UNITED NATIONS

E

Economic and Social Council

Distr.
GENERAL

TRANS/WP.5/2002/1/Add.1
31 May 2002

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on Transport Trends and Economics
(Fifteenth session, 2- 4 September 2002,
agenda item 5)

REPLIES TO THE QUESTIONNAIRE ON TRANSPORT DEVELOPMENT

Addendum 1

Transmitted by the Governments of Lithuania and Turkey

Note: At its fifty-ninth session the Inland Transport Committee, following an earlier decision taken at its fortieth session (ECE/TRANS/42, para. 45), agreed to circulate the questionnaire on the most significant criteria for the determination of new and important developments with regard to inland transport in the member countries of general interest to Governments (ECE/TRANS/119, para. 52).

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LITHUANIA

A. General transport policy aspects

Membership in the European Union is a strategic objective of Lithuania's foreign and domestic policy. This will require fundamental changes in all areas of life.

The main transport policy trends are stable and remain unchanged for several years. They are defined in the Programme of Government for the years 2002-2004, which, with regard to the geographical situation of Lithuania, foresees the use of the country's possibilities in development of transit services and creation of favourable legal environment for transport services. The objectives and tasks of Lithuanian transport policy are also laid down in the Strategy of Lithuanian transport and transit development until 2015, Lithuania's EU Pre-accession Programme (PAP) and the Plan of Strategic Objectives of the Ministry of Transport and Communications

The Government has been paying particular attention towards the implementation of the Accession Partnership priorities, i.e. technical, safety and fiscal harmonization in road transport, restructuring of railways and strengthening of railway administration, strengthening of maritime administration and safety issues; administrative restructuring of civil aviation.

The main priorities in the transport sector are as follows:

- expansion of the sustainable Trans-European transport network (TEN-Tr) by gradual improvement of the technical level of the infrastructure;
- integration into the EU transport services market by ensuring free access to the market in all modes of transport and fair competition between operators;
- institutional reform, in order to organize the public management of transport more efficiently;
- the transport market liberalization. The priorities are given to promotion of private initiatives with the aim of attracting investments for the transport and logistic business;
- encouragement of transit services, by ensuring interoperability, giving priority to comprehensive development of transport technologies and services, development of international relations with neighbouring and further countries;
- the formation of safe and environmentally-friendly transport;
- the harmonization of a Lithuanian legal base with rules of EU legislation (final stage – implementation).

Economic, technological and operational aspects

An important measure of the implementation of the Lithuanian national transport policy is the development of the combined transport, especially engaging railway transport and short sea shipping capacities. Here the main incentive is the State aid for the development of combined transport terminals in the international corridors (in the Klaipeda seaport and on the Lithuanian-Polish border crossing, i. e. in the railway section of Sestokai-Mockava). Practically the combined transportation in Lithuania is performed through the Klaipeda seaport, by sea ferry lines, railways and by road transport. The project documentation of the

European gauge railway construction from the Lithuanian/Polish border to Kaunas with the envisaged freight logistic centre at present is under elaboration.

In order to promote Lithuania's position as a key player in the east-west direction cargo transport the establishment of a logistic centre near Kaunas, strategically ideally located at the intersection of the two international transport corridors I and IX through Lithuania where cargo flows from north to south and east to west meet is foreseen. The basic idea of the "Kaunas Logistic Node" (KLN) is, on the one hand, to promote international transport in Lithuania and on the other to benefit from the large amount of traffic currently crossing Lithuania and skim some cream off by offering (value added) services to transport operators and cargo owners. A new European standard gauge railway line between Lithuania and Poland is foreseen which will link the industrial area of Kaunas with the central European railway network which will definitely strengthen the respective Rail Corridor I by establishing the most eastern internal transport corridor in an enlarged European Union.

In the section Kaišiadorys-Šiauliai, the central section of Lithuanian railways (this section is common for the corridors I and IX) in 2001 the EU ISPA funded project was started on rehabilitation of telecommunications, signalling and electric supply systems and equipment, reconstruction of railway bridges and viaducts. It is planned to finalize these works in 2004.

At present, on the Lithuanian-Polish border the automatic gauge exchange system is under implementation, which together with the improvement of the technical standards of the roads will enable the expansion of passenger and combined transport by the railway.

From the point of view of combined transport the requirements of main laws and other legal acts in transport sector mostly meet the EU requirement, namely on:

- access to the market and to the profession;
- fair competition;
- technical parameters of transport means and freight units;
- organization of technical surveillance;
- requirements on environment and traffic safety.

Transport activities are regulated by more than 600 pieces of European Union legislation. Starting as early as 1995, the drafting of legal acts has been carried out with respect to EU recommendations defined in the White Paper of 1992. Therefore, legal acts passed after 1996 are in general aligned with the provisions of EU legislation. The main part of the national legislation in force is in full or partial compliance with EU law in the area of transport. During the years 2000-2001 new Laws on Aviation, Road Traffic Safety, Transport of Dangerous Goods by Roads, Rail and Inland Waterways, Amendments to Road Code were approved. The implementation of these Laws will facilitate better operational conditions for hauliers, fair competition between them, will ensure safety and security, environmental protection in transport sector.

