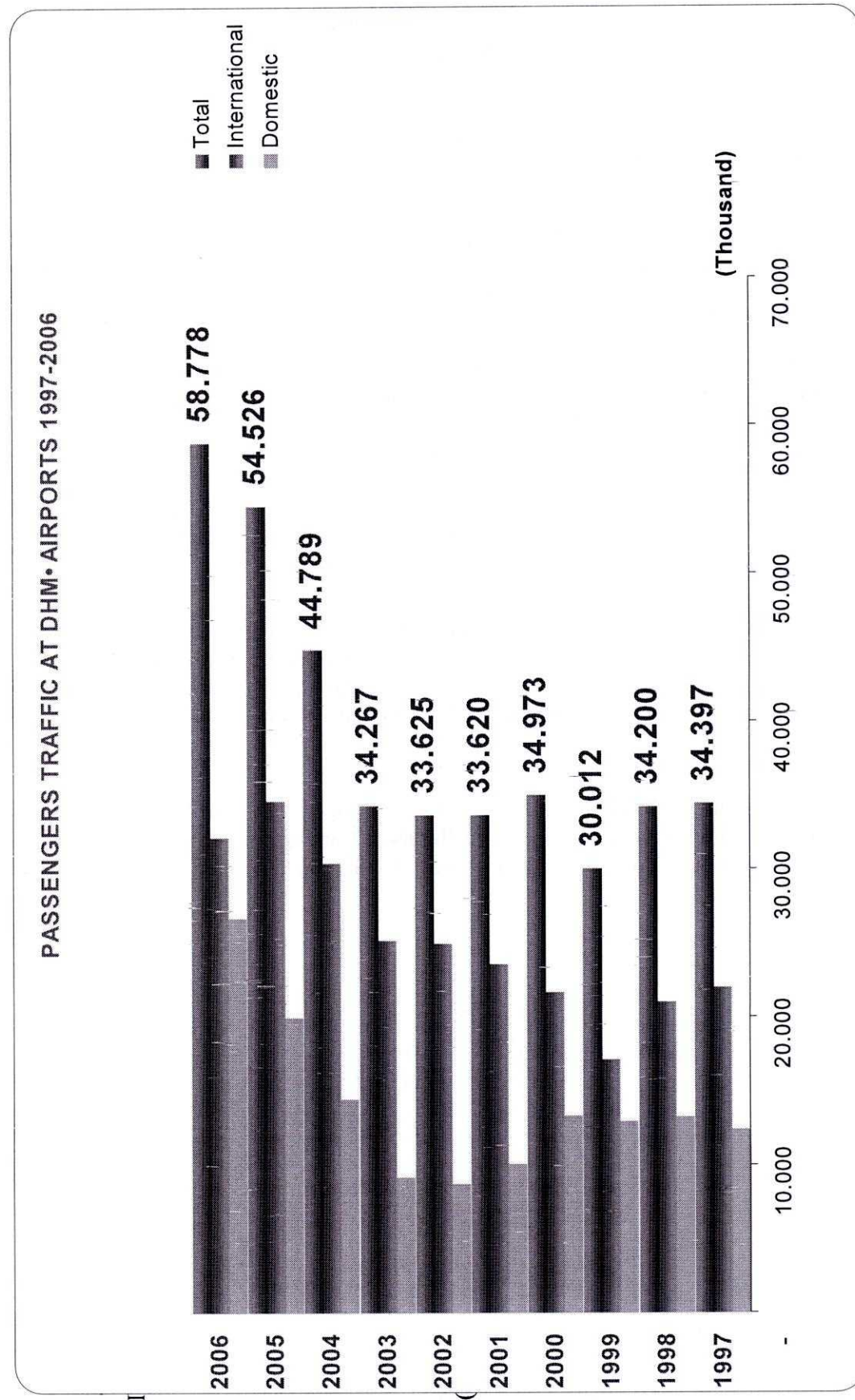
The air transport sector is developing rapidly mainly due to the Regional Aviation Policy of the MoT, which aims at increasing the share of air transport both in national and international transport. Driver development initiatives include successful implementation of the build-operate-transfer system especially in airport and terminal construction has ensured needed infrastructure improvement and due implementation of related International Civil Aviation Organisation (ICAO) standards and EU rules and procedures. These have led directly to heightening the competitiveness of the sector, and continue to do so.

As regarding airport and air traffic management capacity, there are 125 flight routes (air corridors) in Turkish airspace for landing, take off and transit aircraft. According to international flight safety standards, 53.793 km. controlled flight route network has been established. Also, there are 39 entry and exit points for transit flights.

DHMI operates 37 airports. 12 of these are open both for scheduled and non-scheduled international and domestic flights, 12 are airports open for non-scheduled international and domestic flights, and 13 airports are open solely for domestic flights.



Graph 9:



Map 7:



The requirements of airports are determined according to the ICAO rules which automatically apply to all investment planning. Requisite equipment and spare parts are readily available either from Turkey or from abroad.

Air traffic in all airports operated by DHM• in 2006 has totalled 594.749, an increase of 11.4%. Overflight aircraft traffic was 224.774, an increase of 17.6% and passenger traffic grew to 58.778.131, an increase of 7.8% compared with the previous year.

Passenger traffic figures denote an important increase especially on domestic lines relative to previous years. This resulted from regional and low cost air transport, initiated by policy of the Ministry of Transport under which new airlines entered the market and real competition was provided in the sector.

The Regional Aviation Policy (with the motto that "Every citizen will board a plane at least once in their lives") was introduced in 2003 in order to encourage widespread aviation services. Increase in flights numbers and increases in the number of flight points and aircraft resulted significant traffic demand. Competition resulting from the enlargement of the sector and along with accompanying decreases in fares and shortened travel times has been a primary factor. The level of demand has been such that formerly inactive airports have had to be made operable.



By the end of 2006, the number of air carriers increased by 53 % to 20 compared with the year 2002. Along with this, the number of large aircraft used for passenger transport has increased by 72%, from 150 in 2002 to 258 by end 2006. The total number of aircraft on the Turkish registry was 816 as of October 2006.

**Table 17: Last 10 Years Aircraft Passenger and Freight Traffic**

OPERATIONAL FACILITIES	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Aircraft Traffic (Thousand)	348	372	404	415	389	391	374	371	368	441	534
Domestic	169	176	197	218	213	201	168	155	154	193	257
International	179	196	207	197	176	190	206	216	214	248	277
OVERFLIGHT	123	124	125	131	149	152	149	156	154	191	206
Passenger Traffic (Thousand))	27.767	30.781	34.397	34.200	30.012	34.973	33.620	33.625	34.267	44.789	54.526
Domestic	10.347	10.863	12.414	13.239	12.932	13.339	10.057	8.698	9.125	14.428	19.943
Incoming	5.145	5.425	6.189	6.617	6.477	6.664	5.150	4.418	4.622	7.286	10.078
Outgoing	5.202	5.438	6.225	6.622	6.455	6.675	4.907	4.280	4.503	7.142	9.865
International	17.420	19.918	21.983	20.961	17.080	21.634	23.563	24.927	25.142	30.361	34.583
Incoming	8.656	9.936	10.896	10.330	8.484	10.655	11.796	12.546	12.661	15.056	17.041
Outgoing	8.764	9.982	11.087	10.631	8.596	10.979	11.767	12.381	12.481	15.305	17.542
Transit Passenger (Thousand)	265	229	301	452	384	1.593	2.293	2.316	2.084	2.108	2.182
CARGO-MAIL-BAGGAGE TRAFFIC (Thousand Tonnes)	577	652	792	726	686	796	764	880	931	1.126	331
Domestic	172	182	212	210	218	226	172	181	189	263	72
Incoming	84	90	105	104	108	117	86	91	95	133	36
Outgoing	88	92	107	106	110	109	86	90	94	130	36
International	405	470	580	516	468	570	592	699	742	863	259
Incoming	179	205	241	235	217	275	260	304	331	400	119
Outgoing	226	265	339	281	251	295	332	395	411	463	140

Turkish civil aviation operators have flights to 38 points within the country and 103 points abroad. By end 2006, the number of passengers carried increased by 239% on domestic lines and by 31% on international lines compared with the year 2002. There were also important developments for cargo capacity. Between the years 2002 and 2006, there was a cargo capacity increase of 105% on the domestic lines and 39% on the international lines. By end 2006, the total capacity of cargo in the domestic and international lines was 1,346,989 tons. The share of Turkish air carriers has increased in international carriage from 18% in 2002 to 56% by end 2005.

Turkey has achieved in the year 2005, a level of total traffic increase which had been predicted for the year 2015 by such international organisations as the International Air Transport Association (IATA) and European Organisation for the Safety of Air Navigation (EUROCONTROL). The development of civil aviation in Turkey is about 30%, above the world average of 5%.

On the current state of the air transport sector, the TINA-Turkey Study also provided important information on the capacity of Turkish airports and their status in the Core Network of Turkey. For integration with TEN-T, airports are categorised in accordance with TEN-T guidelines as follows :

**Table 18: Categorisation of Airports according to the traffic forecast 2020:**

Category A	Category B	Category C
Ankara Esenboğa	Adana	Denizli Çardak
Antalya	Diyabakır	Erzurum
Dalaman	Gaziantep	Kars
İstanbul Atatürk	Kayseri	Konya
İstanbul Sabiha Gökçen	Samsun-Çarşamba	Malatya
İzmir Adnan Menderes	Trabzon	Van Ferit Melen
Milas-Bodrum	Şanlıurfa GAP	

As for **airport** capacity, the main results and conclusions of the TINA-Turkey Study were as follows:

- The available airside capacity of Turkey's main airports does not appear to present a bottleneck up to 2020 with the possible exception of airside capacity at Istanbul's Atatürk Airport. Trabzon Airport might experience capacity problems soon after 2020.
- However, substantial terminal capacity bottlenecks can be expected after 2020 at the following airports:
  - Atatürk Airport
  - Antalya Airport
  - Trabzon
  - Adana
  - Bodrum

In order to upgrade the aviation systems and to increase the capacity of airports, some measures have been taken for the development and modernization of air transport infrastructure by DHMİ. In terms of air traffic control, the SMART (Systematic Modernisation of Air Traffic Management Resources in Turkey) Project, which has been conducted with EUROCONTROL, aims at establishing 'Centralised Area Control Center (ACC)' in Ankara to take the overall responsibility of en-route air traffic control services.

The method of Build -Operate-Transfer has become the main model chosen for financing airport infrastructure investment. In this way, the projects are financed using private sector capital instead of public funds. Antalya Airport 1st International Terminal Building, Atatürk Airport International Terminal and car park, Antalya Airport 2nd International Terminal Building, Dalaman Airport International Terminal, İzmir Adnan Menderes Airport International Terminal and finally Esenboğa Airport Domestic and International Terminal Buildings are some successful cases in which the BOT model was successfully used.



## 2.2 STRATEGIC PRIORITIES

### Overall Objective of Transport OP

As found in the sectoral assessments in Turkey, the imbalance among transport modes causes many disadvantages both in social life and in the economy. Railways have low standards and travelling time by rail is long, whereas air transport still tends to be expensive and airport access being troublesome. For these reasons, road transport is perceived by the public to be the most convenient. Hence, on the main axes (e.g. Ankara-istanbul, Ankara-zmir, Ankara-Sivas), there is high traffic density and low level of traffic safety. The dominance of road in the modal split and accessibility of the road network influences public investment to focus on roads.

Having regard to the shortcomings of the transport sector elaborated in the sectoral assessment, the overall objective of the TOPras stipulated in Strategic Coherence Framework is "to improve the transportation infrastructure considering safety and intermodality on future TEN-T Network, while maintaining an efficient and a balanced transportation system."<sup>23</sup>

In line with the overall objective and taking into account the shortcomings and the needs of the transport sector in Turkey, priorities have been set as follows :

- Improvement of railway infrastructure
- Improvement of port infrastructure
- Technical Assistance

In this context, again in line with the needs of the sector, the major policy of Turkey and the results of TINA Turkey Study with a prioritised project pipeline (and availability of IPA funds), two measures are submitted under two priorities:

1.1 New construction and/or rehabilitation of railway lines on future TEN-T railway network or in connection with existing TEN-T

2.1 New construction of ports on future TEN-T with necessary multimodal hinterland connections

In this way, it would be possible to realise and expedite needed investments in both rail and maritime infrastructure, and also reinforce the impact of the TOP by concentrated selection of measures and projects.

Achievement of these priorities, will directly lead to :

- ensure a sustainable supply chain for the trade exchange between Turkey and Europe by means of the two modes of transport (railway and maritime), both environmentally positive,

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<sup>23</sup> Strategic Coherence Framework, p. 35

- ensure the integration of Turkey as a key element into the multi-modal supply chains of the region – the link between the Near East, Middle East, Caucasian region and Europe
- transform Turkey into a logistics node or hub for the multi-modal supply chains between Asia and Europe as well as Asia and the Black Sea region.

For freight transport, because of missing lines and inefficient railway infrastructure, highways are currently much preferable, although railways are more economic and more environmental friendly. Construction of missing lines will result in a strong and common freight transport system. Construction/improvement of ports as nodal and transit points will also have a considerable effect on decreasing the imbalance among modes and on increasing the economic competitiveness. Intermodal transport will improve significantly with port hinterland connections. The priorities in the TOP will upgrade maritime transport infrastructure, enhance existing port capacities and/or lead to the development of new hubs and large-scale ports in Mediterranean, Aegean and Black Sea regions with their hinterland connections within the context of Motorways of the Sea concept.

For all these reasons, strong railway infrastructure and port capacity are the prerequisites of a modern and developed Turkey and a productive Asia-Europe connection. Integration of the Turkish railway infrastructure with the TEN-T network and main corridors is of crucial importance for increasing Turkey's trade volume with Europe (and vice versa) and for passenger transport in Turkey, which would also benefit Turkey's competitiveness.

For passenger transport, it is expected that when safe, high speed and comfortable travel is ensured with a new railway infrastructure, the percentage of passenger transport increases. For example, on completion of the Ankara-Sivas railway project, travelling time will decrease to 3 hours, while it is 6 hours by road. With this advantage; railways competitiveness prospects increase substantially.

Improvement and implementation of railway connected ports will provide an economic and environmental friendly network for attaining a smooth transport infrastructure system as well as efficient linkages for the Euro-Asian transport network. Via the port-railway connection, container storage capacity will be increased and distribution will be facilitated through inland container terminals and logistics centers. These centers will facilitate goods transport and organise forwarders and carriers, which will lower the tariffs and increase Turkey's competitive status. Moreover, with modern and new technology equipped ports, transport prices will be lower and the volume of traffic will increase. This is one of the weak points in current Turkish transport sector, i.e., not being able to benefit from the economies of scale in maritime transport due to the lack of large-scale ports and dispersal of freight traffic among small scale ports and piers. Increase in traffic volume concomitant with the improvement of infrastructure will stimulate entrepreneurs in the sector to renew their ships and to augment the number and tonnage of the Turkish fleet.

Together with all these factors, establishment of links to TEN-T network, which will result in connecting European markets to Middle East and the Caucasus will also contribute to the competitiveness of Turkey which is, in fact one, of the pillars of 9<sup>th</sup> Development Plan and the main objective of Strategic Coherence Framework.



The coherence of TOP with other major policy documents is assured through the strategic priorities being defined in line with both Community policies and national policies as expressed in the major strategy documents - MIPD, White Paper, CSG and the 9<sup>th</sup> NDP, Transport Master Plan Strategy and SCF (as expounded in a detailed manner in the National Policy Framework on Transport Policy subsection of the section 1.1 National Policy and Socio-Economic Context and in the section 1.2 Community Strategic Framework). The strategic priorities of TOP which are also stipulated in the Strategic Coherence Framework, are:

- Rehabilitation and/or new construction of future TEN-T railway network and improvement of ports as nodal and transit points in TEN-T network
- TA in respect of these priorities

It is appreciated that the coherence of the strategic priorities of TOP must be demonstrated with the 9<sup>th</sup> Development Plan as the major national policy document for the period 2007-2013 and also with the MIPD and its national counterpart SCF that are the main reference documents for the IPA funds in the current programming period.

In that context, Turkey's strategic goal for the period 2007-2013 as stated in **9<sup>th</sup> Development Plan** is to apply policies, to establish an efficient, safe and balanced transport infrastructure that will increase the competitive capacity of the country. To this end, transferring freight transport to railways, improving the capacity of ports to serve as logistic centers, increasing safety especially in road transport and integration with TEN-T network are the desired actions. The restructuring of the rail sector will contribute to one of the strategic goals of plan: increasing the share of railways in freight transport. Regarding maritime transport, the 9<sup>th</sup> Development Plan makes reference to improvement of port facilities to function as logistic centers appropriate for combined transport supporting Motorways of Sea (MoS), increasing the port capacity in the Aegean, Marmara and Mediterranean ports. The TOP represents a vital and realistic instrument in contributing to the enhancement of the competitive status of the country by ensuring a more healthy balance among the transportation modes through its priority and measures.

The strategic priorities and measures of the TOP Transport are in perfect alignment with the priorities of the MIPD which articulated its priorities as links with the TEN-T, railway infrastructure; port facilities; multi-modal transport; trans-border and national interconnection and interoperability projects, deriving from the TINA study, and intelligent transport systems (ITS). Designed consistently with the stipulations of MIPD, the strategic priorities of the Strategic Coherence Framework (SCF) is the major reference point for the TOP to determine its own priorities.

