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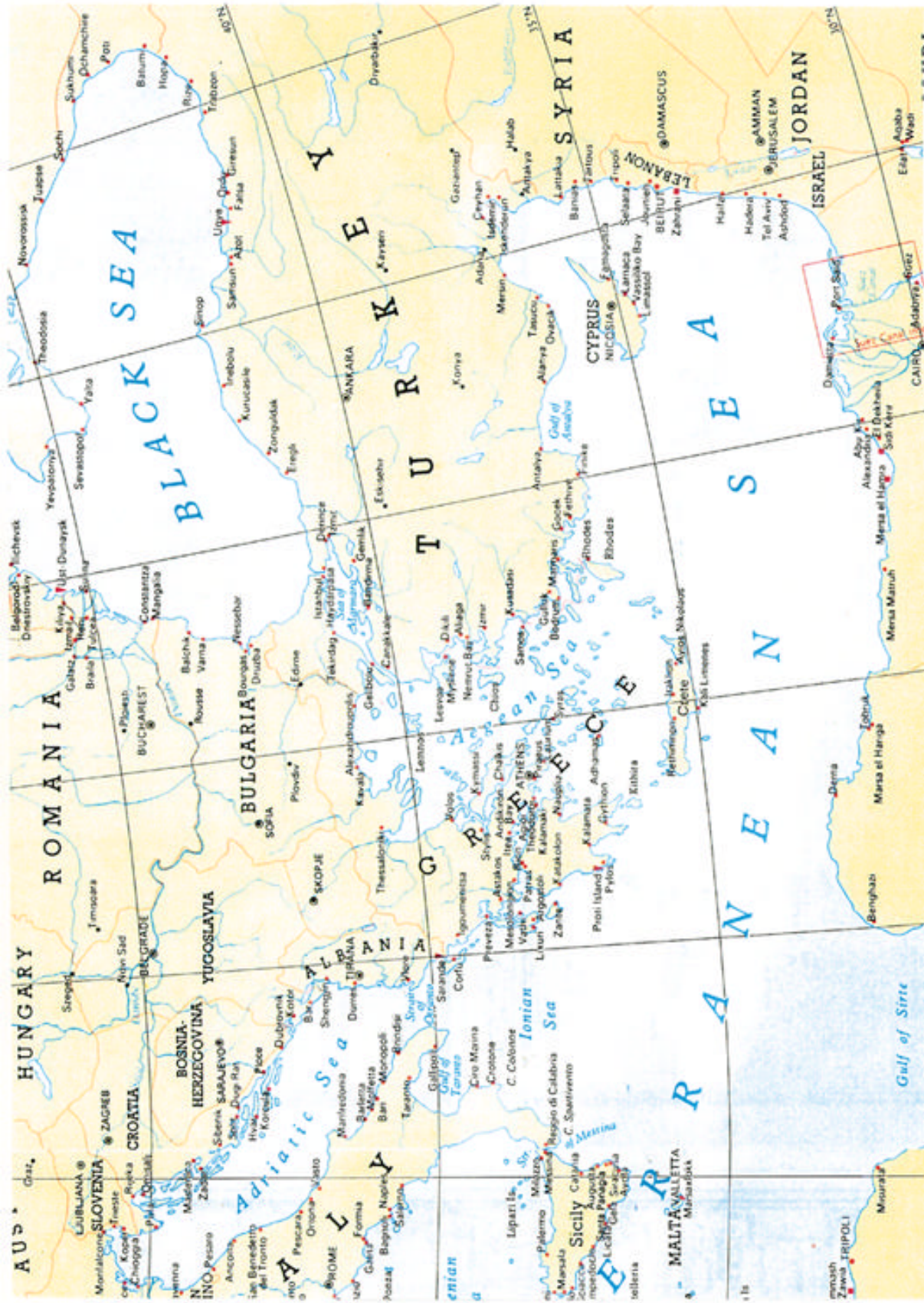
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
GENERAL DIRECTORATE OF RAILWAYS, PORTS AND AIRPORTS CONSTRUCTION
MINISTRY OF TRANSPORT AND COMMUNICATION (DLH)