Infrastructure aspects

Lithuania remains committed to the priority of integrating its transport system into the Pan-European transport network in compliance with the recommendations adopted in the Helsinki Conference in 1994, taking into account the vital importance of this process for Lithuania's integration into the European Union. At present the investment priorities (about 2/3 of all

transport infrastructure investment) are given to reconstruction and modernization of objects within the TINA concept (along the Corridors I and IX). These corridors are:

Roads:

- Corridor I: Kalvarija (Polish-Lithuanian border)-Marijampole-Kaunas-Kedainiai-Panevezys-Salociai (Lithuanian-Latvian border) with the branch line: Panemune (border with Kaliningrad region)- Taurage-Kryzkalnis-Siauliai-Kalviai (Lithuanian/Latvian border);
- Corridor IX: Medininkai (Lithuanian/Belarus border)-Vilnius-Kaunas-Klaipeda with the branch line: Kybartai (border with Kaliningrad region)-Marijampole-Kaunas;

Railways:

- Corridor I: Mockava (Polish/Lithuanian border)-Kazlu Ruda-Kaunas-Radviliskis-Siauliai-Sarkiai (Lithuanian/Latvian border) with the branch line: Pagegiai (Border with Kaliningrad region)-Radviliskis;
- Corridor IX: Kena (Lithuanian/Belarus border)-Vilnius-Kaisiadorys-Radviliskis-Siauliai-Kretinga-Klaipeda with the branch line: Kybartai (Border with Kaliningrad region)-Kazlu Ruda- Kaunas-Kausiadorys;

Lithuania during the works carried within the TINA process has defined the TINA Network in Lithuania that comprises:

- 1,100 km of railway lines;
- 1,617 km of roads lines;
- 3 airports;
- 1 seaport;
- 1 river port;
- 2 terminals.

As regards the TINA concept the main goals which Lithuania reaches are as follows:

- Connection of national transport networks to Trans-European networks;
- Ensuring sustainable mobility in national part of network of international importance (especially in border crossings);
- Ensuring interoperability, i.e. axle load, size, gauge, voltage, braking system in railways, pollution, etc.

In 2001 investments for modernization of the transport infrastructure has amounted to €72.4 million (financed by the State Investment Programme). On 9 October 2001 the investment project on improving the access road to the Vilnius International Airport financed by the Phare programme was completed. The investments of the above-mentioned project for reconstruction of road and construction of viaduct amounted to €1.2 million.

During this period Lithuania has submitted 6 applications to the European Commission for ISPA on support to the road and railway sectors and 1 application for technical assistance in railway sector. The total value of the 7 projects is €128 million. The European Commission has committed to finance 6 projects: €34.7 million from ISPA-2000 budget and €15 million from ISPA-2001 budget.

The first stage of the Via Baltica programme in the territory of the Republic of Lithuania has been finalized - 71 km of new roads were constructed, 103 km of roads were reconstructed or reinforced, 5 bridges and 7 viaducts were built, renovated or reinforced, new traffic safety means were implemented, 10 km of paths for pedestrians and bicycle riders were built, 7.5 km of fencings were repaired, 11 crossings were reconstructed. At present the second stage of the Via Baltica programme is under successful implementation with the aim of timely finalization and utilization of possible supplementary support opportunities in the period of 2004-2006.

At present the main investment priorities are as follows:

in road sector:

- Complete reconstruction of Via Baltica road,
- Rehabilitate and strengthen pavement on roads Vilnius-Klaipeda, Vilnius-Panevezys-Siauliai-Klaipeda,
- Construct Vilnius city southern by-pass,
- Reconstruct Siauliai-Taurage road,
- Construct new separate grade intersections.

in rail sector:

- Increase speed of trains up to 160 km/h in section Vilnius-Klaipeda,
- Modernize signalling, power supply and telecommunications in the main lines,
- Construct European gauge railway line from Polish/Lithuanian border to Kaunas (with logistical centre).

airports:

- Reconstruct and modernize infrastructure:
  - runways
  - lighting
  - signalling and navigation systems.

Lithuanian road infrastructure does not need new roads buildings within the TINA concept and investment priorities are given to reconstruction and modernization of the available road network. But much more finance has to be invested in the Lithuanian railway infrastructure.

Investments are directed at the rehabilitation and modernization of railway infrastructure (53%), reconstruction of roads (22%), development of the Klaipeda seaport (20%) and international airports (5%). It should be noted that the existing infrastructure, already in service of the growing passenger and freight flows (including transit flows), is being improved under common international standards.

The total costs of implementation of the TINA Programme up to year 2015 amount to €2.3 billion:

- modernization of railway network - €1229.86 M
- roads - €516.95 M
- sea port - €460.74 M
- airports - €92.5 M.

B.

(a) EMPLOYED POPULATION BY TRANSPORT ACTIVITIES, 1999-2001

(annual average number; thousand)

	1999	**2000**	**2001**	**2005**
Transport and storage, total	84.6	81.1	74,0	64,0
of which: railway transport	16,7	15.6	14.3	10,411
road transport	44,8	44,8	40,0	35,0
oil pipeline transport	0,3	0,27	0,3	0,3
inland transport	0,17	0,16	0,14	0,11

(b) PASSENGER TRAFFIC BY MODE OF PUBLIC TRANSPORT, 1999-2001

Million passenger-kilometres

	1999	**2000**	**2001**	**2005**
Total	3412	2767	2652,2	2767,0
Rail transport*	745	611	532.8	623
Road (public) transport	2665	2154	2118	2142
by buses	2096	1666	1617	1634
by trolleybuses	569	489	501	508
Inland waterway transport	2	2	1,4	2,0
Air transport	0,0	0,0	0,0	0,0

*Note: There are no trams, underground and urban railway transport in Lithuania.

(c) INFRASTRUCTURE FINANCING, 1999-2001

Million LT

	1999	**2000**	**2001**	**2005**
Railway transport	126,6	74,3	70,83	145,2
Road transport	329,0	314,8	138,7	345,3
Oil pipeline transport	n.a.	n.a.	n.a.	n.a.
Inland waterway transport	1,0	0,7	1,1	2,8
Air transport	23,0	14,3,	2.0	15.0

(d) GOODS TRAFFIC BY MODE OF TRANSPORT, 1999-2001

Million tonne-kilometres

	1999	**2000**	**2001**	**2005**
Total	18219	20145	21087,2	n. a.
Rail transport	7849	8918	7741	9022
Road transport	7740	7769	8048	8660
Inland waterways transport	3	0,7	0,6	0,7
Oil pipeline transport	2627	3457	4779,6	n. a.