The overall objective of SCF is *"To contribute to the economic and social development of Turkey both at national and regional level by diminishing regional disparities and improving the human resources"*. The overall objective of the Regional Development component, in which TOP is sited, is *"to boost Regional Development of Turkey by reducing regional disparities, improving competitiveness and promoting environmental actions and transportation infrastructure"*. More specifically, the main objective of the transportation sector in Turkey is to improve transport infrastructure considering safety and intermodality on future TEN-T Network of Turkey. The priorities of the transport sector in SCF, designed for 7

years, to achieve the above objective are : the rehabilitation and/or new construction of future TEN-T railway network and improvement of ports as nodal and transit points in TEN-T network, construction and improvement of highway network in conformity with TEN-T and Technical Assistance.

As regards the selected projects to give effect to these objectives and their financing within IPA framework, major infrastructure investments in transport sector invariably require substantial funding. In addition to the provision of IPA regulation necessitating at least 25% co-financing, the beneficiary country must also invest sizeable sums. It should be noted that the TOP is open to loan funding from the EIB or other IFIs. In fact, Turkey is currently realising transport infrastructure projects that are part financed by EIB, such as the Istanbul Strait Tube Tunnel Project (MARMARAY) and the Ankara-Istanbul High Speed Train project. Nevertheless, the amount to be delivered by National Budget and the amount of loan to be obtained by IFIs are not yet decided.

The following tables attempt to illustrate the conformity of the TOP with, MIPD, 9<sup>th</sup> Development Plan (9<sup>th</sup> DP) and the SCF priorities :



MIPD	9 <sup>th</sup> DP	SCF	TRANSPORT OP
<p><u>Aim :</u></p> <p>To assist Turkey to address the its economic development needs - increasing competitiveness; convergence with the EU; reduction of regional disparities; increasing employment; improving social inclusion; and restructuring of agriculture</p>	<p><u>Vision:</u></p> <p>Turkey, which grows in stability, shares its income equitably, has global competitiveness, has transformed into information society and completed its harmonization with EU membership</p>	<p><u>Overall objective:</u></p> <p>To contribute both to the Turkey's approximation to the EU, and to the economic and social development of Turkey by reducing regional disparities and improving human resources.</p>	<p><u>Overall objective:</u></p> <p>To improve the transportation infrastructure considering safety and intermodality on future TEN-T Network, while maintaining an efficient and a balanced transportation system.</p>
<p><u>Major areas of intervention:</u></p> <p>*On the main axes to links with EU. They will be the basis for the development of the TEN-T in Turkey.</p> <p>*Railway infrastructure will be a focus as its share in the transport system of Turkey is currently very weak.</p> <p>*Motorways of the Sea will be considered (port facilities where there is a link to economic</p>	<p><u>Axes for economic and social development:</u></p> <p>*Increasing competitiveness -improvement of energy and transport infrastructure</p> <p>*Increasing employment</p> <p>*Strengthening human capital and social solidarity</p> <p>*Ensuring regional</p>	<p><u>Specific objective for transport:</u></p> <p>To improve transport infrastructure considering safety and intermodality on future TEN-T Network of Turkey</p> <p><u>Priorities for Transport:</u></p> <p><i>Priority 1:</i> Rehabilitation and/or new construction of future TEN-T railway network and improvement/ construction of ports as nodal and transit points in the TEN-T network</p>	<p><u>Priorities:</u></p> <p><i>Priority 1:</i> Improvement of railway infrastructure</p> <p><i>Priority 2:</i> Improvement of port infrastructure</p> <p><i>Priority 3:</i> Technical Assistance</p> <p><u>Measures:</u></p> <p>1.1 New construction and/or rehabilitation of railway lines on future TEN-T railway network or in connection with existing TEN-T</p> <p>2.1 New construction of ports on future TEN-T with necessary multimodal hinterland connections</p> <p>3.1 Support to OP implementation including</p>



development). *Support to relevant key studies and necessary related services related to the above projects	development *Increasing quality and efficiency of public services	Priority 2: Construction and improvement of highway network in conformity with TEN-T	management, programming, monitoring and evaluation
<u>Main priorities</u> Rail connection in the West with EU Member States multi-modal transport Trans border and national interconnection and interoperability projects, deriving from the TINA study Intelligent transport systems (ITS), where needed, for the above infrastructure Support to relevant key studies and necessary related services related to the above projects.	<u>Objective for transport:</u> Establishment of rapid and safe transport infrastructure that will increase the competitive capacity of the country Four thematic subjects under transport: Establishment of an Efficient Transport System Improved Safety and Security Integration with Europe and Neighbouring Economies Environmental and Financial Sustainability	Priority 3: Technical Assistance	3.2 Support for information and publicity campaigns 3.3 Support for enhancing the project pipeline



### SWOT Analysis

Strength	Weakness
<ul style="list-style-type: none"> <li>• Turkey's strategic position regarding the transit transport between Europe and Asia, as well as Europe and Middle East</li> <li>• The geographical position of existing and potential Turkish ports as convenient nodal and hub points in TEN-T network.</li> <li>• Political support to railways sector.</li> <li>• Existence of firms with international experience in the construction of transportation infrastructures and skilled human resource in these firms.</li> <li>• Rail transport without transfer after the completion of Marmaray project</li> <li>• Eligibility of Turkey's geographical structure for efficient long-distance rail transport</li> <li>• The existence of well-organized firms with high capacity fleet in international road transport</li> <li>• Commencing high-speed train passenger transport</li> <li>• Successful implementation of Build-Operate-Transfer model especially in airport and terminal construction</li> <li>• List of priority projects to be realised as recommended in TINA Study.</li> </ul>	<ul style="list-style-type: none"> <li>• The imbalance among different modes in favour of road transport</li> <li>• Underdeveloped north-south transport corridors.</li> <li>• Insufficient public finance resources</li> <li>• Insufficient experience in public administration in EU funded projects</li> <li>• Insufficient number of mature projects ready to implement</li> <li>• Mostly old single-track rail network and lack of high-speed railways between large cities.</li> <li>• Insufficient hinterland access, particularly in terms of railways.</li> <li>• Inadequate connection between national networks and regional growth poles</li> <li>• Insufficient large-scale ports to be transit points to serve in TEN-T network</li> <li>• Conventional type port infrastructure and lack of specialised container port system</li> <li>• Inadequate infrastructure in some ports and their hinterland</li> <li>• Low road and railway density</li> <li>• Worn-out highway pavement due to high share on roads of freight and passenger transportation.</li> <li>• Insufficient superstructure and geometrical standards on highways</li> </ul>
Opportunity	Threat
<ul style="list-style-type: none"> <li>• The potential for shifting the passenger and freight transport between Turkey, Central Asian Turkic republics and Middle East to railway transport and multimodal port-rail hinterland connections</li> <li>• The strategic position of Turkey close to growing markets in Middle East and Caucasus</li> <li>• The increasing demand for transport services in Europe, Asia and the Middle East</li> <li>• Increasing potential of Turkish ports to be important transit points by connection of Turkish transport network to TEN-T</li> <li>• Increase in the amount of freight due to the implementation of Ro-La transport and establishment of logistic villages</li> <li>• Proven capacity to raise the share of aviation in comparison with other transport modes through Regional Aviation Policy</li> </ul>	<ul style="list-style-type: none"> <li>• The future implementation of North-South transport corridor by Russia-Iran-India which may threaten the role of Turkey between Europe and Asia</li> <li>• Regional conflicts which may interrupt transport services with the neighbouring countries</li> <li>• High dependence on imported fuel resources for transport</li> <li>• Competition with other ports in the Mediterranean</li> <li>• Narrow implementation period for EU-funded actions</li> </ul>

### 3. PROGRAMMING STRATEGY

The programming strategy of the Operational Programme is based on the outcomes of the TINA-Turkey study. The priorities, measures and projects are derived from the TINA study allied with the analyses of each sector, the provisions of SCF and MIPD.

This assessment leads to a sectoral concentration on rail, ports and intermodality for priorities, measures and project identification in this TOP.

#### General criteria:

After gathering, as a first step, all potentially eligible projects on the proposed corridors and transport modes, projects that could not satisfy the following general screening criteria have been eliminated from further consideration (in order of priority):

- The project should bear a very high relevance to the TINA Network;
- The financial plan should be realistic, including the question of secondary investment cost (maintenance) coverage, and show in particular the division between national and outside financing;
- The project should show sufficient maturity, taking due account of administrative/legal barriers concerning project implementation (land acquisition problems, right of way etc);
- The project should be of sufficient size and significance;
- The project should in no way duplicate third party efforts, but should match other projects of a complementary nature in order to achieve synergies;
- There should be a visible commitment by the national government or regional bodies (to implement the project; projects therefore should be given preference according to their inclusion in related and previously agreed priority project lists (
- The project should provide modal balance and contribute to environmental protection
- The basic technical features of the project should be more cost-efficient (demand oriented) in reaching the strategic objectives than alternative technical options, and should be appropriate and correspond to international standards.

Generally all of the priority projects which have been pre-selected and included in the indicative project list for 2007-2009 are at a certain stage of project preparation, requiring technical, economic and, if necessary, environmental studies.

Therefore, in a second appraisal stage, proposed priority projects will be checked against the following screening parameters:

#### Specific Criteria:

Proposed projects will be checked to ensure the completeness of the following standard preparatory activities, which should be carried out before submitting projects for approval to the European Commission:



- Pre-feasibility study; including preliminary financial and economic analysis and calculation of Financial Internal Rate of Return (FIRR) and Economic Internal Rate of Return (EIRR); eventual preliminary drawings;
- Availability of co-financing, including possible involvement of IFIs;
- Detailed feasibility study, including financial and economic analyses (FIRR & EIRR) which take into account societal (external) effects; cost benefit analyses, affordability analyses, preliminary and detailed technical designs; operation plans etc
- Environmental impact assessment (EIA), if needed according to European regulations;
- Reports on consultations with interested/affected parties;
- Approvals and permits (for example construction permits, environmental permits, rights of land etc)
- Satisfactory completion of all parts of the IPA application form (EC 'major projects' template, in the case of projects over €10m)

The objective of the second phase screening process is to identify the most feasible projects and those projects having the most immediate and significant impact in terms of:

- readiness for implementation (maturity)
- improving transport efficiency;
- guaranteeing financial and environmental sustainability;
- improving transport safety and security.

As far as possible the impact will be assessed in monetary terms, and subjected to a sensitivity analysis. Major Projects will be prepared in accordance with articles 150 and 157 of the IPA Implementing Regulation. Only projects with a sufficiently high rate of return (FIRR; EIRR) will be considered for implementation.

Finally, two legal and financial considerations will be taken into account in assessing the applications: first, an understanding and undertaking that the infrastructure will remain public property, and second, the availability of budgetary resources to ensure Turkish co-financing of the projects, and their sustainability (operation and maintenance) beyond the funding period.

The TOP priority axes and measures proposed below, through which the TOP's strategic objective is to be implemented, are considered the most beneficial for railway and ports development on the one hand, and for society and the environment on the other, while meeting the EU transport *acquis* obligations..

#### Revenue generating projects

Revenue generating projects as defined in Article 150 of the IPA Implementing Regulation are operation(s) proposed for pre-accession assistance involving an investment in infrastructure, the use of which is subject to charges borne directly by users and which generates revenues, or any operation involving the sale or rent of land or buildings.

### 3.1 PRIORITY AXES AND MEASURES

#### Priority 1: Improvement of railway infrastructure

##### Aim

To increase the competitiveness of the country by modernising the railway infrastructure to meet the increasing demand in both passenger and freight transport while ensuring integration with TEN-T network.

##### Specific Objectives

- To promote international and transit movement of passenger and freight in Turkey by providing effective connections with the EU through the modernization and development of the relevant TEN-T priority axis.
- To reduce the imbalance among modes of transport based on the respective competitive advantage of each, by encouraging the development of rail transport.
- To complete missing links of Turkish rail transport network connecting to TEN-T
- To ensure safe, efficient, well functioning, environmentally sound and user friendly transport on the railway network.
- To undertake infrastructure projects including, in particular, interconnection, interoperability and intermodality of national networks as well as with the TEN-T which will rehabilitate of the existing lines and complete missing links of Turkish railway network connecting to TEN-T.
- To increase the passenger demand for rail transport by providing high standard infrastructure ensuring speed and comfort.
- To increase the freight demand to railways by ensuring strategic connection with Europe via ports.

##### Rationale

As mentioned in the sectoral assessment of the railway sector, lack of railway infrastructure to be built in real time is one of the weak points of the current transport system leading to the ascendancy of road transport. Turkey's current ratio of development and dynamism requires additional capacity within a high quality transport system. The increasing demand and the imbalance among modes will be addressed by raising the share of maritime and railways in freight and passenger through improvement of infrastructure. Decrease in travel time and user cost as well as the increase in the quality of service are key factors for augmenting the share of the railways. Enhancement of infrastructure is one of key elements to attain these results.

The TINA Study estimated that, domestically, passenger demand for railways will increase to 5.6 billion pass-km in 2020 (in the reference scenario, where only the projects that are ongoing and will be completed by 2020 are taken into account) from 5.0 billion pass-km for 2004 (base year for TINA Turkey Study). Domestic freight demand for railway indicates a



further rise from 14.14 million tons per annum for 2004 to 31.50 million tons per annum for 2020 (see Reference Scenario).<sup>24</sup>

In order to increase the competitiveness of rail transport vis-à-vis other modes of transport in meeting this demand, necessary updates of the infrastructure must be effected in a timely manner. Besides the construction of new and high standard railway lines, line capacity will also be augmented with provision of signalisation that ensures the frequency, safety and control of the trains and of electrification providing an increase in traction power and cost effective operations. Thus, this priority, alongside its contribution to decreasing the level of mode imbalance, will also serve the broad aim of increasing Turkey's competitiveness.

The poor quality of transport infrastructure and services is a major obstacle to social cohesion and economic development; i.e. it impedes competitiveness, movement of goods and passengers, business settlements and investments. The upgrading of the transport system is urgent and requires large investment. Funding constraints compel prioritization based on the pre assessments, clear objectives and an integrated action strategy.

Taking into consideration Turkey's need for reducing social and economic development disparities vis-a-vis EU member states, an efficient, flexible and safe transport system represents a necessary precondition to that end.

### Description

This priority provides for the construction of railway infrastructure in line with TEN-T in Turkey and rehabilitation of existing lines in order to strengthen weaknesses in the transportation sector. Actions and activities on construction, analysis, evaluation and achievements would be carried out in accord with the outcomes of TINA Study.

By improving the railway infrastructure, this priority will facilitate the assurance of the sustainable mobility of persons and goods under the best possible social, environmental and safety conditions and integrating all modes of transport, under the framework of TEN-T and contributing positively and significantly to the economic development of Turkey.

Concerning the linkage of the priority with the overall national strategy documents, the global objective of the Strategic Coherence Framework addresses promotion of competitiveness, **development of basic infrastructure** and development and effective use of human resources, with a view to reducing the social and economic development disparity between Turkey and EU member states. Furthermore, the principal objective for the transport sector in the Strategic Coherence Framework focuses on facilitating the safe and efficient movement of persons and goods nationally and within Europe, and contributing positively and significantly to the economic development of Turkey.

### Targeting

This priority is directly targeted to the railway sector and the related investor public institutions.

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<sup>24</sup> TINA Turkey Study, Draft Final Report, pp.28-9

## **Measures**

The number of projects to be financed under TOP must, of necessity, be limited . Measures are, likewise, limited. Thus, regarding the railway sector one measure focusing on new construction of railway line is put forward as follows :

1. New construction and/or rehabilitation of railway lines on future TEN-T railway network or in connection with existing TEN-T:

This measure in the railway priority focuses on the new construction and/or rehabilitation of railway lines that are situated on the future TEN-T railway network or the new construction projects that are connecting Turkey with the existing TEN-T network. It is aimed to integrate Turkey's rail infrastructure with TEN-T and to increase the share of railway transport among other modes by providing standard, high speed railway lines conducive to passenger and freight transport and making rail transport more attractive.

### **Eligible Actions**

- New construction project situated on Core Transport Network of TINA-Turkey Study
- New construction project that will provide connection with existing TEN-T
- Rehabilitation project based on Core Transport Network of TINA-Turkey Study

Assistance under this measure refers to procurement contracts. The activities under this measure are aimed at the improvement of trackside infrastructure; signalling, telecommunications, safety and security equipment. The assistance will include works, equipment supply and services (supervision services, implementation support, consultancy services, tender evaluation, project preparation for previously identified projects, project monitoring and evaluation).

## **Delivery of the Priority**

In delivery of the priority, the following points will be taken into consideration:

- Results of TINA-Turkey Study
- Competitiveness of the country and the social cohesion
- Completion of missing links of Turkish transport network to be connected to TEN-T
- Decreasing the imbalance between modes of transport and ensuring intermodality
- Sustainable preservation of environment
- Allowing optimal use of existing capacities for the purposes of integration with TEN-T,
- Ensuring smooth and safe transport on the determined network,



## Targets and Indicators

Indicators			Baseline	2013 Target	Source of information
	<b>Output</b>	Number of projects	0	1	Data from TURKSTAT and TCDD
		Km of new railway located on Core Network	0	230 km	Data from TURKSTAT and TCDD
	<b>Result</b>	Shift of freight and passenger transport from roads in the given route	0	20%	Data from TURKSTAT TCDD and KGM
		Increase in passenger traffic by rail in the given route (pass-km)	409,107 persons/year <sup>25</sup>	5,565,000 persons/year	Data from TURKSTAT and TCDD
		Increase in freight traffic by rail route (t-km)	2,487,500 ton/year <sup>26</sup>	10,464,000 ton/year	Data from TURKSTAT and TCDD
Data for baselines and 2013 target is taken from the Feasibility Study of Halkalı-Kapıkule Railway Project.					