FINAL REPORT FOR THE STUDY ON THE NATIONWIDE PORT DEVELOPMENT MASTER PLAN IN THE REPUBLIC OF TURKEY (ULIMAP)

MAINREPORT VOLUME I

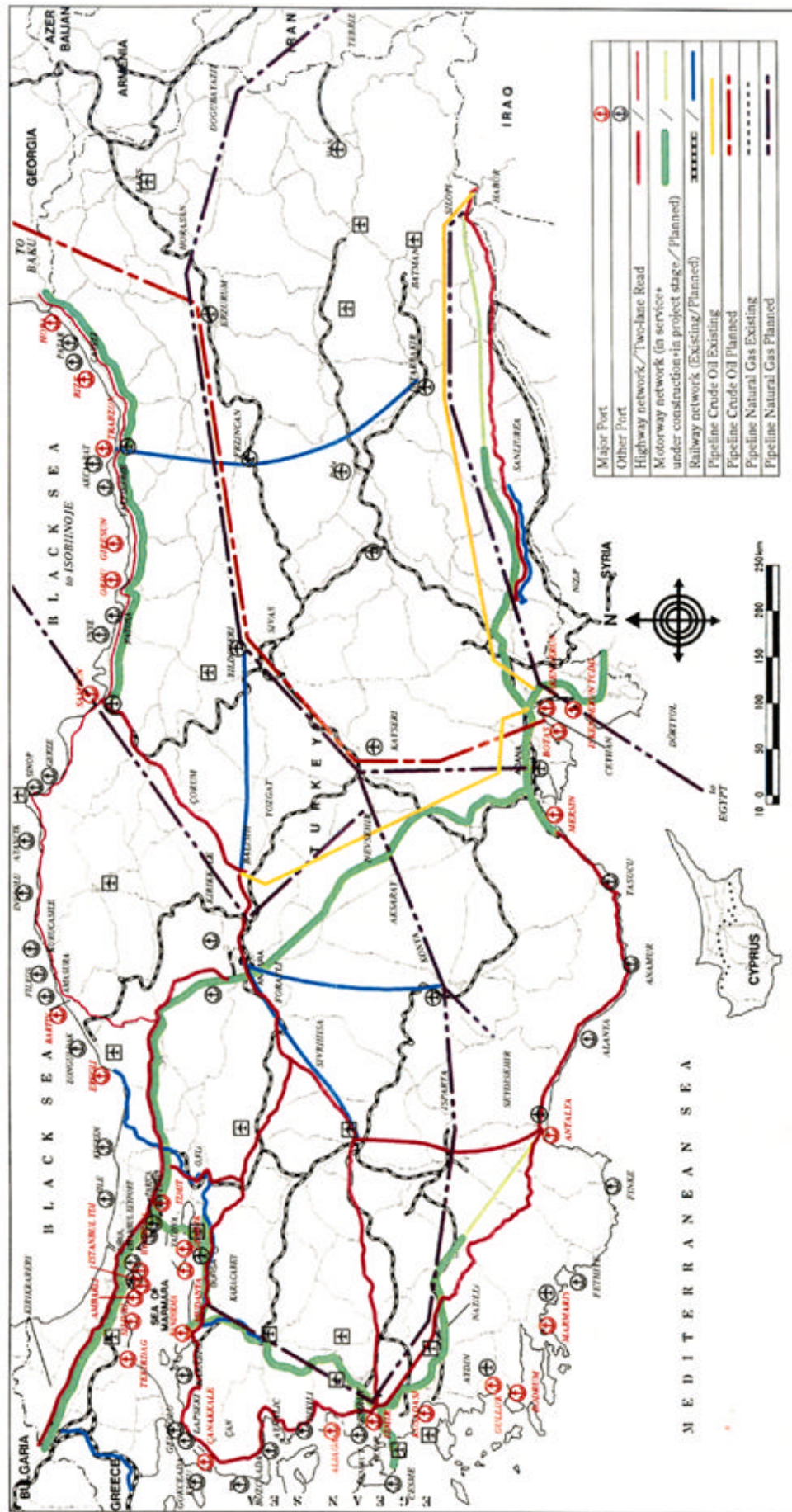
August 2000

**THE OVERSEAS COASTAL AREA DEVELOPMENT
INSTITUTE OF JAPAN (OCDI)**



Location Map of Turkish Ports and the Surrounding countries

Source: Lloyd's Maritime Atlas of World Ports and Shipping Places



Turkish Ports and Transport Network

PREFACE

In response to a request from the Government of the Republic of Turkey, the Government of Japan decided to conduct a study on Nationwide Port Development Master Plan and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Mr. Yukio Nishida of the Overseas Coastal Area Development Institute of Japan (OCDI) to Turkey, three times between July 1999 and May 2000.

The team held discussions with the officials concerned of the Government of Turkey and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Turkey for their close cooperation extended to the Team.

August 2000



Kimio Fujita
President
Japan International Cooperation Agency

LETTER OF TRANSMITTAL

August 2000

Mr. Kimio Fujita
President
Japan International Cooperation Agency

Dear Mr. Fujita:

It is my great pleasure to submit herewith the Final Report of the Study on the Nationwide Port Development Master Plan in the Republic of Turkey.

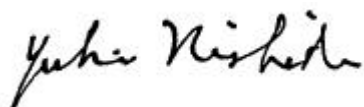
The study team of the Overseas Coastal Area Development Institute of Japan (OCDI) conducted surveys in the Republic of Turkey over the period between July 1999 and June 2000 as per the contract with the Japan International Cooperation Agency.

The findings of this study, which are compiled in this report, were fully discussed with the officials of the Ministry of Transport of the Turkish Government and other authorities concerned to formulate the Nationwide Port Development Master Plan in the Republic of Turkey for the period up to the year 2020.