(e) LENGTH OF ROADS, 1999-2001

(at the end of the year; kilometres)

	1999	**2000**	**2001**
Railway lines operated	1905	1905	1695.8
of which: electrified lines	122	122	122
1,520 mm gauge	1806.6	1811.9	1674
1,435 mm gauge	21.8	21.8	21.8
Roads	73650	75243	76000
motorways	417	417	417
Inland navigable waterways	788	833	833
of which regularly used for transport	369	380	380
Oil pipelines operated	500	500	500

(f) TRANSPORT EQUIPMENT

(at the end of the year)

	1999	**2000**	**2001**
Locomotives	286	278	265
Railway Enterprises wagons	10465	10117	10038
Goods wagons capacity, thous.t.	650,1	637,1	635,9
Railcars	65	63	63
Passenger Railway vehicles	572	563	537
of which: coaches	258	258	232
passenger railcars and railcar trailers	314	305	305
Sleeping cars	197	197	185
Seats cars	361	361	342
Number of buses	15590	15069	n.a.
Number of lorries and road tractors	96576	98613	n. a.
Inland waterways fleet, total	89	89	n.a.
of which freight vessels	21	22	n.a.
Freight vessels capacity, tonnes	10230	10310	n.a.
Number of personal passenger cars	1021795	1097797	n.a.

TURKEY

I. General transport policy aspects

Turkey is located between Asia and Europe serving as an intersection of trade. The transport sector has a significant role in economy since the country is surrounded by sea on three sides and covers an extensive area of 814,578 sq. kilometres. In addition, the increase rate of the population is very high , 1.6 % on average. It is estimated that Turkey's population will reach to 83.4 million people in 2022. The increase of population and globalization will boost the mobility and thus transportation needs.

The transport sector consists of road, rail, maritime, air and pipeline transport. There is no inland water transport in Turkey except train ferry operations on Lake Van.

Transport has been the locomotive and major contributor to economic growth, competitiveness and employment. It is still a driving force behind national/international trade and tourism.

In Turkey, railways were the main driving force of Turkey's economic development following the foundation of the Republic in 1923 until the 1950s. The railway network was about 4,000 route km in the 1920s, and while national policies favoured railway transportation in the first two decades, the network grew to about 7,000 km. Expansion of the network was designed to enable basic commodity flows essential to country's economic development.

After the 1950s, transport policy changed, giving more emphasis to highway transportation and resulting in a rapid expansion of the national road system. The road network expanded from 18,000 km in 1920 to 62,364 km in 1998 including 1528 km motorways, 31,320 km state roads, 29,516 km provincial roads excluding village roads and forest roads.

The development of road transport was further encouraged by three factors during recent decades:

- rapid development of the domestic automotive industry after the 1970's:
- an infrastructure investment programme which resulted in the construction of 1300 km of motorways in the 1980s
- failure of successive Governments to adopt policies which would either require or allow the publicly-owned railway industry effectively to respond to a competitive transport market structure dominated by private sector operators.

The highway led the domestic freight transport with a share of 89.10 % in 1999. The ratio is 4.36% for railway, 4.76 % for maritime and 0.18 % for airways. Ninety-six per cent of the domestic passenger transport in Turkey is by road.

In foreign trade volume, the share of maritime lines is 85.4 %, highways 12.5 %, railway and others 1.7 %, airway 0.4 % in 1997. On the other hand, in the share of foreign trade value, maritime lines led with 46.5 % of the total value followed by highways with 41.5 %, airway with 9.8 % and railway and others 2.2 % in 1997.

1. Current Situation of Transport Modes

1.1 Road Transport

The Turkish road network is 509,771 km in total. The Straits of Bosphorus (at the northern end of the Sea of Marmara) and of Dardanelles (at the southern end) set the dividing line between the European and Asian territories of Turkey. Currently, the Straits of Bosphorus is spanned by two highway suspension bridges- the Fatih Sultan Mehmet Bridge and the Bosphorus Bridge. Activities are under way to construct a Rail-Tube Tunnel under the Bosphorus.

TABLE 1: TURKISH ROAD TRANSPORT SYSTEM 1998 (KM)

	Surfaced	Earth	Impossible Roads	Total
Motorways	1,528	-	-	1,528
State roads	30,926	81	313	31,320
Provincial roads	27,570	1,120	826	29,516
Village roads	-	200,897	46,953	319,448
Forest roads	21,475	106,484	-	127,959
TOTAL	81,499	308,582	48,092	509,771

Source: 9th Transport Council, Road Transport Committee Report, 1998

International Highway network of Turkey, called E-Road, spreads across the country from west to east and north to south.

Infrastructure and operations are separated in road transport as in other countries. The Government is fully responsible for the construction and maintenance of the road infrastructure through the General Directorate of Highways within the Ministry of Public Works and Housing. Highway operators are completely private.

There are more than 5 million private cars registered in Turkey. The total number of road vehicles is more than 9 million. The rate of increase is rapid as domestic car manufacturing and car imports increase and the disposable income level rises.

Licences for intercity passenger transport operators operating on highways over 100 km is given by the Ministry of Transport according to the Regulation Governing Intercity passenger transport by road. There are 571 private bus operators giving service by 9,587 buses having 414,451 seat capacity.

Regional passenger transport by road below 100 km is subject to the permission and control of Governorships and Municipalities.

Licenses for international passenger transport by road is also given by the Ministry of Transport. In intercity passenger transport, there are 154 private bus operators being serviced by 1,385 buses having 68,080 seat capacity.