### Measure 1.1 New construction and/or rehabilitation of railway lines on future TEN-T railway network or in connection with existing TEN-T

#### Specific Objectives

- to increase the present market share of railways while increasing safety level and reducing travel time in railways
- to undertake new construction projects, including interconnection, interoperability and intermodality of national networks as well as with the TEN-T that will complete missing links of Turkish railway network connecting to TEN-T
- to contribute to the increase in the quality of rail transport service to attract more passenger and freight by constructing new lines

#### Rationale

As mentioned, given the imbalance among modes of transport and the low share of railways in the current status of transport system in Turkey, railway infrastructure requires investment to increase its capacity with modern technologies, to increase their ratio in total transportation, and to meet the increase in service demand. Required investment in railways is two-fold : construction of new lines and/or the rehabilitation of existing ones. Due to low level of public investment in railways since 1950s, the density of railways in Turkey is low. Furthermore, although Turkey is situated as a transit country between Europe and Asia, there

<sup>25</sup> Passenger traffic realised in 2004 is used for baseline data

<sup>26</sup> Freight traffic realised in 2004 is used for baseline data

are still gaps in the connections with Europe. The TINA-Turkey Study, stating the Core Transport Network of Turkey, defines the course of solution and, effectively, underwrites the strategic justification of the new investment.

### **Description**

The objective of this measure is to upgrade the railway infrastructure either by new construction or rehabilitation, including signalisation and electrification. The main focus will be on linkages with TEN-T and improvement of future TEN-T to ensure greater integration of infrastructure and interoperability between lines.

These operations aim at developing connections, key links and interconnections, which are needed to eliminate bottlenecks and also filling in missing sections and completing major routes.

Its objective is to increase passenger and freight traffic with a high degree of safety, speed and quality of service, in accord with the cohesion policy's objective of developing network connections to the TEN-T network so as to address effectively territorial cohesion Europe-wide as well as internally in Turkey.

### **Eligible Actions**

- New construction project situated on Core Transport Network of TINA-Turkey Study
- New construction project that will provide connection with existing TEN-T
- Rehabilitation project based on Core Transport Network of TINA-Turkey Study

### **Eligible Actions**

- New construction project situated on Core Transport Network of TINA-Turkey Study
- New construction project that will provide connection with existing TEN-T
- Rehabilitation project based on Core Transport Network of TINA-Turkey Study

Assistance under this measure refers to procurement contracts. The activities under this measure are aimed at the improvement of trackside infrastructure; signalling, telecommunications, safety and security equipment. The assistance will include works, equipment supply and services (supervision services, implementation support, consultancy services, tender evaluation, project preparation for previously identified projects, project monitoring and evaluation).

### **Selection Criteria**

Formal selection criteria of the projects will be determined by reference to the following factors :

- Maturity level of the project
- Location on the Core Transport Network of TINA-Turkey Study
- Providing connection and/or interoperability with TEN-T
- Added-value of the project, e.g., increasing passenger and/or freight transport by rail
- Environmental assessment



## Final Beneficiaries

Public institutions, which are in charge of construction or rehabilitation of railway infrastructure in Turkey, will be the beneficiary :

- Directorate General for Construction of Railways, Ports and Airports
- Directorate General of Turkish State Railways

Since the construction work will be realised by way of tender, engineering or construction firms will also be the integral parts of the OP implementation.

## Monitoring Indicators:

Indicators	Baseline	Target	Source of information
<b>Result</b>			
Number of projects	0	1	TURKSTAT TCDD
Km of new railway located on Core Transport Network	0	230 km	TURKSTAT TCDD
<b>Output</b>			
Shift of freight and passenger transport from roads in the given route	0	20%	TURKSTAT TCDD KGM
Increase in passenger traffic by rail in the given route (pass-km)	409,107 persons/year <sup>27</sup>	5,565,000 persons/year	TURKSTAT TCDD KGM
Increase in freight traffic by rail route (t-km)	2,487,500 ton/year <sup>28</sup>	10,464,000 ton/year	TURKSTAT TCDD KGM

## Priority 2: Improvement of port infrastructure

### Aim

To modernise the port infrastructure in Turkey in order to improve the capacity of ports to meet the increasing demand and decrease the imbalance among modes

### Specific Objectives

- To reduce the imbalance among modes of transport based on the respective competitive advantage of maritime transport.
- To increase the amount of international and transit freight handled in Turkish ports by providing efficient port service.
- To attract the transit freight traffic between Europe and Asia.

<sup>27</sup> Passenger traffic realised in 2004 is used for baseline data

<sup>28</sup> Freight traffic realised in 2004 is used for baseline data

- To realise port projects, which will increase the port capacity and service quality in the given area.

### **Rationale**

Turkey is a developing country and increasing trade volume of Turkey requires additional capacities and a high quality transport system, including large scale ports. Turkey's advantageous geographical position, providing access to important regions such as the Middle East and the Caucasus as well as promoting a high tourism potential, has the need for modern and technology based infrastructure. For the maritime transport, large scale ports, especially with hub-port function instead of small scale ones and piers, will attract more freight and shipping. Thus, this priority, allied with its contribution to decrease the level of imbalance among transport modes, will also serve the broad aim of increasing Turkey's competitiveness.

Ports represent an important element of the TEN-T network, particularly in the context of the EU Motorways of the Sea (MoS) concept. Construction of new ports in future TEN-T network, which is the Core Network of TINA Turkey Study, will contribute to achieving Turkey's aim to integrate with European transport infrastructure.

### **Description**

This priority envisages the improvement of maritime infrastructure with an emphasis on integration with TEN-T. Under this priority new construction of ports that are on the future TEN-T network will be realised.

### **Targeting**

The target of this priority is the maritime sector and related public institutions responsible from port investment.

### **Measures**

One measure is submitted under this priority.

1. Construction of new ports on future TEN-T with necessary multimodal hinterland connections

Turkey, as a developing country, possesses high potential arising from its geographic, geopolitical characteristics and economic and social situation.

Considering the vital repercussions of transportation sector on the development of the economy and also bearing in mind the significance of maritime transport as the most economic and environmentally friendly transport mode in a coastal country with 8,333 km of coast, improvement of maritime transport system is an imperative. Against this background, port infrastructure will be appropriately upgraded to provide necessary port capacities and serve as efficient nodal points within international priority intermodal arteries of national and European concern.



Construction and/or strengthening of hinterland connections for selected ports is an indispensable element in completion of deficient links in the Turkish maritime network for connection with the TEN-T and for assurance of the smooth and safe transportation in an intermodal perspective.

#### **Eligible actions**

- Construction of new ports on future TEN-T with necessary multimodal hinterland connections
- Construction and/or strengthening of hinterland connections for selected ports is an indispensable element in completion of deficient links in the Turkish maritime network for connection with the TEN-T.

Assistance under this measure refers to procurement contracts. The activities under this measure are aimed at the improvement of trackside infrastructure; signalling, telecommunications, safety and security equipment. The assistance will include works, equipment supply and services (supervision services, implementation support, consultancy services, tender evaluation, project preparation for previously identified projects, project monitoring and evaluation).

#### **Delivery of the Priority**

Delivery of the priority will be effected by reference to the following points:

- Results of TINA Study
- Completion of missing links of Turkish transport network to be connected to TEN-T
- Decreasing the imbalance between modes of transport and ensuring intermodality
- Sustainable preservation of environment
- Allowing optimal use of existing capacities for the purposes of integration with TEN-T,
- Ensuring smooth and safe transport on the determined network,

#### **Targets and Indicators**

In setting targets and indicators for this priority, construction of Çandarlı Port, which is situated in Aegean Coast is assumed. In this regard, estimates are taken from the Feasibility Study of the Çandarlı Port Construction Project.

Indicators			Baseline* (2007)	Target* (213)	Source of information
	<b>Output</b>				
		New ports located on Core Transport Network	0	1	DLH UMA
		Kms. of railway constructed between port and railway	0	28	DLH TCDD
		Estimated port capacity for handling (in TEUs)	0	940,000	DLH UMA
		Estimated port capacity for storage (in TEUs)	0	1,3 million	DLH UMA
	<b>Result</b>	Increase in handling capacity in the region (TEU)	890,000	1,84 million	UMA
		Increase in storage capacity in the region (TEU)	650,000	1,75 million	UMA

\* Baseline and target data collected from Feasibility Study of Çandarlı• Project

**Measure 2.1 New construction of ports or strengthening of existing ones with necessary multimodal hinterland connections**

**Specific objectives**

The following specific objectives have been adopted for this measure:

- to provide suitable nodal points for continuous and safe transportation on TEN-T network through Turkey
- to improve intermodality by increasing the capacity of ports and constructing their hinterland connections in compliance with the MoS policy of the EU.
- to provide cohesion of Turkey with the EU by efficient transportation and its impact on the economy.
- to provide further necessary infrastructure for the increasing trade volume of Turkey, thus increasing maritime transportation needs, and thus contribute to the economy.
- to create balance between the transportation modes by increasing the share of maritime transport and aligning with the EU transportation policies
- to allow the optimal use of existing port capacities for the purposes of contribution to the TEN-T,



## **Rationale**

The Mediterranean and Black Sea regions with Turkey centrally located, continue to grow their worldwide container traffic throughput. This presents Turkey with the role of a key junction between east-west and north-south axes for international multimodal network and the development of Euro-Asian transport linkages. The existing maritime infrastructure is not capable of responding adequately to the estimated demand made by these regions. To serve the TEN-T connection, ports will be important gateways. Consequently, it is essential to construct/upgrade port infrastructures to provide necessary capacities and to serve as efficient nodal points within international priority intermodal arteries, which are of national and European concern.

As a result of the investment, large scale port infrastructure with in-built economies of scale will ensure efficient transportation systems. This, in turn, will lower transportation costs to the benefit of to the export and import trade. These ports will serve for transit cargoes, which will further contribute to the economy and advance the cohesion of Turkey with the EU.

## **Description**

This measure entail the upgrading of maritime infrastructure. Integration with TEN-T network is again one of the main benefits of the measure. Construction activities will target priority port infrastructures, hinterland connections, storage capacities and strengthen existing ports and logistic centers.

## **Eligible Actions**

- Construction of new ports on future TEN-T with necessary multimodal hinterland connections
- Construction and/or strengthening of hinterland connections for selected ports is an indispensable element in completion of links in the Turkish maritime network for connection with the TEN-T.

Assistance under this measure refers to procurement contracts. The activities under this measure are aimed at the improvement of trackside infrastructure; signalling, telecommunications, safety and security equipment. The assistance will include works, equipment supply and services (supervision services, implementation support, consultancy services, tender evaluation, project preparation for previously identified projects, project monitoring and evaluation).

## **Selection Criteria**

Formal selection criteria will reflect the following:

- Maturity level of the project
- Location on future TEN-T network
- Added-value of the project, e.g, attracting container traffic in Mediterranean or Black Sea region
- Environmental assessment

## Final Beneficiaries

The public institution, responsible for construction or rehabilitation of maritime infrastructure in Turkey will be the beneficiary:

- Directorate General for Construction of Railways, Ports and Airports

The Undersecretariat of Maritime Affairs which is responsible for policy making in maritime sector and directly deals with ports developments will also play an important role in the implementation of TOP Transport. As construction work will be realised by way of tender, engineering and construction firms will also be the integral parts of OP implementation.

## Monitoring Indicators:

Indicators	Baseline* (2007)	Target* (2013)	Source of information
<b>Output</b>			
New ports located on Core Transport Network	0	1	DLH UMA
Kms. of railway constructed between port and railway	0	28	DLH TCDD
Estimated port capacity for handling (in TEUs)	0	940,000	DLH UMA
Estimated port capacity for storage (in TEUs)	0	1,3 million	DLH UMA
<b>Result</b>			
Increase in handling capacity in the region (in TEUs)	890,000	1,84 million	UMA
Increase in storage capacity in the region (in TEUs)	650,000	1,75 million	UMA

\*Baseline and target data is collected from Feasibility Study of Çandarlı Project

## 3.2 TECHNICAL ASSISTANCE

### Aim

A primary aim of the Technical Assistance priority is to assist the Ministry of Transport (MoT) to overcome its lack of experience in managing EU funds and to develop the necessary administrative capacity to ensure successful OP completion.

### Specific Objectives

- To support the Operating Structure in the implementation of the TOP
- To strengthen the administrative capacity of the Operating Structure for the TOP responsible for the activities mentioned in Article 28 of Commission Regulation



2499/2007 (excluding activities relating to tendering, contracting and payments in the transition period)

- To increase awareness of IPA among the public and private stakeholders through training, information and visibility activities
- To deliver training on IPA and Structural Funds regulations, training of staff on project management, IPA implementation rules, evaluations, expert reports, statistics and studies; improvements in evaluation methods and the exchange of information on practices in this field.
- To ensure the proper visibility of projects financed under the TOP measures to disseminate information, networking, raise awareness, promote cooperation and exchange experiences
- To enhance the project pipeline for the 2010-2013 period in order to ensure the absorption capacity of transport sector
- To assist Operational Programme's revision
- To ensure the institutional sustainability of the TOP by building human resources capacity through training and the practical absorption of expertise.
- The installation, operation and interconnection of computerised systems for management, monitoring, inspection and evaluation.

### **Rationale**

2007-2009 period will be the first time for the Operating Structure for the TOP to manage EU pre-accession funds. The experience of MoT and other stakeholders in the previous period related only to Twinning projects that centred on legislative alignment and TA projects, substantially lower than the budget for the Transport OP. With the IPA, for the first time, Turkish institutions will realise major transport infrastructure projects with EU pre-accession funds and in accord with EU stipulations. The MoT and the other related public institutions have extensive experience in implementing major infrastructure projects in all transport sectors involving national budget funds or European international loan financing institutions.

In the case of the TOP, however, key elements such as programming, implementation, monitoring and evaluation of projects and funds to EU standards will be innovative. Hence, the need for consultancy and training to ensure full compliance with these needs.

It is also appreciated that, alongside training and related activities, the information and publicity requirements of the EU in the promotion of the OP and the tender procedures will be essential for ensuring the transparency of the process.

Enhancement of the project pipeline in the transport sector resulting from the project prioritisation of the TINA-Turkey Study and related activities is important for ensuring the productive absorption of IPA funds, especially in the period of 2010-2013. In order to ensure maturity of projects a project has been initiated by MoT and SPO to be financed under 2006 Support to European Integration Activities (SEIA) funds. This envisages a two-step approach. In the first step, for which the tendering process is about to be completed at present, the Feasibility and Environmental Impact Assessment (EIA) Studies of 20 railway and port projects (prioritised in TINA-Turkey Study) will be revised with aim of identifying the gaps of the preparatory studies relative to the standards of IPA funding. Following the gap assessments, gap plugging for the preparatory studies of the projects under the TOP will be realised. In this way, the projects of the TOP will be mature and ready to be implemented

within IPA framework. In this context, a TA priority of the TOP will be the preparation of projects for the next implementation period and any other preparatory study for TOP projects.

### **Description**

The TA priority will focus on the supporting activities to Ministry of Transport as the Managing Authority and all other related institutions involved in OP implementation process. Through TA activities, institutions involved in OP implementation, will become more efficient in the management, implementation, monitoring and evaluation of the TOP. The information and publicity requirements of EU will also be reinforced by this TA priority. TA priority will also assist the Operating Structure in technical matters such as revision and upgrading of the projects.

### **Targeting**

This priority is targeted at supporting public and private institutions with responsibility for the OP implementation process. Resources would be utilized mostly in training and consultancy activities as well as OP promotion activities and other related information campaigns and the studies for project pipeline enhancement. .

### **Measures**

Measures envisaged under the Technical Assistance priority are as follows:

1. Support to OP implementation including management, programming, monitoring and evaluation

Activities for enhancing the administrative capacity of the Ministry of Transport including necessary training for managing, programming, implementing, monitoring, controlling, evaluating and auditing activities, including assistance to the Sectoral Monitoring Committee and revision of existing Operational Programmes.

2. Support for information and publicity activities

Publicity as required by the EU, such as the widespread dissemination of the TOP via web and/or print and other media platforms as well as seminars and conferences to increase the awareness of the TOP.

3. Support for enhancing the project pipeline

Studies for enhancing the project pipeline such as the financial and technical feasibility as well as the assessment of the environmental impact would also be proposed under the TA priority.

### **Delivery**

As regards delivery of the TA priority, it should be stated that any overlap between TA priority and projects to be financed under Component I will be avoided. Furthermore, as mentioned, the focus will center on support activities for the responsible institutions in every aspect of OP implementation.



#### Deliverables

- training courses and seminars
- study visits/internships
- sectoral monitoring committees
- publicity campaigns
- feasibility studies
- assessment studies on environment

#### Targets and indicators

Indicators	Baseline	Target	Source of information
<b>Outputs</b>			
Number of training to be organised	0	10	Training documents and certificates
Number of seminars to be organised	0	10	Seminar documents and certificates
Number of staff to receive training	0	100	Certificates of trainings
Number Study Visits/ Internships realised	0	4	Regular monitoring reports
Number of Sectoral Monitoring Committee meetings to be financed	0	10	Regular monitoring reports
Establishment of web-site for Transport OP			MoT official web-site
Number of announcements to be delivered on web-site of MoT	0	20	Print-outs of the web announcements
Number of feasibility studies to be carried out	0	2	Feasibility Study
Number of EIA studies to be carried out	0	2	EIA
<b>Results</b>			
Awareness on OP increased among the staff implementing the OP			measured by questionnaires

### 3.3 HORIZONTAL ISSUES

According to the provisions of Multi Annual Indicative Planning Document (MIPD), integration of four cross-cutting themes into OPs is envisaged. The horizontal issues concerned are: (1) equal opportunities for men and women, (2) environmental protection and sustainable development, (3) participation of civil society, (4) geographic, sectoral and/or thematic concentration.