On behalf of the study team, I would like to express my heartfelt appreciation to the Government of the Republic of Turkey, the Ministry of Transport and other authorities concerned for their diligent cooperation and assistance and for the heartfelt hospitality which they extended to the study team during our stay in the Republic of Turkey.

I am also greatly indebted to the Japan International Cooperation Agency, the Ministry of Foreign Affairs, the Ministry of Transport and the Embassy of Japan in Turkey for giving us valuable suggestions and assistance during the preparation of this report.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Yukio Nishida', is written over a light blue horizontal line. The signature is fluid and cursive.

Yukio Nishida
Team Leader for the Study
on Nationwide Port Development
Master Plan in the Republic of Turkey

ABBREVIATION LIST

A	AADT	Annual Average Daily Traffic
	AGV	Automated Guide Vehicle
B	BEC	Black Sea Economic Cooperation
	BOT	Build-Operate-Transfer Method
	BOTAS	Boru Hatlari Ire Perrol Tasima A.S. (Petroleum Pipeline Corporation)
	BSEC	Black Sea Economic Cooperation
C	CFS	Container Freight Station
	CIS	Commonwealth of Independent States
D	DHMI	State Airports Enterprises
	DLH	The General Directorate for Construction of Railways, Ports and Airports
	DOKAP	Eastern Black Sea Regional Development Plan
	DWT	Dead Weight Ton
E	EC	European Countries
	ECO	Economic Cooperation Organization
	EDI	Electronic Data Interchange
	EFTA	European Free Trade Association
	EIA	Environmental Impact Assessment
	E-Road	International European Road
	EU	European Union
F	FTZ	Free Trade Zone
G	GAP	South-eastern Anatolia Project
	G.C.	Gantry Crane
	GDH	General Directorate of Highway
	GDP	Gross Domestic Product
	GNP	Gross National Products
	GPS	Global Positioning System
	GRDP	Regional Gross Domestic Product
	GT	Gross Tone
H	HSR	High Specification Road
I	IMF	International Monetary Fund
	IT	Information Technology