There is no law or regulation governing domestic freight transport by road. According to the latest figures of the Ministry of Interior Affairs there are 650,331 trucks and 877,591 small trucks registered in traffic. However, a new Road Transport Draft Law has been prepared by the General Directorate of Road Transport of Ministry of Transport and submitted to the Turkish Grant National Assembly for approval. The competence of the General Directorate of Road Transport of the Ministry of Transport will be increased with new staff to be employed to achieve transport policy objectives.

An electronic monitoring centre system has been established in the Ministry of Transport coordinated with Regional Directorates, border gates and international transport association in order to get statistical data on freight and passenger road transport movements.

EURO 1, EURO 2 and EURO 3 ECMT certificates are given to the operators of “green and safe” and “greener and safe” lorries conforming to EURO 1, EURO 2 and EURO 3 norms according to the ECMT (European Conference of the Ministers of Transport) Resolutions in order to reduce environmental impact of road transport vehicles in international freight transport and utilization of these kind of vehicles are supported.

The volume of international passenger transport by road is 95.2% and international freight transport by road is 89.9% according to the data of State Statistical Institute in 2000.

As for international freight transport, there are 897 operators, 21,083 trailers, 24,748 semi-trailers, 4,179 trucks with 852,944 tons capacity in total.

1.2 Rail Transport

Railways and seven big sea ports are operated and maintained by TCDD which is a Government organization falling into the State Economic Enterprise (SEE) category. The construction of new railways and sea ports is the responsibility of DLH (General Directorate of Railways, Ports and Airports Construction) within the Ministry of Transport.

TCDD currently provides rail passenger and freight transport services over an extensive rail network. In so doing, it faces intense competition from the road transport industry which is privately run by businessmen who market their services aggressively, are very responsive to customers and keep costs to a minimum. In contrast, TCDD's ability to respond by providing an efficient, competitive rail service at an acceptable financial cost is constrained by the policy and legal framework within which it operates.

The number of staff employed in the railway sector is more than 45,000 including 3 affiliate corporations which are manufacturing locomotive and rolling stock.

By the AGTC Agreement, the following TCDD railway lines are accepted as international combined transport lines:

- E70 Kapikule-Istanbul-Haydarpasa-Ankara
- E702 Ankara-Kapiköy(Razi-Iran)
- E704 Ankara-Nusaybin(Kamisli-Syria)
- E704 Mersin-Adana-Iskenderun-Nusaybin
- E702 Samsun-Sivas-Malatya-Kapiköy
- E702 Bandirma-Ankara-Kapiköy

1.3 Sea Ports

Surrounded by sea on three sides, Turkey has the privilege of having strategic ports in a very rapidly developing region. With its 8,333 km of coastline, there exist 8 major public ports, 10 public piers, 50 small municipal piers and about 59 specialized private ports owned by industrial complexes. In Turkey, 7 big public ports comprising Derince, Bandirma, Mersin, Iskenderun, Samsun, Haydarpasa and Izmir are operated by TCDD- Turkish State Railways, all having connections to the railway network. The Turkish Maritime Organization (TDI) operates the port of Trabzon which is in the process of privatization.

Haydarpasa, Mersin, Bandirma, Iskenderun, Samsun and Derince ports have been registered as international ports and container terminals by the AGTC Agreement.

TABLE 2: CAPACITY OF TCDD PORTS

Ports	Ship/Year		Handling (1000 tonnes)		
	Freight	Passenger	General Cargo Dry Bulk	Container	Total
Haydarpasa	2,651	-	2,834	3,082	5,916
Derince	1,105		- 1,799	-	1,799
Samsun	1,130	-	2,189	-	2,189
Mersin	2,650	623	2,639	2,855	5,494
Iskenderun	640	-	3,224	-	3,224
Bandirma	1,037	3,240	2,636	-	2,636
Izmir	2,389	1,246	1,469	4,082	5,551
TOTAL	11,602	5,109	16,790	10,019	26,809

Source: TCDD Annual Statistics 1999

Haydarpasa, Izmir and Mersin ports are the biggest ports of Turkey in terms of annual handling capacity and ship/year capacity.

The major commodity groups handled at TCDD ports are dry bulk, container, liquid bulk and general cargo.

The volume of goods loaded at TCDD ports were 18,176,000 tonnes in 2001. The volume of goods unloaded at TCDD ports were 16,435,000 tonnes in 2001.

1.4 Air Transport and Airports

After the adoption of the Civil Aviation Law No 2920 in 1983 by Parliament, the Turkish aviation sector has shown a significant progress. In this period, not only the modernization and the service standards of the Turkish Airlines (THY) which is a public corporation (100% State owned) but also the number of the private airline operators were increased. The biggest operator is Turkish Airlines (THY) and its shares will be sold in the near future. There are 8 private airline operators. In parallel to these developments, the market share of air transport has improved. There is no full competition in domestic flights since the leading air operator is the Government and its investments are currently covered by the State.

In 1998, 90% of the total movements, 99.6 % of the international movements were covered by the eight most important international airports of Turkey which are Atatürk, Esenboga, A. Menderes, Antalya, Dalaman, Adana, Trabzon and Milas-Bodrum.

Airport operations are the responsibility of the DHMI (General Directorate of State Airports Operations) which is a State Economic Enterprise like TCDD under the Ministry of Transport. The number of airports operated by DHMI is 40, including 10 international airports.

TABLE 3: AIRPORTS IN TURKEY

Type of Airports	No.
International and domestic	10
Domestic and charter	10
Domestic	20
TOTAL	40

Source: DHMI (General Directorate of State Airports Operations)

The aircraft traffic realized in 2001 was 10.057.808 domestic, 23.562.640 international for a total of 33.620.448. With regard to the year 2000 there is a decline of -%4.