#### Equal opportunities for men and women

Equal opportunities for men and women are basically guaranteed in the Constitution (Art. 10) "All individuals are equal without any discrimination before the law, irrespective of language, race, colour, sex, political opinion, philosophical belief, religion and sect, or any such

considerations. Men and women have equal rights and the State is responsible to implement these rights (Art. 10).

As required by the Acquis, the law guarantees the principle of equal pay for women and men. The principle of equal pay pertains to all employees covered in the scope of Labour Law No. 4857 as well as the Civil Servants Law No. 657.

As regards access to employment, vocational training and promotion, working conditions and social security, there exist provisions in various laws focusing on equal treatment. The relevant laws are:

- Labour Law No. 4857: No discrimination based on language, race, sex, political thought, philosophical belief, religion, sect and similar grounds can be made in the business relationship. The employer cannot mistreat a worker directly or indirectly in concluding the labour contract, establishing the conditions thereof, implementation and termination thereof due to sex or pregnancy, unless biological reasons or those pertaining to the work qualifications oblige.
- Law on Social Insurance and General Health Insurance No. 5510: All employees irrespective of gender and form of working are insured by this law.
- Law on Vocational Training No. 3308: General provisions on training and working conditions as well as social security are set regardless of sex.
- Law on Civil Servants No. 657: General provisions on access to employment, promotion, training and working conditions as well as social security are set regardless of sex. There are general and specific (like entrance exams) requirements for recruitment of civil servants, these conditions are the same for men and women.

Women and men have the same and equal opportunities to take part in the OP process. Female officials have participated in each and every part of OP preparation already in a very positive manner. Regarding the implementation, the Ministry of Transport (MoT), as a matter of policy, would ensure a high involvement of the women.

### **Competition Policy**

All tendering processes for works, services and supply contracts through the implementation of the TOP will be realised in accordance with the provisions of Practical Guide to Contract Procedures for EC External Actions (PRAG)<sup>29</sup>. Compliance with the competition rules of the EU will be ensured.

### **Environmental protection and sustainable development**

Among three other cross-cutting issues, environmental protection and sustainable development is a highly appropriate one for the TOP considering its priority and measures. As emphasised, one of the most pressing problems of Turkish transportation sector is the imbalance among the modes of transport road usgae being, by far, the dominant mode. This gives rise to the harmful effects of gas emissions on the environment and low sustainability because of imported and limited oil resources, TOP, by contrast focuses on strengthening

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<sup>29</sup> The document is available on [http://ec.europa.eu/europeaid/tender/practical\\_guide\\_august2006/index\\_en.htm](http://ec.europa.eu/europeaid/tender/practical_guide_august2006/index_en.htm)



railway and maritime transport involving improvements that result in significantly less air pollution and more sustainable transport systems.

Only safe and environmentally-friendly transport is sustainable transport. In fact, the White Paper<sup>30</sup> places the transport user at the heart of transport policy, that is, to reduce accidents and develop cleaner technologies.

In counteracting the existing development difficulties of Turkish transport, in particular, the unequal growth between modes of transport, the OP emphasises the revitalisation of the railways, to be achieved before economic development, combined with the envisaged accession to the EU, which might exacerbate the railway's weak market position. The OP therefore follows a strategy of sectoral sustainability as adopted by the European Council in Gothenburg in June 2001.

Furthermore, the TOP attaches importance to environmental matters by taking into account Environmental Impact Assessments (EIAs) on pipeline projects. Infrastructure projects, for funding under IPA have to be environmentally acceptable as assessed by EIAs prepared to EU standards. The Republic of Turkey has been performing environmental impact assessment for individual developments since 1993 consequent to the adoption of By-Law on Environmental Impact Assessment on February 7, 1993. Currently, the Turkish By-Law on Environmental Impact Assessment is not in full harmony with relevant EU acquis due to differences in provisions concerning the participation of public to the process, some articles in Annex 1 and transboundary EIAs.

In the matter of the maturity of the project pipeline, again arising out of TINA Turkey Study, a study has been initiated to assess the feasibility, EIA and other related documents of the projects and to identify any gaps relative to EU standards. On completion of this study, which is financed under EU-Turkey Financial Assistance-Support to European Integration Activities Fund, another tender will be issued to revise the feasibility, EIA and other pipeline project documents to ensure complete alignment with EU requirements.

Assistance provided in the framework of SCF must fully respect compliance with sustainable development principles and meet relevant environmental norms, and the relevant environmental acquis such as directives on EIA, Habitats and Birds (in order to avoid negative impacts on areas to be determined as Natura 2000 sites) as appropriate. The projects to be financed must be appraised case by case in order to be coherent with the relevant obligations of the environmental acquis.

Regarding the state of play on Strategic Environmental Assessment (SEA) in Turkey, studies on a draft by-law is going on. On the other hand, as to the reduction of greenhouse gas emissions and Kyoto Protocol, Turkey has submitted a National Statement on Climate Change within the context of United Nations Framework Convention on Climate Change to the Secretary of the Framework Convention. With the aforementioned document, Turkey has presented its status on greenhouse gases emission. Further studies are being conducted.

The influence of transport and transport facilities on the natural environment has been monitored in Turkey since 1993 consequent to the adoption of By-Law on Environmental

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<sup>30</sup> White Paper, European Transport Policy for 2010: time to decide, Brussels, 12.9.2001, COM(2001) 370 final



Impact Assessment on February 7, 1993. The influence of transport investments are being monitored for all receiving environments taking into consideration the threshold values given in the Annex 1 and Annex 2 of By-Law on EIA.

The polluter pays principle is mentioned on Law on Environment No. 2872 (Official Gazette: 11 August 1983, no 18132) as amended by the Law No.5491 (Official Gazette: 13 May 2006, no 26167) with Article 2, Article 3 and Article 11 and By-laws on Water Pollution Control, Control of Waste Oils, Solid Waste Control and Control of Used Batteries and Accumulators.

According to the Article 2 of the Law, polluter is defined as “the natural and legal persons that cause either directly or indirectly to the deterioration of the ecological balance and environment and to the pollution of the environment during or after their operations”.

Article 3 of the Law states that “the expenses incurred for preventing, limiting, eliminating the environmental pollution and deterioration and improving the environment shall be paid by the polluter or whoever causes the deterioration”.

According to the Article 11 of the Law, “investment, operation, maintenance, repair and rehabilitation expenses” of wastewater and landfill facilities are to be collected from the current and future users of these services. Accordingly, this is a system in which “polluter pays principle” is applied not only to the industrial installations but also to each of the individual being. The parties, which are using and/or will be using the wastewater infrastructure systems/solid waste disposal facilities, shall contribute to the expenses that will be incurred by the administrations that are responsible of the treatment systems, for investments in, operating, maintaining, repairing, improving and cleaning of the subject matter systems in proportion of their share in pollution independent of whether they have a connection system or not. From those who benefit from these services a fee for collecting, treating and disposing of waste water/solid waste is collected at the rate determined by the municipal commission and the other administrations that are authorized.

In addition to the above-mentioned provisions of the Law, polluter pays principle is included in By-laws on Water Pollution Control, Control of Waste Oils, Solid Waste Control and Control of Used Batteries and Accumulators, and is among the basic principles of the draft EU Integrated Environmental Approximation Strategy of Turkey for 2007-2023.

### **Participation of civil society**

Participation of representatives of civil society, such as NGOs, civil associations, Chambers, Unions and universities would be ensured by Programme authority. It is one of the TA measures to promote awareness.

### **Geographic, sectoral and/or thematic concentration**

As indicated in the Multi Annual Indicative Planning Document (MIPD), a strong sectoral and geographic concentration of OP is envisaged. According to MIPD, no geographical concentration for the TOP is anticipated. Hence, the implementation area of TOP is the entire geography of Turkey. The TOP, however, focuses on the extension of the TEN-T in Turkey by paying special attention to rail and maritime connection instead of roads, airports and air transport. Moreover, since it will help to connect Turkish transport infrastructure to existing TEN-T, the EU-funded TINA Turkey Study will be invariably taken into account.



### **3.4 COMPLEMENTARITIES AND SYNERGIES WITH OTHER FORMS OF ASSISTANCE**

The issue of complementarity and synergies among IPA components is important to ensure complete and integrated effect of IPA funds. In this context, from the outset, the Programme Authorities established linkages between their OPs by designating staff to the preparation team of other OPs. In terms of the content of OPs, Multi Annual Indicative Planning Document (MIPD) and Strategic Coherence Framework (SCF) lay down the basic principles by determining the priorities and key areas of intervention of OPs.

In general terms, TOP is mostly interrelated with Environment OP since it is concerned with the environmental friendly modes of transport. By promoting the use of rail and maritime transport the TOP would also contribute to lowering gas emissions and to the environmental sustainability of the country.

As regards the Regional Competitiveness OP, the projects that will connect the national network to TEN-T will reduce disparities between EU and Turkey regarding transport infrastructure and increase interregional accessibility. This will, in turn, contribute to reducing regional disparities and increasing economic competitiveness.

The TOP and the Human Resources Development OP, whose overall objective is “to support the transition to a knowledge-based economy capable of sustainable economic growth with more better jobs and greater social cohesion”, serve the common objective of increasing competitiveness even if from different approaches and perspectives

### **3.5 INDICATIVE LIST OF MAJOR PROJECTS**

Indicative list of projects designed in accordance with the priorities and measures of OP Transport is derived from the results of TINA Study in particular project prioritisation.

#### **Project Prioritisation in TINA**

The TINA Turkey study used eight priority criteria of the TEN-T guidelines of 2004 (Art. 5) as the basis for evaluating the relevance of the planned projects. As additional information the selection criteria from the TINA guidelines of 1999 were also considered. For project prioritisation, multi-criteria analyses (MCA) was used which represents a combination of the criteria used in the sources mentioned above.

The first screen consists of the TEN-T guidelines which includes 8 priority criteria as follows:

1. relevance for international key links
2. relevance for national networks
3. promotion of the interoperable rail network
4. promotion of shipping
5. promotion of the integration of rail and air transport
6. promotion of optimisation and intermodality in transport
7. promotion of safety and environmental objectives
8. ensured sustainability

Other sources of criteria included the following:

- TINA guidelines of 1999
- 9th Development Plan of Turkey
- Nationwide Ports Master Plan

The TINA guidelines of 1999 recommend the following priority criteria:

- Level of economic feasibility ( $EIRR > 10\%$ , 5-10 %)
- Cost efficiency of the project (benefit per transport quantity)
- Type of projects (reconstruction higher rated than upgrading or new construction)

The selection criteria for pre-selection and final selection of projects derived from other EU sources include the following :

- Contribution to international key links
- Promotion of optimum cost efficiency in transport
- Size and significance of the projects (exceptions for rehabilitation, safety, environmental, Motorways of the Sea and traffic management projects)
- Maturity of project (national interest & commitment)
- Minimum economic efficiency ( $EIRR > 6\%$ )
- Contribution to safety & security objectives

The location of a planned project on the TINA Core Network for Turkey is a pre-condition for MCA scoring. The MCA encompasses the following seven criteria with their defined weights:

- Level of national interest and commitment related to the planned project ('maturity' of project) - 20%
- Compliance of a planned project with the TEN-T guidelines in general (general relevance check) -10%
- Level of economic efficiency achieved by a planned project -15%
- Contribution to safety and environmental objectives - 10%
- Size and significance of a planned project - 10%
- Type of project - 5%
- Severity of bottleneck to be reduced by the planned project. - 25%

However, since the available data on the economic efficiency of the planned projects in terms of EIRR are neither complete nor comparable and do not comply as yet with the methodological requirements for EU funded projects, no scoring was made for this criterion, to which a weight of 15% is given. Therefore, the maximum attainable score is 85 (instead of 100). The following tables show the project prioritisation results:



**Railways:**

Table 19:

**TINA TURKEY - PROJECT PRIORITIZATION**

**MULTI-CRITERIA ANALYSIS OF PROJECTS**

(excl. ongoing projects)

No.		Type of project	Location	Nat. inter. & committ.		TEN-T guidelines				Safety		Environ-ment		Size & signific.		Type of project			Bottleneck 2020			Total score	
						railshpg. intermod. Total																	
						20%	sc.	5%	sc.														5%
Railways																							
1	new construction	Halkali - Kapikule (Bulgarian border)	95	19	100	5	90	4,5	9,5	90	9	100	5	60	3	100	10	100	15	25	80		
2	new construction of superstructure	Ankara - Konya (high-speed line)	100	20	100	5	90	4,5	9,5	90	9	100	5	60	3	100	10	100	15	25	81		
3	new construction	Ankara - Afyon - Izmir (high-speed line)	95	19	100	5	100	5	10,0	90	9	100	5	60	3	75	7,5	100	15	23	78		
4	new construction	Ankara - Sivas (high-speed line)	95	19	100	5	90	4,5	9,5	90	9	100	5	60	3	100	10	100	15	25	80		
5	signalling	Eskişehir - Kütahya - Balıkesir	95	19	100	5	90	4,5	9,5	100	10	95	9,5	100	5	40	4	100	15	19	77		
6	signalling	Bandırma - Menemen	75	15	100	5	100	5	10,0	100	10	95	9,5	100	5	100	10	100	15	25	80		
7	signalling	Izmir - Denizli - Karakuyu	75	15	100	5	90	4,5	9,5	100	10	95	9,5	100	5	75	7,5	40	6	14	66		
8	signalling	Samsun - Kalın	60	12	100	5	100	5	10,0	100	10	95	9,5	100	5	100	10	100	15	25	77		
9	sign., electrification	Sivas - Kars line (Kars - Divrigi)	75	15	100	5	90	4,5	9,5	100	10	100	10	100	5	75	7,5	75	11	19	73		
10	electrification	Kırıkkale - Çetinkaya	75	15	100	5	90	4,5	9,5	75	7,5	100	10	100	5	100	10	100	15	25	77		
11	sign., electrification	Pehlivan köy - Uzunköprü	90	18	100	5	90	4,5	9,5	100	10	100	10	60	3	100	5	40	6	10	66		
12	new construction	Bandırma-Bursa-Osmaneli, Ayazma-İnönü	75	15	100	5	100	5	10,0	90	9	90	9	60	3	100	10	100	15	25	76		
13	new construction	Aydın - Çine - Güllük Port	75	15	100	5	100	5	10,0	90	9	90	9	75	3,8	60	3	40	4	75	11	65	
14	new construction	Nusaybin - Silopi - Iraq	60	12	100	5	75	3,8	8,8	90	9	90	9	100	5	60	3	40	4	6	10	57	
15	new construction	Adapazarı - Karasu - Zonguldak	80	12	100	5	100	5	10,0	90	9	90	9	100	5	60	3	40	4	75	11	63	
16	new constr., modernis.	6 Logistic Centres (in 6 regions)	100	20	100	5	100	5	10,0	100	10	90	9	100	5	100	10	100	15	25	84		
17	electrification	Bogazköprü - Yenice, Mersin - Adana - Toprakale	90	18	100	5	100	5	10,0	75	7,5	100	10	75	3,8	100	5	100	10	15	25	79	
18	electrification	İrmak - Zonguldak	100	20	100	5	100	5	10,0	75	7,5	100	10	100	5	100	10	100	15	25	83		



**Roads:**

**Table 20:**

**TINA TURKEY - PROJECT PRIORITIZATION**  
**MULTI-CRITERIA ANALYSIS OF PROJECTS**  
(excl. ongoing projects)

		Roads																			
No.	Type of project	Location		Nat. inter. & commit.		TEN-T guidelines			Safety		Environ-ment	Size & signific.	Type of project	Bottleneck 2020			Total score				
				20%	sc.	5%	sc.	5%	sc.	10%	sc.	5%	sc.	5%	sc.	10%	sc.	15%	sc.	ach. <sup>1</sup>	
19	upgrading / 2nd stage	Bala Junct.-Aksaray-(Er./Ul.) Junct.	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	100	10	100	15	78	
20	upgrading / 2nd stage	Gerecs - Merzifon (230 km)	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	75	7,5	75	11	19	
21	upgrading / 2nd stage	Merzifon-Refahiye Junct. (262 km)	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	75	7,5	75	11	19	
22	upgrading / 2nd stage	Refahiye Junct.-Erzurum-Görsöğüt-Iranian border (328 km)	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	75	7,5	75	11	19	
23	upgrading / 2nd stage	6th region bound.-Kırşehir-Kayseri	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	100	10	100	15	78	
24	upgrading / 2nd stage	Bozüyük - Kütaya - Afyon - Dinar - Denizli (93 km)	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5						
25	upgrading / 2nd stage	Antalya - Denizli - Salihli (277 km)	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	100	10	100	15	78	
26	upgrading / 2nd stage	Afyon - Konya - Ereğli - (Aksaray/Ulukisla) Junct. (80 km)	90	18	75	3,8	75	3,8	7,5	90	9	90	9	100	5	75	7,5	75	11	19	
27	upgrading	Hadimköy - Kinali (Istanbul - Edirne Motorway)	60	12	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	15	78	
28	new construction	Edirne - Pazarkule (- Greek border)	40	8	75	3,8	75	3,8	7,5	90	9	75	7,5	75	3,8	60	3	40	4	75	15
29	upgrading / 2nd stage	Kinali Junct. - Greek border	90	18	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	10	75	11
30	upgrading / 2nd stage	Balkesir - Akhisar - Manisa	90	18	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	10	100	15
31	upgrading / 2nd stage	Canakkale - Izmir	90	18	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	10	100	15
32	upgrading / 2nd stage	Sivrihisar - Eskişehir - Bozüyük	90	18	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	10	75	11
33	upgrading / 2nd stage	Sivrihisar - Afyon	90	18	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	10	100	15
34	upgrading / 2nd stage	Sarıurfa - Silopi	90	18	75	3,8	75	3,8	7,5	90	9	90	9	75	3,8	90	4,5	100	10	100	15