The construction of new airports is the responsibility of DLH (General Directorate of Railways, Ports and Airports Construction) within the Ministry of Transport which hands the new airports over to DHMI when they are completed.

In Turkey transport activities are carried out by several Ministries and organizations. As a result transport decisions are taken by different authorities and there is no authority to coordinate and integrate these decisions. This abundance of authorities and lack of a general transport policy has a negative effect on efficiency and sustainability in the transport sector.

Most of the operators and infrastructure units in rail, air, road and sea transport are public organizations and thus the State plays a major role in the sector, having a cost increasing effect and prices go further away from covering the costs. It is, therefore, necessary to redefine the State's role limiting it to a regulatory part.

To solve these problems and to define Turkey's Transport Policy, preliminary studies are under way for preparation of a Transport Master Plan under the coordination of the Ministry of Transport. On the other hand restructuring activities are going on in order to improve the efficiency of public organizations in the transport sector.

II. Economic, technological and operational aspects

Maritime Container Transport

Container transport services are available at TCDD ports and private ports located in Izmit Gulf and in Ambarli in the Marmara Region. New private container ports are under construction in the same area. In 1998, the overall container handling volume reached 700 thousand TEUs. During the past ten years, containerization has substantially grown and now exceeds general cargo at each port but the traffic to and from ports is currently moving 95% by highway trucks. To attract traffic from the ports and the roads to the railways, TCDD has been carrying out studies on combined transport strategies and is aiming to increase the share of the railways in the sector by making the railways an indispensable means of door to door transportation. Studies are under way for installing new inland container terminals.

A significant volume of the sustained increase in maritime container volumes is handled through the TCDD ports of Izmir, Mersin and Haydarpasa.

Container traffic has reached 1,347 thousand TEUs in 1998 and the growth rate has been an average of 26.6 % per year over the past ten years. Container transportation has become a global standard for the international trade nowadays. Therefore, formulation of a strategy on container traffic is the key to the development of this sophisticated industry to which Turkey has been orienting.

TABLE 4: CONTAINER TRAFFIC IN TURKISH SEA PORTS

	1994	1995	1996	1997	1998
	(thousand tons)				
All ports	3,780	7,323	9,073	11,791	13,077
TCDD ports	5,480	6,862	8,428	9,659	9,723
TCDD ports (TEU)	588,341	715,239	874,121	1,001,692	972,167

Source: TCDD Annual Statistics, JICA Study on the Nationwide Port Development Master Plan, March 2000

More than 70 % of the maritime containers are handled at TCDD ports.

There will be a growing demand for the movement of containers in the near future and it is forecasted that the container traffic will reach to reach 6 million TEU by the year 2020.

TABLE 5: CONTAINER TRAFFIC FORECAST FOR TURKISH SEA PORTS (TEU)

	1998 (Actual)	**2010**	**2015**	**2020**
All ports	1,345,000	3,380,000	4,500,000	6,000,000

Source: JICA Study on the Nationwide Port Development Master Plan, March 2000

III. Infrastructure aspects

Transport is of great importance for economic growth, labour mobility, consumers and the competitiveness of Turkey. It is, therefore, vital that its provision and use is as efficient as possible. Achieving this objective is among other questions dependent on how users are charged for infrastructure and what means are available to finance investments.

Relying on the purely public financing of transport infrastructure is becoming more difficult as Turkey faces growing financial burdens and seeks to develop greater involvement of the private sector in the financing of infrastructure projects.

Turkey has been developing infrastructures through foreign sources provided from multilateral and governmental organizations and private creditors. These lenders are lending around US$ 3 billion per annum to Turkey. The European Investment Bank (EIB), Islamic Development Bank (IDB), European Council Social Development Fund, International Development Association, International Bank for Reconstruction and Development (IBRD) and Nordic Investment Bank are among the lenders.

BOT port projects were contracted in 1999 for Filyos and Derince Ports which are under preparation for construction.

TCDD's investment plans have been supported by foreign loans. TCDD received €36 million from European Investment Bank for the procurement of container handling equipment at Haydarpasa, Izmir and Mersin Ports. Equipment procured has been installed in the same ports during 1997-1999.

Airport investments are made by the Government. However, the BOT model has become popular in financing of airport investments. Atatürk and Antalya airports were constructed by the BOT model.

Table 6: Planned and Realized investments with regard to modes of transport

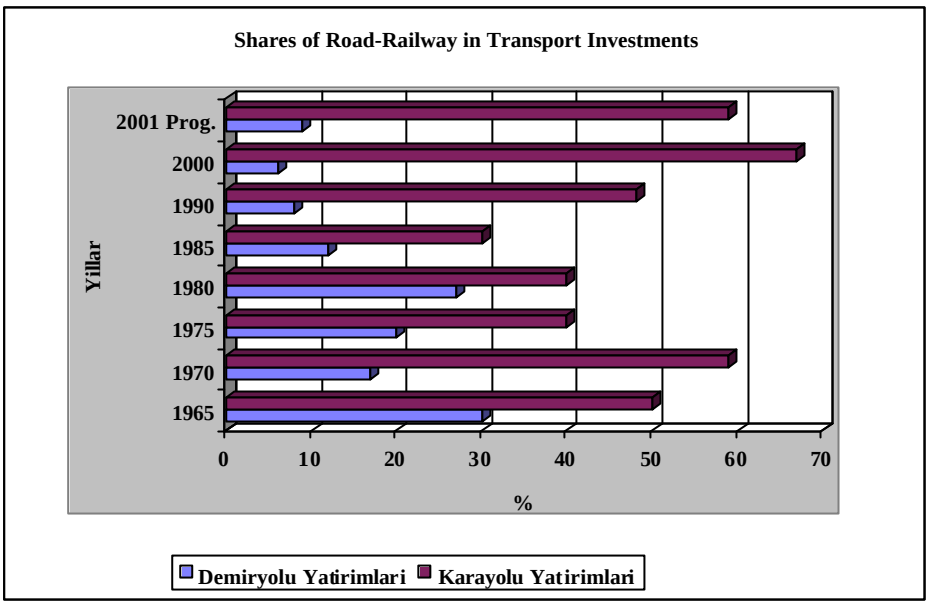
	I. BYKP		**II. BYKP**		**III. BYKP**		**IV. BYKP**		**V. BYKP**		**VI.BYKP**	
	Plan. *(P)*	Gerçek *(R)*	Plan. *(P)*	Gerçek *(R)*	Plan. *(P)*	Gerçek *(R)*	Plan. *(P)*	Gerçek *(R)*	Plan. *(P)*	Gerçek *(R)*	Plan. *(P)*	Gerçek *(R)*
Road	71,2	71,2	72,7	72,7	52,0	74,6	60,7	74,6	49,2	43,3	78,9	82,7
Railway	17,5	17,5	18,8	18,8	22,4	13,9	24,6	10,6	21,9	16,0	8,5	7,2
Others	11,3	11,3	8,5	8,5	25,6	11,4	14,7	14,8	28,9	40,7	12,6	10,1