Seaports and Airports:

Table 21:

**TINA TURKEY - PROJECT PRIORITIZATION**  
**MULTI-CRITERIA ANALYSIS OF PROJECTS**  
(excl. ongoing projects)

text: ongoing project

Ports																						
No.	Type of project	Location	Nat. inter. & committ.		TEN-T guidelines					Safety		Environ-ment		Size & signific.		Type of project			Bottleneck 2020			Total score ach. <sup>1</sup>
			20% sc.	5% sc.	tail/shpg.	5% sc.	intermod.	Total sc.	10% sc.	10% sc.	5% sc.	5% sc.	5% sc.	5% sc.	10% sc.	10% sc.	15% sc.	sc.				
36	upgrading / new constr.	Izmir port channel + 2nd stage Container Terminal	90	18	100	5	90	4,5	9,5	100	10	90	9	90	4,5	100	10	100	15	25	81	
37	upgrading / new constr.	Denince Container Terminal	90	18	100	5	90	4,5	9,5	100	10	90	9	90	4,5	100	10	100	15	25	81	
38	new constr., 1st stage	Candarli (Kuzey Ege) port	90	18	100	5	90	4,5	9,5	100	10	75	7,5	60	3	100	10	100	15	25	78	
39	upgr./new constr.	Mersin Container Port	90	18	100	5	90	4,5	9,5	100	10	90	9	90	4,5	100	10	100	15	25	81	
40	new construction	Filyos port	75	15	100	5	90	4,5	9,5	100	10	75	7,5	60	3	100	10	100	15	25	75	
Airports																						
No.	Type of project	Location	Nat. inter. & committ.		TEN-T guidelines					Safety		Environ-ment		Size & signific.		Type of project			Bottleneck 2020			Total score ach. <sup>1</sup>
			20% sc.	5% sc.	tail/shpg.	5% sc.	intermod.	Total sc.	10% sc.	10% sc.	5% sc.	5% sc.	5% sc.	5% sc.	10% sc.	10% sc.	15% sc.	sc.				
41	upgrading / 2nd runway	Trabzon	60	12	75	3,8	90	4,5	8,3	95	9,5	90	9	90	4,5	75	7,5	100	15	23	71	
42	study on new constr.	Istanbul	60	12	75	3,8	90	4,5	8,3	95	9,5	75	7,5	60	3	100	10	100	15	25	70	
43	new construction	Cukurova	40	8	75	3,8	90	4,5	8,3	95	9,5	75	7,5	60	3	75	7,5	100	15	23	64	
44	upgrading / 3rd runway	Ankara	40	8	75	3,8	90	4,5	8,3	95	9,5	90	9	90	4,5	75	7,5	75	11	19	63	



As a result of MCA analysis, 13 railway, 14 road and 3 port projects are defined as priority projects. Although the MCA is simplified and is necessarily based to some degree on subjective judgement, the overall results provide quite clear and reasonable conclusions. Under aspects of a countrywide transport strategy all priority projects can be allocated to main transport corridors and links as follows:

- Among the 32 priority projects, three railway projects and one road project support the development of the existing Pan-European Corridor IV and its continuation to Central and Eastern Turkey, i.e., the rail projects Halkalı-Kapıkule, Ankara-Sivas, Kırıkkale-Çetinkaya and the road project Kırşehir- Kayseri.
- Six railway projects support the development of transport via the country's main ports and constitute, therefore, an important element of coordinated intermodal transport in Turkey, namely İzmir – Ankara, Bandırma – Menemen, Samsun – Kalın, Bandırma-Bursa-Osmaneli, Mersin - Adana –Toprakkale and Irmak – Zonguldak. These railway projects improve the railway connections to the main ports both in the Mediterranean Sea (including Aegean and Marmara Sea) and the Black Sea (Samsun, Zonguldak/Filyos).
- The efficient development of intermodal transport is supported by the 6 container terminals (logistic centers) that are planned countrywide.
- The five priority seaport projects (i.e. extension of the container port at İzmir port, construction of Derince Container Terminal, new construction Çandarlı port, new construction of Mersin Container Port, new construction of Filyos port) are linked to railway connections that will be improved by the rail priority projects.
- Five road priority projects (i.e. Çanakkale – İzmir, Balıkesir – Akhisar – Manisa, Bala junct. – Aksaray – (Ereğli/Uluköy) junct., Antalya – Denizli – Salihli, Bozüyük – Kütahya – Afyon – Dinar – Çardak – Denizli) focus on the improvement of important North-South corridors in Central and Western Turkey, while three improve the East-West connections (namely Gerede – Merzifon, Merzifon – Refahiye junct., Afyon – Konya – Ereğli – (Aksaray – Uluköy) junct., 6th region boundary – Kırşehir – Kayseri), and two (i.e. Kinalı Junct. – Greek border and Refahiye junct. – Erzurum – Gürbulak – Iranian border) to neighbouring countries (Greece and Iran).

Building on the results and analyses of the TINA Turkey Study and due to findings of the sectoral assessment part, two priorities as the improvement of rail infrastructure and the improvement of port infrastructure are set for the TOP. Being commensurate with priorities and measure of OP and the results of the TINA Turkey Study and considering the amount of IPA funding for period 2007-2009, four projects were chosen for realisation :

1. New Construction of Halkalı-Kapıkule Railway Line
2. New Construction of Çandarlı Port
3. Installation of a Signalling, Electrification and Telecommunication System on Irmak-Karabük-Zonguldak Railway Line
4. New Construction of Mersin Container Port

Technical details of the projects including the objective and stage of preparation are displayed on a template provided by European Commission and attached as Annex 2.



#### 4. FINANCIAL TABLES

Please note: (1) financial data provided under column 5 "Other (IFI, etc)" is for information only and does not constitute a legal commitment  
(2) financial data provided at measure level is indicative (Article 155.2(h) of Commission

YEARS 2007 - 2009	Total Public expenditure (1) = (2) + (3) (Eur)	Public expenditure		IPA cofinancing rate (4)=(2)/(1) (%)	For information
		Community Contrib. (IPA) (2) (Eur)	National Public Contrib. (3) (Eur)		
<b>Priority Axis 1 *</b>	<b>212,144,000</b>	<b>159,108,000</b>	<b>53,036,000</b>	<b>75%</b>	<b>0</b>
Measure 1.1	212,144,000	159,108,000	53,036,000	75%	
<b>Priority Axis 2</b>	<b>22,800,000</b>	<b>17,100,000</b>	<b>5,700,000</b>	<b>75%</b>	<b>0</b>
Measure 2.1	22,800,000	17,100,000	5,700,000	75%	0
<b>Technical Assistance</b>	<b>4,656,000</b>	<b>3,492,000</b>	<b>1,164,000</b>	<b>75%</b>	<b>0</b>
Measure 3.1	1,396,800	1,047,600	349,200	75%	0
Measure 3.2	465,600	349,200	116,400	75%	0
Measure 3.3	2,793,600	2,095,200	698,400	75%	0
<b>Total Years 2007 - 2009</b>	<b>239,600,000</b>	<b>179,700,000</b>	<b>59,900,000</b>	<b>75%</b>	<b>0</b>

\*Total cost of the project envisaged to be financed under this priority is 646.106.161 €

Please note: (1) financial data provided under column 5 "Other (IFI, etc)" is for information only and does not constitute a legal commitment  
(2) financial data provided at measure level is indicative (Article 155.2(h) of Commission

YEAR 2007	Total Public expenditure (1) = (2) + (3) (Eur)	Public expenditure		IPA cofinancing rate (4) = (2)/(1) (%)	For information
		Community Contrib. (IPA) (2) (Eur)	National Public Contrib. (3) (Eur)		
<b>Priority Axis 1</b>	<b>68,981,333</b>	<b>51,736,000</b>	<b>17,245,333</b>	<b>75%</b>	<b>0</b>
Measure 1.1	68,981,333	51,736,000	17,245,333	75%	
<b>Priority Axis 2</b>	<b>7,600,000</b>	<b>5,700,000</b>	<b>1,900,000</b>	<b>75%</b>	<b>0</b>
Measure 2.1	7,600,000	5,700,000	1,900,000	75%	
<b>Technical Assistance</b>	<b>1,552,000</b>	<b>1,164,000</b>	<b>388,000</b>	<b>75%</b>	<b>0</b>
Measure 3.1	465,600	349,200	116,400	75%	
Measure 3.2	155,200	116,400	38,800	75%	
Measure 3.3	931,200	698,400	232,800	75%	
<b>Total Year 2007</b>	<b>78,133,333</b>	<b>58,600,000</b>	<b>19,533,333</b>	<b>75%</b>	<b>0</b>



Please note: (1) financial data provided under column 5 "Other (IFI, etc)" is for information only and does not constitute a legal commitment  
(2) financial data provided at measure level is indicative (Article 155.2(h) of Commission

YEAR 2008	Total Public expenditure (1)=(2)+(3) (Eur)	Public expenditure		IPA cofinancing rate (4)=(2)/(1) (%)	For information
		Community Contrib. (IPA) (2) (Eur)	National Public Contrib. (3) (Eur)		
<b>Priority Axis 1</b>					
Measure 1.1	71,914,667	53,936,000	17,978,667	75%	0
	71,914,667	53,936,000	17,978,667	75%	0
<b>Priority Axis 2</b>					
Measure 2.1	7,600,000	5,700,000	1,900,000	75%	0
	7,600,000	5,700,000	1,900,000	75%	
<b>Technical Assistance</b>					
Measure 3.1	1,552,000	1,164,000	388,000	75%	0
Measure 3.2	465,600	349,200	116,400	75%	
Measure 3.3	155,200	116,400	38,800	75%	
	931,200	698,400	232,800	75%	
<b>Total Year 2008</b>	<b>81,066,667</b>	<b>60,800,000</b>	<b>20,266,667</b>	<b>75%</b>	<b>0</b>

Please note: (1) financial data provided under column 5 "Other (IFI, etc)" is for information only and does not constitute a legal commitment  
(2) financial data provided at measure level is indicative (Article 155.2(h) of Commission

YEAR 2009	Total Public expenditure (1) = (2) + (3) (Eur)	Public expenditure		IPA cofinancing rate (4) = (2)/(1) (%)	For information
		Community Contrib. (IPA) (2) (Eur)	National Public Contrib. (3) (Eur)		
<b>Priority Axis 1</b>	<b>71,248,000</b>	<b>53,436,000</b>	<b>17,812,000</b>	<b>75%</b>	<b>0</b>
Measure 1.1	71,248,000	53,436,000	17,812,000	75%	0
<b>Priority Axis 2</b>	<b>7,600,000</b>	<b>5,700,000</b>	<b>1,900,000</b>	<b>75%</b>	<b>0</b>
Measure 2.1	7,600,000	5,700,000	1,900,000	75%	
<b>Technical Assistance</b>	<b>1,552,000</b>	<b>1,164,000</b>	<b>388,000</b>	<b>75%</b>	<b>0</b>
Measure 3.1	465,600	349,200	116,400	75%	
Measure 3.2	155,200	116,400	38,800	75%	
Measure 3.3	931,200	698,400	232,800	75%	
<b>Total Year 2009</b>	<b>80,400,000</b>	<b>60,300,000</b>	<b>20,100,000</b>	<b>75%</b>	<b>0</b>



## **5. IMPLEMENTATION PROVISIONS**

### **5.1 Implementation provisions**

*This chapter of the operational programme describes the systems and arrangements in place as they are known at the time of the drafting of the operational programme. However, a number of critical decisions regarding structures and responsibilities as well as management and information systems are yet to be taken in the context of the accreditation for conferral of decentralised management, which follows a different timing from the adoption of the OP. To this end, the Framework Agreement, as well as the Financing Agreement to be signed after conferral of decentralised management, will set out detailed provisions regarding management and control systems. The provisions in this Chapter must therefore be understood as subject to later adaptations by the applicable provisions of these agreements.*

In accordance with Council Regulation No 1085/2006 of 17 July 2006 establishing an Instrument for Pre-Accession Assistance (IPA), and Commission Regulation No 718/2007 of 12 June 2007 implementing Council Regulation No 1085/2006 (IPA Implementing Regulation), the Prime Ministry Circular of .... designated the main structures and authorities for IPA management and implementation tasks. This Chapter describes the implementation arrangements for the TOP.

This Chapter also regulates the general framework for the management, monitoring, evaluation, financial management and control, and information and publicity of the Transport OP. According to Article 10 of IPA Implementing Regulation, the Commission will implement IPA assistance through decentralised management initially with ex-ante controls for Component III and IV. However, the ultimate aim is the conferral of decentralised management to national authorities without ex-ante controls by the Commission. After a transition period, during which the Commission can verify that all the necessary management and control systems are functioning effectively in accordance with the relevant Community and national rules, decentralised management without ex-ante controls may be conferred on the national authorities by the Commission

### **5.2 Management and control structures**

#### **5.2.1 Bodies and authorities**

In order to ensure the effective and efficient management of the interventions co-funded from national and IPA resources, the structures and authorities as well as their functions and responsibilities are described in this section in compliance with the relevant provisions of IPA Implementing Regulation (Articles 21 to 31) These authorities and structures must be effectively in place, operationally ready and accredited before the Commission can confer decentralised management.

These structures and authorities are given below:\*

- (a) National IPA Co-ordinator,
- (b) Strategic Co-ordinator for Components III and IV,
- (c) Competent Accrediting Officer,

- (d) National Authorising Officer,
- (e) National Fund,
- (f) Audit Authority,
- (g) Operating Structure by IPA Component or Programme.

The main functions and responsibilities of the above mentioned bodies except the Operating Structures are given in the relevant articles of IPA Implementing Regulation and in Annex A of the Draft Framework Agreement.

Within this framework, the functions of the Operating Structure responsible for the management and implementation of the TOP will be given in this Chapter.

### **Operating Structure for the Transport OP**

Under the Prime Ministry Circular..., the Ministry of Transport has been appointed as the Operating Structure for the TOP.

### **Functions**

The Operating Structure will manage the TOP, which in compliance with Article 28 of the IPA Implementing Regulation will be responsible for the following functions:

- a. drafting the annual or multi-annual programmes;
- b. programme monitoring and guiding the work of the sectoral monitoring committee as defined in Article 59, notably by providing the documents necessary for monitoring the quality of implementation of the programmes;
- c. drawing up the sectoral annual and final implementation reports defined in Article 61(1) and, after their examination by the sectoral monitoring committee, submitting them to the Commission, to the national IPA co-ordinator and to the national authorising officer;
- d. ensuring that operations are selected for funding and approved in accordance with the criteria and mechanisms applicable to the programmes, and that they comply with the relevant Community and national rules;
- e. setting up procedures to ensure the retention of all documents required to ensure an adequate audit trail, in accordance with Article 20;
- f. arranging for tendering procedures, grant award procedures, the ensuing contracting, and making payments to, and recovery from, the final beneficiary;
- g. ensuring that all bodies involved in the implementation of operations maintain a separate accounting system or a separate accounting codification;
- h. ensuring that the national fund and the national authorising officer receive all necessary information on the procedures and verifications carried out in relation to expenditure;
- i. setting up, maintaining and updating the reporting and information system;
- j. carrying out verifications to ensure that the expenditure declared has actually been incurred in accordance with applicable rules, the products or services have been delivered in accordance with the approval decision, and the payment requests by



the final beneficiary are correct. These verifications shall cover administrative, financial, technical and physical aspects of operations, as appropriate;

- k. ensuring internal audit of its different constituting bodies;
- l. ensuring irregularity reporting;
- m. ensuring compliance with the information and publicity requirements.

In addition to the above-mentioned responsibilities resulting from the Article 28(2) of IPA Implementing Regulation, the Operating Structure is also responsible for:

- managing the Secretariat of the Monitoring Committee for the TOP;
- ensuring the evaluations of the TOP;
- implementing the measures under Technical Assistance of the TOP.