Table 7: Planned and Realized investments with regard to modes of transport, according to 7th National Development Plan-BYKP

	PLANLANAN ***(Planned)***	**GERÇEKLESEN** ***(Realized)***
Road	**71**	**66**
Railway	**9**	**7,5**
Others	**20**	**26,5**

Provided that the increase trends in the last 25 years continue it may be expected that in the year 2020 passenger traffic will grow approximately 3.3 times (540 Billion Passenger-Km) and Freight traffic 2.5 times (300 Billion Ton-Km). Extension of the existing rail network is of vital importance in view of the ever-growing demand in Turkey.

No doubt, Turkey cannot meet all the requirements of the young population with its limited resources. Still some important distance is covered in the transport sector, the motorways being one. At the point reached today it is necessary that all partners in the sector should be self-sufficient. However, General Directorate of Turkish State Railways being the leader it is hard to talk of self-sufficiency for the public organizations in the sector. Maybe it will better explain the seriousness of the situation to mention that TCDD's loss with current prices in 2001 has neared TL 550 trillion and the value added is TL 138.1 trillion with current prices in 2000.



Graf 1

The figures show that policies not complying with a sustainable development are ruling in the transport sector. While the road receives a share of 60% of the total transport investments the share of rail is under 10%. It is observed that rail's share has especially shrunk after General Directorate of Railways Ports and Airports was transferred to Ministry of Transport in 1986.

PORTS AND RAILWAYS PROJECTS OF TURKEY

1. PORT FACILITIES, EQUIPMENT AND MODERNIZATION (III) PROJECT:

EIB (European Investment Bank) has provided a loan for €36 million for equipping Haydarpasa, Izmir and Mersin Ports with full container equipment. (1998-2001)

2. TURKEY EARTHQUAKE REHABILITATION AND RECONSTRUCTION ASSISTANCE PROJECT (TERRA)

EIB has provided a loan of €12.8 million for Derince Port Rehabilitation and Procurement of 2 units of Quay Cranes. Our request for a loan of €12 million for the procurement of 2 units of Gantry Cranes is under study.

3. TURKEY EARTHQUAKE REHABILITATION AND RECONSTRUCTION ASSISTANCE PROJECT (TERRA)

EIB has provided a loan of €36 million for the purchase of 4 train sets to replace the rolling stock damaged during the earthquake.

OTHER PROJECTS

1. ALIAGA - MENEMEN / ALSANCAK - CUMAOVASI ELECTRIFICATION & SIGNALLING PROJECT

The Project with a total cost of $US 45.5 million is going on. A loan of $US 19 million for electrification is supplied by the Spanish Government and Spanish Private Sector. A loan of $US 26.5 million is provided by Japanese Eximbank and Private Firms

2. ANKARA-ISTANBUL REHABILITATION PROJECT

The total cost of $US 402 million is provided through the Spanish Goverment and Private Firms loans. Credit negotiatons are going on between Treasury and the Creditor.

3. PERMANENT WAY MECHANISATION PROJECT (IV)

The project with a total cost of $US 15.3 million is waiting for the approval of the Undersecretariat of the Treasury and will be financed through Private Firms loan.

B.

(a) Total Employment in railways 2001: 39,856.

(b) Total investments 2002: TL 300.8 trillion (including TL 70 trillion for earthquake compensation).

(c) Passenger transport 2001: mainline 24 million suburban: 52 million total: 76 million passenger-km total: 5.6 billion.

(d) Freight transport 2001: 14.3 million tons Ton-km: 7.5 billion.

(e) TURKISH RAIL TRANSPORT SYSTEM 2001 (KM)

	Non-electrified	Electrified	Total
Mainlines	6,778	1,479	8,257
Doubling Mainlines	141	273	414
Total Mainlines	6,919	1,752	8,671
Subsidiary Lines	1,899	370	2,269
TOTAL	8,818	2,122	10,940

(f) capacity of railway rolling stock total: freight 638,735 ton
number of freight cars: 16,513
passenger 60,673
number of passenger coaches:1,031.

CRUDE OIL TRANSPORTATION ACTIVITIES AND RELATED FACILITIES

Since its foundation in 1974, BOTAS has instigated the construction and commissioning of various crude oil pipelines through which it is carrying out its crude oil transportation activities.

BOTAS' existing crude oil pipelines are as follows:

- Iraq-Turkey Crude Oil Pipeline;
- Ceyhan-Kirikkale Crude Oil Pipeline;
- Batman-Dörtyol Crude Oil Pipeline; and
- Selmo-Batman Crude Oil Pipeline.