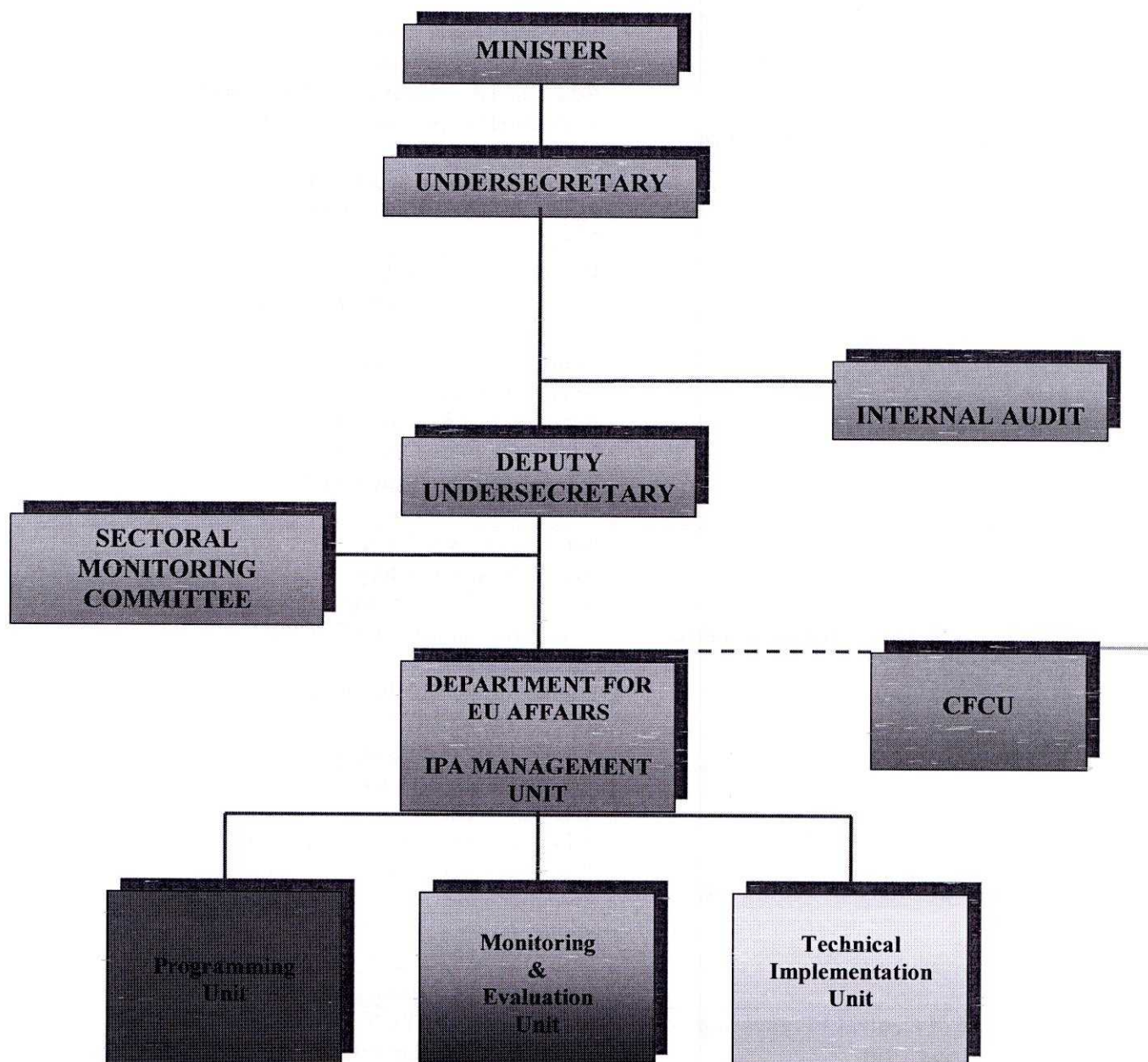
### **Composition**

The Operating Structure will be composed by the following bodies:

The Operating Structure basically will contain:

- 1) **IPA Management Unit**, which is located under the Department for EU Affairs. The Head of the Department will also perform as the head of IPA Management Unit. It will further contain **three sub-units**, each responsible for;
  - a) Programming
  - b) Monitoring and Evaluation
  - c) Technical Implementation.
- 2) The Sectoral Monitoring Committee for Transport OP
- 3) **The Internal Audit Unit**, which was established by the Law No: 5018 and attached to the Undersecretary will carry out internal audit function for the IPA funds to be used through the TOP.
- 4) A Cooperation Agreement will delegate some of the responsibilities defined under the Article 28 of the IPA Implementing Regulation to the Central Finance and Contract Unit.

Organigramme for the Operating Structure for the Transport OP





The heads of the bodies constituting the Operating Structure shall be clearly designated and shall be responsible for the tasks assigned to their respective bodies.

Heads of the bodies, which constitute the Operating Structure, are given below:

<b>Head of Operating Structure</b>	<b>Mr. Suat Hayri AKA</b> Deputy Undersecretary Address: T.C. Ulaştırma Bakanlığı (Ministry of Transport) Hakkı Turaylı Caddesi No: 5 Emek Ankara/Turkey Phone: 00 90 312 203 11 41 Fax: 00 90 312 203 11 51 E-mail: <a href="mailto:aka@ubak.gov.tr">aka@ubak.gov.tr</a>
<b>Head of IPA Unit</b>	<b>Dr. Mustafa KAYA</b> Head of Department for EU Affairs Address: T.C. Ulaştırma Bakanlığı (Ministry of Transport) Hakkı Turaylı Caddesi No: 5 Emek Ankara/Turkey Phone: 00 90 312 203 18 90 Fax: 00 90 312 203 19 13 E-mail: <a href="mailto:mustafa@kaya.ubak.gov.tr">mustafa@kaya.ubak.gov.tr</a>
<b>Chair of Monitoring Committee</b>	<b>Mr. Suat Hayri AKA</b> Deputy Undersecretary Address: T.C. Ulaştırma Bakanlığı (Ministry of Transport) Hakkı Turaylı Caddesi No: 5 Emek Ankara/Turkey Phone: 00 90 312 203 11 41 Fax: 00 90 312 203 11 51 E-mail: <a href="mailto:aka@ubak.gov.tr">aka@ubak.gov.tr</a>
<b>Head of Internal Audit Unit</b>	<b>Mr. Sami KALAYCI</b> İç Denetim Birimi (Internal Audit Unit) Address: T.C. Ulaştırma Bakanlığı (Ministry of Transport) Hakkı Turaylı Caddesi No: 5 Emek Ankara/Turkey Phone: 00 90 312 203 10 68 Fax: 00 90 312 203 10 89 E-mail: <a href="mailto:samikalayci@gmail.com">samikalayci@gmail.com</a>
<b>Head of Central Finance and Contract Unit</b>	<b>Mr. Muhsin ALTUN</b> Address: Eskişehir Yolu 4.Km. 2.Cad. (Halkbank Kampüsü) No: 63 C-Blok 06580 Söğütözü Ankara/Turkey Phone: :00 90 312 295 49 00 Fax: 00 90 312 286 70 E-mail: <a href="mailto:muhsin.altun@cfcu.gov.tr">muhsin.altun@cfcu.gov.tr</a>

### **Distribution of functions**

The Sub-Units within the IPA Management Unit will execute the following functions:

#### **Programming Sub-Unit:**

- Drafting and updating of the Operational Programme
- Preparation and submission of Major Projects (article 157 of the IPA Implementing Regulation)
- Defining of project selection criteria
- Preparation and selection of projects based on the TOP
- Ensuring that operations are selected for funding and approved in accordance with the criteria and mechanisms applicable to the programmes, and that they comply with the relevant Community and national rules
- Carrying out tasks arising from TApriority
- Financial planning, budgeting, co-financing,
- Feasibility studies, Impact assessment, market research
- Ensuring compliance with the information and publicity requirements
- Preparing and implementing a communication strategy

#### **Monitoring and Evaluation Unit:**

- preparation of sectoral annual and final reports (article 169 of the IPA Implementing Regulation)
- programme monitoring and guiding the work of the sectoral monitoring committee
- secretariat for the sectoral monitoring committee
- setting up procedures to ensure the retention of all documents required to ensure an adequate audit trail
- ensuring irregularity reporting
- ensuring the evaluation of the TOP
- detailed design of the evaluation schedule
- defining the criteria to set up external evaluation teams,
- co-ordination of activities related to evaluation of performance
- setting up, maintaining and updating the reporting and information system

#### **Technical Implementation Unit (to be revised in accordance with the Cooperation Agreement to be signed with the CFCU):**

- ensuring effective implementation of IPA projects programmed, and also that the results set forth in relevant Financing Agreement are being achieved.
- drafting detailed plans of implementation for the projects
- preparing forecast notices and procurement notices and submitting to the CFCU
- proposes the voting members of the evaluation committee to the CFCU for approval (and submits curriculum vitae of each voting member of the committee) and ensures the full availability and attendance of the proposed members in the committee's meetings;
- cooperating with the CFCU regarding clarification of tender dossier for the prospective tenderers;
- examining together with the CFCU claims and complaints submitted by the prospective tenderers and prepares a justified reply;



- executing and monitoring the technical implementation of the contract, forming a Project Monitoring Committee and heading its activities;
- drawing up the sectoral annual and final implementation reports
- checking and approving the invoices (read and approved) and other documents indicated in the supply, service and works contracts in accordance with the guidance of the CFCU;
- technical and physical verification of operations upon payment requests
- submitting the CFCU progress reports on the technical implementation of projects in accordance with the form forwarded by the CFCU, as well as monthly, quarterly and final reports, and any other information about the implementation of IPA projects;
- ensuring accuracy of information given in the reports and allows the CFCU to verify this information;
- regular meetings with final beneficiaries & contractors
- assessing risks associated with project implementation and informs the CFCU forthwith about any circumstances that could have negative effect for the implementation of the project;
- immediately informing the NAO and the CFCU of any irregularities found or suspected, submits to the CFCU monthly irregularity reports as attached with the progress reports in accordance with the form forwarded by the CFCU;
- filing and keeping any documentation related to the IPA project in accordance with the related provisions of the Manual of Procedures on which the respective Operating Structure's activities are based;

***Delegated Tasks to the CFCU:***

During the transition period the following functions with relation to the Transport OP Priority Axes 1 and 2. / Measures 1.1 and 2.1 will be delegated to the Central Finance and Contracts Unit (CFCU). *(to be revised in accordance with the Cooperation Agreement to be signed between Operating Structure and CFCU):*

After the transition period, a Finance and Contracts Unit for the Transport OP will be established within the Operating Structure

- arranging for tendering and grant award procedures
- acting as Contracting Authority
- making payments to, and recovery from, the final beneficiary
- ensuring that the National Fund and the NAO receive all necessary information on the procedures and verifications carried out in relation to expenditure;
- carrying out verifications to ensure that the expenditure declared has actually been incurred in accordance with applicable rules, the products or services have been delivered in accordance with the approval decision, and the payment requests by the final beneficiary are correct. These verifications shall cover administrative, financial, technical and physical aspects of operations, as appropriate;
- ensuring a sound financial management of particular EU funded projects

**Internal Audit Body:**

- establishing and fulfilling an annual audit work plan which encompasses audits aimed at verifying:
- effective functioning of the management



- ensuring reliability of accounting information provided to the Commission.
- submitting the following to the Audit Authority:
  - An annual audit activity report
  - An annual opinion following the model set out in the framework agreement as whether the management of the Transport OP is in line with the EU Regulations
  - An opinion on any final statement of expenditure
  - Further specific requirements for the annual audit work plan

### **5.2.2 Separation of functions**

In accordance with the Article 21.2 of the IPA Implementing Regulation and with Articles of the Prime Ministry Circular-2007/ ..... the appropriate segregation of duties will be ensured between and within the designated bodies.

The description of activities as planned at time of the drafting of the OP is given hereunder. However, as preciously stated, a number of critical decisions regarding structures and responsibilities as well as management and information systems will be taken in the context of the accreditation for conferral of decentralised management. To this end, the Framework Agreement, as well as the Financing Agreement to be signed after conferral of decentralised management, will set out detailed provisions regarding management and control systems. The provisions of this section must therefore be understood as subject to later adaptations by the applicable provisions of these agreements, where required.

#### **Separation of functions between the bodies**

Clear division of tasks has been ensured among the designated IPA bodies.

In this respect, a clear separation between verifications, controls, and evaluations to be carried out by the Operating Structure and the National Fund has been ensured. The different divisions of the Operating Structure within the Ministry of Transport will perform verifications, controls, and evaluations, while the National Fund within the Undersecretary of Treasury will carry out these functions.

Furthermore, clear separation between audits and implementation and payment procedures has been guaranteed through the differentiation of the bodies responsible for executing these tasks. Audits will be carried out by the Board of Treasury Controllers, which acts as Audit Authority, as well as the Internal Audit Unit of the Ministry of Transport; whereas the Operating Structure and the CFCU will perform implementation and payment procedures.

#### **Separation of functions within the bodies**

Adequate separation of functions has been ensured within the designated IPA bodies.

The principle of separation of functions has been observed when arranging the institutional mechanism within the Operating Structure and defining the tasks of the each body constituting the Operating Structure.

In this regard, operational and financial aspects of an operation will be initiated and implemented by the SPO (Senior Programming Officer) and the staff within the final beneficiary. The staff of the Technical Implementation Sub-Unit of IPA Management Unit within the Operating Structure will verify them.



The responsibilities of the CFCU in that process are defined in the section for the task delegated to the CFCU. It will carry out administrative, financial, technical and physical verifications of operations, as appropriate

### **5.3 Monitoring and evaluation**

#### **5.3.1 Monitoring arrangements**

*This section of the operational programme describes the systems in place as they are known at the time of the drafting of the operational programme. However, a number of critical decisions regarding structures and responsibilities will be taken in the context of the accreditation for conferral of decentralised management, which follows a different timing from the adoption of the operational programme. Accordingly, the Framework Agreement, as well as the Financing Agreement to be signed after conferral of decentralised management, will set out detailed provisions regarding management and control systems. This Chapter must be understood as provisional, to be superseded by the applicable provisions of these agreements.*

#### **Monitoring Committees**

In order to ensure coherence and coordination in the implementation of the IPA components, programmes and operations as well as the progress in the implementation of IPA assistance, the following monitoring committees will be established:

- IPA Monitoring Committee covering all the IPA components
- Sectoral Monitoring Committees for each OP
- National Coordination Structures:
- Financial Cooperation Board
- Regional Development and Human Resources Development Coordination Committee for 3<sup>rd</sup> and 4<sup>th</sup> components of the IPA

#### IPA Monitoring Committee

According to the Article 58 of IPA Implementing Regulation, Turkey shall, within six months after the entry into force of IPA Implementing Regulation, set up an IPA Monitoring Committee, in agreement with the NIPAC and the Commission, to ensure coherence and coordination in the implementation of all IPA components.

The IPA monitoring committee shall satisfy itself as to the overall effectiveness, quality and coherence of the implementation of all programmes and operations towards meeting the objectives set out in the financing agreements as well as in the MIPD. For this purpose, it shall base itself on the elements given by the sectoral monitoring committees.

The IPA Monitoring Committee may make proposals to the Commission, the NIPAC and the NAO for any actions to ensure the coherence and co-ordination between the programmes and operations implemented under the different components, as well as for any cross-component corrective measures needed to ensure the achievement of the global objectives of the assistance provided, and to enhance its overall efficiency.

It may also make proposals to the Monitoring Committee for the Transport OP for decisions on any corrective measures to ensure the achievements of the programme objectives and enhance the efficiency of assistance provided under the Transport OP.

The IPA Monitoring Committee shall adopt its internal rules of procedure in compliance with a monitoring committee mandate established by the Commission, and within the national institutional, legal and financial framework.

The IPA monitoring committee shall include among its members representatives of the Commission, the NIPAC, the NAO, representatives of the Operating Structures, and the sectoral co-ordinator. A representative of the Commission and the NIPAC shall co-chair the IPA Monitoring Committee meetings.

The IPA Monitoring Committee shall meet at least once a year. Intermediate meetings may also be convened, in particular on a thematic basis.

#### Monitoring Committee for the Transport Operational Programme

In accordance with Article 59 of IPA Implementing Regulation, the Head of the Operating Structure shall establish a sectoral monitoring committee for the Transport OP within six months after the entry into force of the IPA Implementing Regulation.

MC Transport OP shall be co-chaired by the Deputy Undersecretary of the Ministry of Transport as the head of the Operating Structure for the Transport OP and a representative of the Commission. The Operating Structure, in agreement with the Commission, shall decide its composition.

The members of the MC TOP will include (indicatively):

- The National IPA Coordinator or his/her representative;
- A representative of the Commission
- A representative of the Strategic Coordinator for Components III and IV;
- Representatives of each body of the operating structure for the programme  
(**indicative list**):
  - Undersecretariat of Maritime Affairs (UMA);
  - DG Construction of Railways, Ports and Airports (DLH•)
  - DG Land Transport (KUGM)
  - DG State Airports Administration (DHM•)
  - DG State Railways (TCDD)
  - DG Coastal Safety and Salvage Administration (KEGM)
  - DG Civil Aviation (SHGM)



- DG Highways (KGM)
- The Sectoral Monitoring Committee includes representatives from the civil society and socio-economic partners, regional or national organisations with an interest in and contribution to make to the effective implementation of the programme. These are: **(indicative list)**:
  - RODER (Vessel Operators And Combined Transporters Association)
  - UND (Freight Forwarders Associations)
  - DTD (Rail Freight Association)
  - TÜRKL•M (Port Operators Association of Turkey)
  - TOBB (The Union of Chambers and Commodity Exchanges of Turkey)
  - TMMMB (Association of Turkish Consulting Engineers and Architects - ATCEA)
  - Universities
- The National Authorizing Officer;
- A representative of the National Fund;
- Representatives of other Operational Structures:
  - Ministry of Industry and Trade
  - Ministry of Environment and Forestry
  - Ministry of Labor and Social Security
  - Ministry of Agriculture and Rural Affairs

The composition of the Monitoring Committee for the TOP can be reviewed and extended by the Head of the Operating Structure in agreement with the Commission in order to guarantee sufficient representation and membership.

The MC TOP will be assisted by a permanent secretariat provided by the Operating Structure for the preparation of papers for discussion by the committee or for clearance by written procedure.

As indicated in the organogram of the Operating Structure for the TOP, the Head of Operating Structure (Deputy Undersecretary of the Ministry) chairs the Sectoral Monitoring Committee for the TOP. The Monitoring and Evaluation Sub-Unit of the IPA Management Unit will perform also as the Secretariat of the Sectoral Monitoring Committee.

The MC TOP will report to the IPA Monitoring Committee. Its tasks will include to:

- a. consider and approve the general criteria for selecting the operations and approve any revision of those criteria in accordance with programming needs;

- b. review at each meeting progress towards achieving the specific targets of the operational programme on the basis of documents submitted by the operating structure;
- c. examine at each meeting the results of implementation, particularly the achievement of the targets set for each priority axis and measures and interim evaluations, it shall carry out this monitoring by reference to the indicators agreed;
- d. examine the sectoral annual and final reports on implementation, including OP summary tables
- e. be informed of the annual audit activity report or of the part of the report referring to the operational programme;
- f. examine any proposal to amend the financing agreement of the programme and propose to the operating structure any revision or examination of the programme likely to make possible the attainment of the programme's objectives or to improve its management, including its financial management, as well as to oversee the cross cutting themes and publicity measures.
- g. steering the preparation of TOP (SCF)
- h. proposing amendments for the TOP depending on current developments; (SCF)
- i. reviewing and approval of annual financing plan for each of the Priority;

The MC TOP shall confirm or make proposals to the Head of the Operating Structure, to the Commission, the Strategic Co-ordinator and the National IPA Co-ordinator to revise the programme following where relevant an evaluation, including the results, output and financial indicators to be used to monitor the assistance.

The MC TOP will set up its rules of procedure in agreement with the Operating Structure and the IPA Monitoring Committee. It will meet at least twice a year and upon request by the Commission. Intermediate meetings may also be convened as required.

In accordance with the Article 167.2 of the IPA IR (EC) No 718/2007 of 12 June 2007, the MC TOP will draw up its rules of procedure in compliance with a sectoral monitoring committee mandate set out by the Commission, and within the institutional, legal and financial framework of the beneficiary country concerned. It shall adopt these rules of procedure in agreement with the operating structure and the IPA monitoring committee, in order to exercise its missions in accordance with this Regulation.

For adequate project evaluation, the Monitoring Committee may appoint working groups, particularly for monitoring activities of horizontal issues and seek opinions of independent experts.

### **National Coordination Structures**

Overall coherence for financial cooperation with the EU as well as participation to Community Programmes shall be ensured through internal mechanisms by the involvement of all key actors (NIPAC, NAO, and Strategic Coordinator) under political ownership. Accordingly, identification of two new structures is envisaged: Financial Cooperation Board (FCB) and Regional Development and Human Resources Development Coordination Committee.



### ***Financial Cooperation Board***

The Financial Cooperation Board is envisaged to be established under the chairmanship of the Chief Negotiator with the involvement of NIPAC, NAO, Strategic Coordinator, Ministry of Foreign Affairs, and Ministry of Finance. Ministry of Transport, Ministry of Industry and Trade, Ministry of Environment and Forestry, Ministry of Labor and Social Security, Ministry of Agricultural and Rural Affairs and other relevant public institutions may participate, where appropriate. EUSG will provide secretariat of the Board.

This Board will ensure overall coherence for financial cooperation with the EU through political ownership and interministerial coordination.

This Board will be responsible for;

- Monitoring and steering of general financial cooperation process,
- Assessment of overall and annual breakdown of the funds among IPA components.

### ***Regional Development and Human Resources Development Coordination Committee***

As a part of the institutional set-up under IPA, a Regional Development and Human Resources Development Coordination Committee for the SCF will be established. The Committee will be composed of under the chairmanship of the Undersecretary or one Deputy Undersecretary of the State Planning Organisation, Undersecretaries of the Operating Structures responsible for each OP and the high-level representatives of Ministry of Foreign Affairs, Ministry of Finance, Undersecretariat of Treasury, EUSG and •ller Bank. State Planning Organisation will provide secretariat of the Coordination Committee.

The main tasks and responsibilities of the Regional Development and Human Resources Development Coordination Committee are as follows:

- To steer the management of the SCF
- To secure OP's compliance with the SCF
- To review the progress being made towards achieving objectives and targets on the OP base
- To propose to the Operating Structure any revision of the programme for the attainment of the programmes' objectives and improvement of its management
- To consider and approve any proposal to amend the financing agreement of the programme

### **5.3.2 Management Information System**

The head of the operating structure is responsible for the efficiency and correctness of management and implementation and in particular for setting up, maintaining and updating regularly a reporting and information system to gather reliable financial and statistical information on implementation, for the monitoring indicators and for evaluation and for forwarding this data in accordance with arrangements agreed between the NIPAC and the Commission.

The Monitoring and Evaluation Sub-Unit will be responsible for the establishment and maintenance of the MIS for Transport OP. The Operating Structure and all other bodies involved in the implementation of the will have access to this system.

This system will be developed into one or several computerised system(s), in a form chosen by the Operating Structure, which will enable to:

- monitor and manage the implementation of operations and projects, from the moment of tendering and call for proposal to the closure of the OP, in particular results whenever feasible and outputs;
- carry out and monitor financial transactions;
- ensure the reporting requirements on the implementation of the OP.

### 5.3.3 Monitoring System and Indicators

The quantitative and qualitative progress made in implementing the programme as well as its efficiency and effectiveness in relation to its objectives will be measured by the use of evaluation and monitoring indicators related to the results and outputs of the individual measures.

In identifying appropriate monitoring and evaluation indicators, account has been taken of the methodologies, guidelines and lists of examples of indicators issued by the Commission, in particular the "Indicative guidelines on evaluation methods: Monitoring and evaluation indicators" (August 2006, working document No. 2 for the programming period 2007-2013). For Component IV Programmes, it is recommended to use the OP summary table (annex to follow) that follows the format that will be used by DG Employment, Social Affairs and Equal Opportunities for assessing the OP and for monitoring.

The Head of the Operating Structure is responsible for programme monitoring. In this context, the Operating Structure will collect performance data (outputs, results and expenditure) from operations and projects. It will establish, maintain and update the reporting and information system by taking this project-level data and aggregate it to measure, priority axis and whole OP levels. Data on individuals who are the ultimate beneficiaries must be collected for each project and used for aggregation at measure and priority level. On this basis the Operating Structure will assess the progress of the OP at each level against objectives and targets, prepare reports to the Sectoral Monitoring Committee, draft the sectoral annual and final reports on implementation and to launch interim evaluations if required. For the Component IV programmes, these reports should include the filled in OP summary table

In the context of monitoring and for the purpose of using indicators, the role of the Operating Structure will also be to ensure that:

- a) monitoring requirements are built into the calls for tender and proposals documents (application forms and guidelines for applicants);
- b) project applications (when appraised and selected) include proposed outputs and results, as well as data on individuals, that are consistent with the OP indicators for the appropriate measure;



- c) provision of data is built into the contract with beneficiaries as an obligation, and that performance data is provided systematically and in a timely manner by beneficiaries alongside the project reimbursement claim;

#### 5.3.4 Selection of operations

All service, supply, works and grant contracts shall be awarded and implemented in accordance with the rules for external aid contained in the Financial Regulation and in accordance with the "Practical Guide to contract procedures for EC external actions" (Practical Guide) as published on the EuropeAid website at the date of the initiation of the procurement or grant award procedure. The standard templates and models provided for in the Practical Guide shall be used in order to facilitate the application of the applicable rules.

All operations **which are not major projects** and which are implemented by final beneficiaries other than national public bodies shall be selected through calls for proposals.

The Operating Structure will set up a selection committee for each call for proposals launched for the selection of operations financed under a specific measure. The selection committee will appraise project applications in compliance with the selection criteria and methodologies agreed by the Sectoral Monitoring Committees and published in the call for proposals documents. The applications will first be screened for their compliance with eligibility and administrative criteria meeting the relevant eligibility requirements set out in the relevant measures (completeness, accuracy, etc) and thereafter will be evaluated according to their quality. The selection committee will then make recommendations to the operating structure, in compliance with Article 158 of the IPA Implementing Regulation. Members of the Selection Committee should be the most appropriate officials and experts with technical competence to undertake a qualitative appraisal of project applications.

Procurement (including the award of major projects) shall also follow the above mentioned contract award procedures. Tender selection committees will be established for the evaluation of service, works and supply tenders.

As expressed before, certain tasks pertaining to the tendering, contracting, payment and accounting are delegated to the Central Finance and Contract Unit in the transition period between 2007-2009. Therefore, tendering selection committee will be established under the coordination of CFCU, which will launch the tender on behalf of the OS, supervise the evaluation process and contract awarding. Upon receiving the official invitation from the CFCU, the Operating Structure will nominate the names of experts with relevant experience and backgrounds to take place in the tendering selection committee. The rules to be followed during all the stages of the process are clearly mentioned in the PRAG.

#### 5.3.5 Sectoral annual and final reports on implementation

The Operating Structure in accordance with article 169 of the IPA Implementing Regulation will prepare sectoral annual and final reports on implementation. These reports will assess the implementation progress covering the attainment of set objectives, the problems encountered in managing the programme and the measures taken, the financial execution as well as monitoring and evaluation activities carried out. For Component III programmes this will include specific progress reports on each major project, in accordance with the format to be agreed with the Commission. For the Component IV programmes they will include an up to date OP summary table. They will be discussed at least at the second Sectoral Monitoring Committee meeting of each year.



### 5.3.6 Evaluation arrangements

Evaluations are a tool for assessing the relevance, efficiency and effectiveness of the financial assistance as well as the impact and sustainability of the expected results. As a minimum, an ex ante evaluation and an interim evaluations will be carried out under the responsibility of the Head of the Operating Structure in accordance with the principles laid down in the IPA Implementing Regulation and guidance provided by the Commission.

The evaluation arrangements and activities of the programme will fully respect the principle of proportionality.

#### Types of evaluations:

##### Ex ante evaluation

Under the responsibility of the Operating Structure and Strategic Coordinator an ex-ante evaluation of the (programme) has been carried out by the independent experts within the framework of the technical assistance project called "*Support to the SPO to Build Capacity at Central, Regional and Local Level to Implement Economic and Social Cohesion Measures.*" and is annexed to the programme. A summary of the results of the ex-ante evaluation and the way the evaluation was conducted is set out in section 1.5.

In this respect, ex ante the independent experts have elaborated evaluation report of the TOP and key points related to ex-ante evaluation report are annexed.

The main purposes of the ex ante evaluation were to:

- assess whether the overall programme is an appropriate means for addressing the issues confronting Turkey
- check whether the programme has well defined strategic axes, priorities and objectives that are relevant to Turkey's needs and is achievable
- advise on the quantification of objectives and the establishment of a basis for both monitoring and future evaluation work
- review the adequacy of the implementation and monitoring arrangements and help with the design of project selection procedures and criteria

##### Interim evaluation

During the implementation of the programme, interim evaluations complementing the monitoring of the TOP will be carried out, in particular where this monitoring reveals a significant departure from the goals initially set or where proposals are made for the revision of the programme. At any rate, evaluations should be planned to provide data on indicators agreed upon in the OP that cannot be obtained through the monitoring system. In addition, strategic evaluations or thematic evaluations can be carried out under the responsibility of the operating structure. The results will be sent to the ad-hoc committee on evaluations, to the Sectoral Monitoring Committee and to the Commission.



## Ex-Post Evaluation

The ex-post evaluation will be the responsibility of the European Commission in collaboration with the Strategic Coordinator. The ex-post evaluation will be carried out by independent experts and will be completed not later than three years after the end of the programming period. The results of the evaluations will be published according to the applicable rules on access to documents.

## Evaluation function

The Head of the Operating Structure is responsible for ensuring that adequate evaluations of the operational programme are carried out. Experts or bodies, internal or external, functionally independent from the management and control system, will carry out the evaluations.

The Evaluation expert or experts within the Monitoring and Evaluation Sub-Unit of the IPA Management Unit will carry out evaluation tasks defined above. The Sub-Unit is functionally independent from the Programming and Technical Implementation Units. In the sub-unit there will be at least one expert on evaluation whose role and responsibilities is to be further defined by the Implementing Manuals. The manuals will further define the procedures ensuring functional independence of the evaluation experts from the other ones. Some of the evaluation functions at some stages can be outsourced to external evaluators through using a certain portion of the budget allocated to Technical Assistance priority.

Functions of the Evaluation Unit are:

- Ensuring the evaluations of the TOP ,
- Co-ordination of activities related to evaluation of performance and achievements of the TOP,
- Provide inputs to next programming, identification and formulation phases on the basis of lesson learned during the implementation of evaluation exercises.

## Evaluation committee

The Sectoral Monitoring Committee should designate an ad-hoc committee to assist the operating structure in its evaluation activities. The committee members should be experts in evaluation, and, for the component IV programmes, in employment /social inclusion policies. The assistance should take place at all stages of the evaluation (guidance, planning, implementation, communication of results). Relevant stakeholders shall be able to contribute as well.

## Evaluation activities and timing

Indicative Evaluation Activities	Timing
Ex-Ante Evaluation of the TOP.	Parallel with the drafting process of the T OP. From the beginning of the programming process till the approval of the OP.
Interim Evaluation of the TOP.	2009
Ex-Post Evaluation of the TOP.	Not later than three years after the end of the programming period.

## 5.4 Information and publicity

### References

Articles 62 and 63, 169(3)(e) IPA Implementing Regulation  
Commission Regulation 1828/2006  
European Parliament and Council Regulation 45/2001  
Council Regulation 1605/2002, as amended

### 5.4.1 Introduction

Information and publicity are important aspects of pre-accession assistance and in particular to the successful design and delivery of the operational programmes, given the partnership basis on which they are undertaken. Communicating for a successful management and implementation of the operational programmes can be broken down into a series of information and publicity activities.

Accordingly, article 62 of the IPA Implementing Regulation sets out certain requirements regarding the information to be provided and publicity of programmes and operations financed by the Community, addressed to citizens and beneficiaries with the aim of highlighting the role of Community funding and ensuring transparency.

The information to be provided by the operating structures should include inter alia the publication of the list of final beneficiaries, the names of the operations and the amount of Community funding allocated to operations. The Commission must also ensure the publication of the relevant information on tenders and contracts in the official Journal of the European Union and other relevant media and websites.

Article 63 of the IPA Implementing Regulation provides further that the Commission and the relevant authorities of the beneficiary country shall agree on a coherent set of activities, to be funded from the TA priority of the operational programme, to make available and publicise information about IPA assistance.

In accordance with these provisions, the Programming Sub-Unit of IPA Management Unit shall be responsible for the information and publicity activities under the programme. The information shall be addressed to the citizens of Turkey and to European citizens in general, and to the potential beneficiaries. It shall be the aim to highlight the role of the Community and ensure that IPA assistance is transparent.

The Ministry of Transport will be responsible as an Operating Structure for :

- Providing information on and publicise programmes and operations by *highlighting the role of the Community* and ensuring that assistance from the Funds is transparent.
- Organising the publication of the list of the final beneficiaries, the names of the operations and the amount of Community funding allocated to operations.

### 5.4.2 Requirements

In compliance with Article 63 of the IPA Implementing Regulation the Programming Sub-Unit of IPA Management Unit will prepare a communication action plan (CP) to provide a strategic coherence to the set of activities to publicise information about IPA assistance. This communication action plan will cover the entire period 2007-2013. The Programming Sub-Unit of IPA Management Unit will submit a draft of the communication action plan to the Commission within four months of the date of signature of the Financing Agreement covering



the operational programme. As a minimum the communication action plan will include the following points:

- The aims and target groups
- The strategy and content
- The indicative budget
- The administrative departments
- The criteria used for evaluation

#### **5.4.3 Activities**

The Programming Sub-Unit of IPA Management Unit shall ensure that the information and publicity measures are implemented in accordance with the communication action plan aiming at the broadest possible media coverage using all suitable forms and methods of communication at the appropriate territorial level. The Programming Sub-Unit of IPA Management Unit will be responsible for organising at least the following information and publicity measures:

- a major information activity publicizing the launch of an operational programme, even in the absence of the final version of the communication action plan;
- at least one major information activity a year, as set out in the communication action plan, presenting the achievements of the operational programme including major projects;
- the publication (electronically or otherwise) of the list of beneficiaries, the names of the operations and the amount of Community and national funding allocated to the operations

The Programming Sub-Unit of IPA Management Unit shall provide potential beneficiaries with clear and detailed information on at least the following:

- the possibility of financing opportunities offered jointly by the Community and the beneficiary country through the OP;
- the conditions of eligibility to be met in order to qualify for financing under the operational programme;
- a description of the procedures for examining applications for funding and of the time periods involved;
- the criteria for selecting the operations to be financed;
- the contacts at national, regional or local level that can provide information on the operational programmes.

#### **5.4.4 Indicative budget**

The indicative budget for the Communication Action Plan under this Operational Programme for the period 2007-2009 will be set at an appropriate level in order to provide adequate cover for the costs of the publicity and information measures. The budget allocation per year, as well as the indicative amounts necessary for the period 2010-2013, will also be presented in the Communication Action Plan.

#### **5.4.5 Management and implementation**

Within the IPA Management Unit, Information and Communications will be assigned to Programming Sub-Unit, which will contain an information and publicity team. The information and publicity team will be composed of some of the officials of the IPA Management Unit, whose tasks will involve supporting the head of the operating structure in the performance of the following functions and responsibilities:

- discuss the communication action plan with the Commission;
- coordinating the information and publicity activities under other IPA funded programmes;
- communication with the media;
- elaboration, implementation and assessment of the programmes communication action plan;
- represent the programme in the relevant national and Commission information networks;
- handling enquiries from beneficiaries;
- monitoring and control on the fulfillment of the P&I requirements from the beneficiaries;
- development, production and distribution of information materials; preparation and implementation of public events;
- development and maintaining the contents of programme website;
- liaison with the IT regarding technical maintenance;
- management of out-sourced services;
- elaboration and monitoring Annual communication action plans and coordination of internal events and trainings.