IRAQ-TURKEY CRUDE OIL PIPELINE

The Iraq-Turkey Crude Oil Pipeline System has been constructed within the frame of the Iraq-Turkey Crude Oil Pipeline Agreement that was signed on 27 August 1973 between the Governments of the Republic of Turkey and the Republic of Iraq for the purpose of transporting the Iraqi crude oil from the Kirkuk Region and other production fields in Iraq to the Ceyhan (Yumurtalik) Marine Terminal. The 986 km long (1st line), 40" pipeline was commissioned in 1976 and the first tanker was loaded on 25 May 1977. The pipeline allowed an increase of the annual capacity to 70.9 MTA.

The projects aiming at increasing the capacity of the pipeline system are;

- The First Expansion Project, the construction of which started in 1983 and was completed in 1984, which allowed increasing the initial annual capacity of 35 MTA to 46.5 MTA;

- The Second Pipeline (parallel to the first one), the construction of which started in 1985 and was commissioned in 1987. This 46" pipeline allowed an increase of the annual capacity to 70.9 MTA.

As the owner of the pipeline system located within the territory of Turkey, BOTAS undertakes the operation, control, maintenance and repair of the pipeline system. The pipeline has an efficient telecommunication system by means of which the operation of the pipeline is controlled by the main dispatching centres located in Iraq and Turkey.

	IRAQ	TURKEY	TOTAL
1ST line	345	641	986 km
2ND line	234	656	890 km
TOTAL	579	1,297	1,876 km

The segment of the Crude Oil Pipeline System in Turkey contains 6 pump stations located in Silopi, Idil, Midyat, Viransehir, Araban and Pazarcik and a pig station in Bahçe. There are 12 storage tanks with a capacity of 135,000 m³ each, one relief tank with a capacity of 10,000 m³, a water tank with a capacity of 3,000 m³, one slop tank with a capacity a 10 m³, 3 ballast treatment tanks with a total capacity of 95,000 m³, one slop tank with a capacity of 3.000 m³ in Ceyhan Terminal. There is a 1,950 m long terminal jetty containing 4 slop tanks

with a total capacity of 144 m³ and two surge tanks with a total capacity of 75 m³ which can accommodate four 15,000-300,000 DWT tankers. There are also tug boats, mooring and pilot boats

The suspension of the Iraq-Turkey Crude Oil Pipeline operations since August 1990, arising out of the embargo imposed on Iraq by the United Nations, was ceased by United Nations resolution No. 986 dated 14 April 1995, which allowed Iraq to export limited amounts of crude oil for a period of six months. The first tanker was loaded on 16 December 1996, accordingly.

31,280,690 tons (230,853,656 barrels) of oil was transported in 2001 by the Iraq-Turkey Crude Oil Pipeline under United Nations resolutions. A total of 167,358,488 tons (1,239,620,851 barrels) of Iraqi oil was transported between December 1996 and December 2001.

CEYHAN-KIRIKKALE CRUDE OIL PIPELINE

The Ceyhan-Kirikkale Crude Oil Pipeline stretching from Ceyhan to Kirikkale Refinery meets the requirements of the Kirikkale Refinery. The ownership of this pipeline was transferred to BOTAS from TPAO in October 1983. It was commissioned in September 1986. The 447 km long 24" diameter pipeline has an annual capacity of 5 MTA.

There are two pump stations in Karaisali and in Ceyhan, a pig station in Aksaray, a delivery terminal in Kirikkale. There are three storage tanks with a capacity of 50,000 m³ each in Ceyhan, 5 slop tanks with a capacity of 10 m³ each in Ceyhan and on the line and one relief tank with a capacity of 1,500 m³ in the delivery terminal.

A total of 3,412,175 tons (24,812,901 barrels) of crude oil was transported through Ceyhan-Kirikkale Crude Oil Pipeline in 2001.

BATMAN-DÖRTYOL CRUDE OIL PIPELINE

This pipeline was commissioned by TPAO (Turkish Petroleum Corporation) on 4 January 1967 to transport the crude oil produced in Batman and the surrounding areas to the Dörtyol Terminal and thereafter to the domestic points of consumption. Its ownership was transferred to BOTAS on 10 February 1984. The pipeline starts from Batman and ends in Dörtyol on the Bay of Iskenderun. This 18" line has an annual capacity of 3.5 million tons and it is 511 km long. The crude oil produced in Batman, Diyarbakir and Saril regions is also transported to Dörtyol through the same pipeline by connected branches.

There are 3 pumping stations in Batman, Diyarbakir (Pirinçlik) and Kahramanmaras (Saril). Both Batman and Dörtyol Terminals have 7 crude oil storage tanks each with a capacity of 25,000 cum. There are 8 more storage tanks; four in Pirinçlik and four in Saril. The Dörtyol tank farm also has a ballast treatment tank with a capacity of 6,000 cum. The 1,320 m long jetty at the Dörtyol Terminal can receive tankers with a maximum capacity of 65,000 DWT.

A total of 2,775,493 tons (19,835,875 barrels) of crude oil was transported through Batman-Dörtyol Crude Oil Pipeline in 2001.

SELMO-BATMAN CRUDE OIL PIPELINE

This pipeline transports the crude oil produced in the Selmo Area to the Batman Terminal. It is 42 km long and has a capacity of 800,000 tons/year.

A total of 107,631 tons (793,448 barrels) of crude oil was transported through this pipeline in 2001.

EXISTING AND PLANNED NATURAL GAS PIPELINES OF TURKEY

Currently, the length of the existing natural gas pipelines of BOTAS is about 3,800 km and around 1,200 km distribution lines are under construction. Also, two transmission lines with a total length of 1,200 km were tendered as 6 sections in 2001. In addition, the length of the planned lines to be tendered in 2002 is around 800 km.

The Main Natural Gas Transmission Line, with a length of 842 km, was built to transport Russian gas supplies to Turkey. The pipeline stretches from Bulgaria, enters into Turkey near the town of Malkoçlar and reaches to Ankara supplying gas to power stations, industries and the cities of Ankara, Istanbul, Izmit, Eskisehir and Bursa. In 1996, the transmission line was extended to the Western Black Sea Region through the 209 km long Izmit-Karadeniz Eregli Transmission Line and to Çan through the 208 km long Bursa-Çan Transmission Line. BOTAS extended the existing transmission network further from Çan to Çanakkale with a pipeline of 107 km long in 2000. In addition to these lines, a 1,500 km long Eastern Anatolia Natural Gas Main Transmission Line was put into operation at the end of 2001. This pipeline stretches from the Iranian border to Ankara by way of Erzurum, Sivas and Kayseri. The Eastern Anatolia Natural Gas Main Transmission Line also extends from Kayseri to Seydisehir via Konya.

The construction of the Turkish section of the Blue Stream Project from Samsun to Ankara via Amasya, Çorum and Kirikkale was completed in 2001 and a 501 km long line was connected to the Russian Federation-Turkey Natural Gas Transmission Line near Ankara. With this pipeline, natural gas will be supplied to the cities on the pipeline route; namely Samsun, Amasya, Çorum and Kirikkale. Construction works of the Pressure Reducing and Metering Station in Samsun/Durusu are just about to be completed. The delivery of gas will be started in the second half of 2002.

The Russian Federation-Turkey Natural Gas Main Transmission Line has been extended from Bursa (Karacabey) to Izmir, to supply natural gas to the industrial and residential sectors in cities along the route such as Balikesir, Manisa and Turgutlu via a 251 km. long, 36” pipeline. Construction works have been completed in April 2002.

BOTAS plans to further extend the line to the Aegean and Southern Anatolia regions via the construction of the Konya-Izmir and Southern Natural Gas Transmission Lines. Both transmission lines have been tendered as three sections and construction contracts related to these sections of the Southern Natural Gas Transmission Line and the Konya-Izmir Natural Gas Transmission Line have been signed and the studies for financing are carried by the contractors. The construction of these lines is planned to be completed in 2004.

In order to transport Turkmenian and Azeri gas, approximately 250 km long pipeline from the Georgian border of Turkey to Erzurum/Pasinler is going to be constructed and it will be

connected to the Eastern Anatolia Natural Gas Main Transmission Line. The environmental impact assessment study of this pipeline has been finalized.

TURKISH GAS MARKET LIBERALIZATION

Today, the gas business enters the new millennium in a context of restructuring of the energy scene as a whole. Stimulated by new technological and commercial opportunities, the industry is repositioning to initiate a new growth phase and a 'new economy' of gas is accordingly emerging. Technological progress, new economic and commercial approaches, player strategies, globalization, mergers and alliances combine to give gas the dynamism it needs to materialize the hopes it embodies to become the 'energy of the 21st century'.

Gas market structures are changing drastically worldwide. While recent decades were supply-oriented, the quest for improved competitiveness, greater adaptation to market and consumer demands, represent the objectives of the industry in the new century.

Parallel with the world trend, the Turkish gas sector is also being restructured. The new "Natural Gas Market Law" was enacted on 2 May 2001, ending BOTAS' monopoly over the importation, distribution, selling and pricing of natural gas. The basic objective of the law is to create a competitive gas market and encourage the private sector to invest in the gas sector. Transparency and regulation in the market is necessary in order to achieve these goals. In this respect, some concepts of the new Natural Gas Market Law are the following:

Regulator : The gas and electricity markets will be regulated by an independent regulator, called the Energy Market Regulatory Authority (EMRA).

Unbundling: BOTAS' vertically integrated legal entity (excluding distribution operations) will continue until 2009. After that date, BOTAS shall be restructured into a horizontally integrated legal entity, with the importation and marketing arms of BOTAS retaining the BOTAS name. The companies to be formed as a result of this restructuring shall be privatized within two years, except for the company responsible for the transmission activities.

Market Opening:

- Companies willing to operate in the Turkish gas market will have to obtain a licence from EMRA. Storage tariffs and wholesale prices will be set by competition, with some oversight by EMRA.

- BOTAS is prevented from concluding new import contracts until its supply share falls to 20% of total demand. However, a temporary article in the law makes an exemption for Egyptian supplies (a natural gas sale and a purchase contract was initiated by BOTAS) if the studies made by EMRA shows supply deficiency.

- A gas release programme will be set up under which BOTAS will have to auction at least 10% of its supply portfolio every year until 2009, or until its market share is reduced to 20%. No import company shall be allowed to import in excess of 20% of the national gas consumption estimate, nor to conclude an import agreement with any company with which BOTAS has an importation contract.

- Residential natural gas distribution service licenses will be awarded to private companies through tenders. The existing city distribution companies owned by the municipalities will be privatized to reduce municipalities' holdings to a maximum of 20%.

- Although the new Natural Gas Market Law came into force immediately, its implementation is subject to a twelve-month transition period, extendable to a maximum of 18 months. Consumers consuming more than 1 million m^3 per year of gas and all power producers will be able to choose their suppliers following the transition period. This threshold will be renewed every year.

Third Party Access: The existing and currently planned BOTAS transmission network will form a National Transmission System, but other companies will be able to build and own transmission lines. BOTAS, as owner and operator of the National Transmission System, is to offer services under a system of non-discriminatory, regulated and published tariffs and access conditions regulated by EMRA.

Storage: To ensure security of supply, gas importers and wholesalers must store 10% of the gas they import within five years.