Some of the information and publicity measures will almost certainly require out-sourcing for professional services (such as design and pre-print, web page, printing, advertising, photography and opinion polls). It will be the responsibility of the information and publicity team to manage such services and ensure they are contracted in accordance with public procurement rules.

#### **5.4.6 Monitoring, evaluation and reporting**

Monitoring, evaluation and reporting are mandatory requirements for the implementation of the publicity measures included into the communication action plan of the programme.

The progress made in the implementation of the communication action plan shall be reported during the meetings of the Sectoral Monitoring Committee. The head of the Operating Structure shall inform the Sectoral Monitoring Committee of the information and communication measures carried out and the means of communication used. The Head of the Operating Structure shall provide the Sectoral Monitoring Committee with examples of communication measures carried out.

The annual and final reports on implementation of the Operational Programme shall include the following information:

- Examples of information and communication measures for the operational programme undertaken in implementation of the communication action plan;
- The arrangements for the information and publicity measures concerning the publication electronically or otherwise of the list of beneficiaries, the names of the operations and the amount of public funding allocated to the operations;



- The content of major amendments to the communication action plan.

A set of indicators for evaluation of the publicity measures will be included in the communication action plan and represent the essential part of the plan with regard to the assessment of the efficiency and effectiveness of the implemented publicity activities.

The yearly results of the qualitative and quantitative analysis will be used for the elaboration of the Annual communication action plans and if there is a need for the modification of the communication action plan.

#### 5.4.7 Partnership and networking

Bodies that can act as relays for the programme and disseminate the information concerning the general public are the following:

- professional and trade associations and organizations;
- economic and social partners;
- non-governmental organisations;
- educational institutions;
- organisations representing business;
- operators;
- information centers on Europe and Commission representations in (*state country*);
- other main stakeholders of each priority.

The operating Structure will work in close cooperation with the above-mentioned bodies for the dissemination of information regarding the programme and IPA pre-accession assistance strategy.

#### 5.4.8 Internet

The website of the programme will be linked to the IPA, ECD, DG ELARG, DG EMPL and DG REGIO websites and preferably as well with the websites of the other programmes. It will be created according to the following principles:

- **Accessibility to as many users as possible** – ensuring the site has a simple address; registering it on main search engines so it can be found easily; designing it to be viewable with low specification screens and software; ensuring it is quick to download.
- **Prioritizing fast access to rich information** – the site should be clearly organized so users can find what they are looking for quickly and easily; the information should be available as downloadable pdf documents, where possible.
- **Visual appeal** – strong visual identity through logos, use of colors etc. without limiting the clarity, speed and simplicity
- **Developing as an ongoing resource**
- **Interactive content, exploiting the unique strengths of websites**

## Annex A

### Detailed Summary table of OP

<b>Priority axis 1:</b> Improvement of railway infrastructure, improved modal split in favour of railway sector. <b>Measure 1.1.</b> New construction and/or rehabilitation of railway lines on future TEN-T railway network or in connection with existing TEN-T			
<b>Specific objective 1</b>	<b>Result indicators</b>	<b>Main types of operation</b>	<b>Output indicators</b>
To increase the present market share of railways while increasing safety level and reducing railway travel time and establishing connection with the TEN-T Network	Shift of freight and passenger transport from roads on the given route  Increase in freight traffic by rail route (t-km)	New railway line construction or rehabilitation of existing line situated on Core Transport Network of Turkey	Number of approved projects Connection with the TEN-T  Km of new railway located on Core Transport Network
Railway sector and the related investor public institutions are targeted. Geographically, the areas close to the EU territory, which will enable connection to the TEN-T, are targeted by this measure.	Increase in passenger traffic by rail on the given route (pass-km)		
<b>Priority axis 2:</b> Improvement of port infrastructure / improved modal split in favour of maritime sector. <b>Measure 2.1:</b> New construction of ports or strengthening of existing ones with necessary multimodal hinterland connections.			
<b>Specific objective 1</b>	<b>Result indicators</b>	<b>Main types of operations:</b>	<b>Output indicators</b>
To provide suitable nodal points for continuous and safe transportation on TEN-T network through Turkey	Increase in handling capacity in the region	Construction of new ports on future TEN-T network within the territory of Turkey.	New ports located on Core Transport Network
To improve intermodality by increasing the capacity of ports and constructing their hinterland connections in compliance with the	Increase in storage capacity in the region		Kms. of railway constructed between port and railway  Estimated port capacity for handling (in TEUs)



<p>MoS policy of the EU.</p> <p>The maritime sector and related public institutions responsible for the port investment are targetted by this measure. Geographically, the areas close to the EU territory, which will enable connection to the TEN-T, are targetted by this measure.</p>			<p>Estimated port capacity for storage (in TEUs)</p>
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## ANNEX B

Indicative list of major projects of the Regional Development programme for "Transport" in Turkey

Project name	Estimated value of project M€
1. Construction of Kapıkule-Halkalı Railway Line	646
2. Port of Candarli ( North Aegean Sea Port)	185
3. Installation of a Signalling, Electrification and Telecommunication System on Irmak-Karabük-Zonguldak Railway Line	160
4. New Construction of Mersin Container Port	370



Project No:	Priority Axis: 1 Improvement of railway infrastructure	Measure No.: 1.1 New construction of railway lines on future TEN-T railway network or in connection with existing TEN-T
<b>Project location</b>		
1. Project name	<b>Construction of Kap-kule-Halkal• Railway Line</b>	
2. Investment value (estimated)	<b>646,106,161 EUR</b>	
3. Description of main project components and/or activities	<p>This project entails construction of railway line infrastructure in line with high standard railway technology. Assuming no financing problems, construction will be completed in 3 years. In general, there are six main steps in process - feasibility study, environmental impact assessment, application projects (cost-benefit analysis including financial analysis, design studies), preparation of tendering documents, land acquisition and construction after launching of tender procedure(s).</p>	
4. Description of main project objectives and expected results	<p>The Kap-kule-Halkal• railway line will strengthen the Asia-Europe connection on the Pan-European Transport Corridor IV. This project is the first step of an East-West railway line from the Bulgaria Border to the Georgian Border. Moreover, the Kap-kule-Halkal• railway line will improve economic circulation in the Trakya region which is the most important trade region of Turkey. The high standard line resulting from this project will provide interoperability with Europe. There will be both passenger and freight transport on this line and the speed of the line will be compatible with the linking line in Bulgaria. This project will reduce road density and its associated problems (accidents, air pollution etc.). Currently, there is a major imbalance between transport modes in Turkey. Road transport idiomates passenger and freight transport. This high standard railway line will contribute not only to a major improvement in railway transport but also curb the disparity between transport modes.</p>	
5. Month and year of start of project implementation	Late 2008	6. Month and year of end of project implementation
8. Readiness of basic project documentation		7. Project duration (months)
		40

Document type	status	status description	completion date	comment
Pre-feasibility study	<input checked="" type="checkbox"/>	completed	09.05.2006	
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	<input checked="" type="checkbox"/>	completed	09.2007	
EIA study	<input checked="" type="checkbox"/>	completed	09.2007	
Tender documents	<input checked="" type="checkbox"/>	completed	09.2007	
Other (specify)	<input type="checkbox"/>			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	status description (none/in progress/ completed)	completion date	comment
Conceptual design	<input checked="" type="checkbox"/>	completed	04.2006	
Preliminary design	<input checked="" type="checkbox"/>	completed	04.2006	
Main design	<input checked="" type="checkbox"/>	completed	03.2007	
Final design	<input checked="" type="checkbox"/>	completed	09.2007	
Location Permit	<input type="checkbox"/>			
Building Permit	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			
10. Description of the land ownership status:				
Both private and Public lands are on the project corridor. In this context, land acquisition will be done according to the respective Law #2942.				



11. Describe current project status	Pre-feasibility studies and cost-benefit analysis (including financial analysis) are completed. The feasibility studies, environmental impact assessment, design studies and preparation of tender documents are in progress and will be completed by 09.2007.		
12. Name of final beneficiary	General Directorate of Railways, Ports and Airports Construction(DLH)	13. Name of Operator	TCDD (Turkish State Railways)
14. Sources of financing : This part of the table will be filled in after the completion of calculations regarding the co-financing rate.			
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant
..... EUR	386, 098, 161EUR	..... EUR	159, 108, 000 EUR
15. Additional Comments:			

Project No: -	Priority Axis: Improvement of port infrastructure	Measure No.: 2.1 Construction of new ports on future TEN-T with necessary multimodal hinterland connections
<b>Project location</b>		
1. Project name	<b>Port of Çandarlı (North Aegean Sea Port)</b>	
2. Investment value (estimated)	<b>185.000.000 EUR</b>	
3. Description of main project components and/or activities	<p>The facility will function as a HUB PORT and provide sufficient berths which will accommodate postpanamax container vessels at 16 m. deep terminals and requires large stacking areas. The corridor connecting the Mediterranean trade lines to the Black Sea countries will utilize port of Çandarlı.</p> <p>Total Capacity of the facility : 2 million TEU Capacity of the first stage : 1 million TEU</p>	
4. Description of main project objectives and expected results	<p>Port of Çandarlı on implementation will -</p> <ul style="list-style-type: none"> <li>act as an alternative new port of the West Anatolian Hinterland</li> <li>act as a transmission center (hub-port) in the multimodal transportation line for the traffic between Europe / Middle East / East / Black Sea Countries.</li> </ul> <p>Since the project will have a hub-port function benefits will extend to the whole of Turkey with special positive impact on the West Anatolian hinterland.</p>	
5. Month and year of start of project implementation	2009 <sup>32</sup>	7. Project duration (months) 36

<sup>32</sup> The starting date of the implementation of the project is given as 2009 considering that the Feasibility Study and EIA of the project will be revised during the period of 2007-2008



8. Readiness of basic project documentation				
Document type	status	status description	completion date	comment
Pre-feasibility study				
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	X	Feasibility study completed in 2005.	14.12.2005	
EIA study	X	EIA approval is obtained from Ministry of Environment	17.03.2005	
Tender documents	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			
9. Status of project design documentation and permits				
Documentation type	Status (tick box)	status description (none/in progress/completed)	completion date	comment
Conceptual design	X	Completed	14.12.2005	
Preliminary design	X	Completed	14.12.2005	
Main design	<input type="checkbox"/>			
Final design	<input type="checkbox"/>			
Location Permit	X	Nearly completed		
Building Permit	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			
10. Description of the land ownership status:				

Land is owned by state.			
11. Describe current project status	Feasibility is completed under EU support. EIA approval obtained from Ministry of the Environment, Approval of settlement plans is expected to be finalised within 2007. Implementation of project (preparation of detailed design and construction) is submitted to be financed through EU funds.		
12. Name of final beneficiary	General Directorate of Railways Ports and Airports Construction	13. Name of Operator	
14. Sources of financing This part of the table will be filled in after the completion of calculations regarding the co-financing rate.			
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant
167,900,000 EUR	.....EUR	.....EUR	17,100,000 EUR
15. Additional Comments:			



Project No: -	Priority Axis: 1	Measure No.: 1.1
<b>Project location</b>		
1. Project name	<b>Installation of a Signalling, Electrification and Telecommunication System on Irmak-Karabük-Zonguldak Railway Line</b>	
2. Investment value (estimated)	160.000.000 EUR	
3. Description of main project components and/or activities	<p>The project entails new construction of the signalling, electrification and telecommunication systems for the Irmak-Zonguldak line section. The railways at some stations will also be extended and 7 new sidings will be constructed.</p> <p>New signaling, electrification and telecommunication systems will be controlled from central operating centers in Karabük. The signalling system will be compatible with ETCS Level-1 standards while the electrification system will be (AC) 50 Hz, 24kV and compatible with 160 km/h line speed and the telecommunication system will support command and remote control systems between Irmak – Zonguldak by underground fiber-optic cables and SDH systems. New construction of electronic level-crossing protection systems compatible with proposed signalling and electrification systems at all level crossings is also included in the project.</p> <p>For the maintenance and repair at the plants of the signaling and telecommunication systems as well as the further infrastructure plants, service centers and administration buildings are planned for Irmak, Cerkes and Karabük where appropriate buildings are to be constructed</p>	
4. Description of main project objectives and expected results	<p>The purpose of this project is to improve the line capacity of the Irmak-Karabük-Zonguldak railway line, increasing the railways' share of the transport market, improving the train management system, minimising staff numbers, reducing the operating costs, contributing to the protection of environment and making a major contribution to the development of that region.</p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>- By the implementation of this project, net freight transportation will increase by up to 7 millions tonnes by means of 30% capacity increase.</li> <li>- In this line works related to movement of trains such as switching of trains and changing of mechanical signals are done manually. There is a high dependence on station staff and a high risk of human errors. This project will eliminate human error risks as well as delays in travelling times with a major reduction in operating costs.</li> </ul>	

	<ul style="list-style-type: none"> <li>- The current telecommunication system is very susceptible to weather conditions and requires more technical staff to operate than an underground cable systems. With the installation of new telecommunication system frequent cut-downs due to weather conditions will decrease.</li> <li>- By replacing the electrified locomotives instead of diesel locomotives damage to the environment will be reduced.</li> </ul>				
5. Month and year of start of project implementation	By the end of 2009	6. Month and year of end of project implementation	2012	7. Project duration (months)	36
8. Readiness of basic project documentation					
Document type	status	status description	completion date	Comment	
Pre-feasibility study	X				
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	X		2005		
EIA study					
Tender documents	<input type="checkbox"/>				
Other (specify)	<input type="checkbox"/>				
9. Status of project design documentation and permits					
Documentation type	Status (tick box)	status description (none/in progress/completed)	completion date	comment	
Conceptual design					
Preliminary design					
Main design	<input type="checkbox"/>				
Final design	<input type="checkbox"/>				



Location Permit			
Building Permit	<input type="checkbox"/>		
Other (specify)	<input type="checkbox"/>		
10. Description of the land ownership status:			
<b>Land is owned by state.</b>			
11. Describe current project status			
Technical feasibility studies have not been prepared yet. Only a prefeasibility study was prepared showing general assessment of the project			
12. Name of final beneficiary	The main beneficiary will be Turkish State Railways (TCDD)	13. Name of Operator	Turkish State Railways (TCDD)
14. Sources of financing IPA and the other sources			
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant
.....EUR	.....EUR	.....EUR	.....EUR
15. Additional Comments:			

Project No: -	Priority Axis: 2	Measure No.: 2.1
<b>Project location</b>		
1. Project name	<b>Mersin Container Port</b>	
2. Investment value (estimated)	370.000.000 EUR (First Stage)	
3. Description of main project components and/or activities	<p>The facility will function as a HUB PORT and provide a sufficient number of berths to accommodate postpanamax container vessels. The corridor destined to Mid Asia and Middle East countries will utilise Mersin Container Port.</p> <p>In accordance with the results of the feasibility study carried out under EU grant, the capacity is estimated in stages as follows;</p> <p>Stage 1: 1 million TEU Stage 2: 2 million TEU Stage 3: 4 million TEU overall capacity</p>	
4. Description of main project objectives and expected results	<p>Present capacity of the existing port facilities on the Eastern Mediterranean coastline in Turkey is insufficient to satisfy the assessed future demand for the marine bound traffic via Turkey. This creates the necessity to provide new port capacities in hubport services which will be highly competitive by introducing efficient services and scale economies because of its privileged location. Mersin Container Port Project will act as a gateway facility between Mediterranean container shipping lines and Mid Asian landlocked countries.</p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>- Mersin Container Project will serve Middle and East Anatolian hinterland mainly GAP Project.</li> <li>- By providing cargo transmission between Mediterranean Sea and Black Sea will decrease the number of vessels passing straits.</li> <li>- Hub port function will provide considerable economic and strategic benefits.</li> <li>- Mersin Container Port will comprise an important component of the international multimodal transportation system and, because of its railway connection, will form a gateway position not only for Middle Eastern countries but also Caucasian, landlocked Asian and the Commonwealth of Independent States.</li> </ul>	
5. Month and year of start of project implementation	2008	24
6. Month and year of end of project implementation	2010	24
7. Project duration (months)	24	



8. Readiness of basic project documentation				
Document type	Status	status description	completion date	Comment
Pre-feasibility study				
Feasibility study (with cost-benefit analyses which includes economic and financial analysis)	X	Feasibility study is completed in 2005.	02.06.2005	
EIA study	X	Nearly completed.		
Tender documents	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			

9. Status of project design documentation and permits				
Documentation type	Status (tick box)	status description (none/in progress/completed)	completion date	Comment
Conceptual design	X	Completed	02.06.2005	
Preliminary design	X	Completed	02.06.2005	
Main design	<input type="checkbox"/>			
Final design	<input type="checkbox"/>			
Location Permit	X	O.K.		
Building Permit	<input type="checkbox"/>			
Other (specify)	<input type="checkbox"/>			

10. Description of the land ownership status:	
Land is owned by state.	

11. Describe current project status	
Feasibility is completed under Spanish grant. EIA approval will be obtained from Ministry of Environment and Forestry, approval of settlement plans is expected to be finalised soon.	

12. Name of final beneficiary	General Directorate of Railways Ports and Airports Construction	13. Name of Operator	General Directorate of Railways Ports and Airports Construction
14. Sources of financing IPA and the other sources			
National component (including final beneficiary)	IFI (specify)	Other donor (specify)	Proposed IPA grant
.....EUR	.....EUR	.....EUR	.....EUR
15. Additional Comments:			