L	LNG	Liquefied Natural Gas
	LPA	Local Port Authority
	LSR	Low Specification of Road
M	MAINS	The Maritime Information System (Singapore)
	MISC	Malaysia International Shipping Company
	MOT	Ministry of Transport
	MSR	Medium Specification of Road
N	NYK	Nippon Yusen Line
O	OECD	Organization for Economic Cooperation Development
	OHBC	Over Head Bridge Crane
	OIC	Organization of the Islamic Conference
	OIZ	Organized Industrial Zone
P	PA	Privatization Administration
	PHC	Privatization High Council
	PHS	Personal Handy phone System
	PMB	Port Management Body
	PMUMA	Prime Ministry Undersecretariat for Maritime Affairs
	P&O Ned	P&O Nedloyd
	PPA	Private Port Authority
	PPP	Purchasing Power Parity
	PSA	Port of Singapore Authority
Q	QGC	Quay Gantry Crane
R	RMG	Rail Mounted Gantry Crane
	Ro-Ro	Role-on Role-off
	RTG	Rubber Tire Gantry
S	SIS	State Institute of Statistics
	SPO	State Planning Organization
	SSIE	Small Scale Industrial Estates
T	TCDD	Turkish State Railways
	TDI. Inc. Co.	Turkish Maritime Operations Incorporated Company
	TEM	The North-South European Highway Project
	TEU	Twenty Foot Equivalent Unit
	TDB	Trade Development Board (Singapore)
	TL	Turkish Lira
	TPA	Turkish Port Authority
	TPAO	Turkish Petroleum Cooperation
	TTH	Trans-Turkish Highway

U	UASC	United Arab Shipping Company
	UN	United Kingdom
	UNCTAD	The United Nations Conference on Trade & Development
	UN/EDIFACT	United Nations Electronic Data Interchange for Administration, Commerce & Transport
	USA	United State of America
	USSR	Union of Soviet Socialist Republics
W	WTO	World Trade Organization

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PART 1

PRESENT CONDITIONS

Chapter 1 Introduction

1.1 Study Background

- (1) The Republic of Turkey, which is encircled by the Black Sea, Marmara Sea, Aegean Sea and Mediterranean Sea, is located at a crossroads of the trade between Asia and Europe having borders with Greece, Bulgaria, Georgia, Armenia, Iran, Iraq and Syria. There are approximately 400 coastal facilities stretching along its coastal line of around 8,300 kilometers.

International cargo volume through Turkish ports has been increasing while domestic cargo volume has been decreasing. Cargo handling volume through the ports reached 155 million tons including container cargo of 1,347 thousand TEUs in 1998.

A cargo is being handled at small-scale ports that are managed and maintained by different bodies. Consequently, those ports are suffering from inefficient cargo handling operations due to various problems such as space constraint, deteriorated facilities and a lack of modernized operation systems. Thus, the ports are required to be developed to solve the present sufferings and meet the increasing demand for the future.

In addition, correcting the imbalance in regional development is one of the foremost social reforms targeted in the 7th Five-year Development Plan. Therefore, regional development plan related to the port development has to be taken into consideration.

- (2) Considering the situation mentioned above, the Government of the Republic of Turkey (hereinafter referred to as 'GOT') requested the Government of Japan (hereinafter referred to as 'GOJ') to conduct a study for formulating a nationwide port development master plan (hereinafter referred to as 'the Study'). The scope of work for the Study was agreed upon between the General Directorate of Railways, Ports and Airports Construction, Ministry of Transport (DLH) of GOT and the Japan International Cooperation Agency (JICA), an official technical cooperation agency of GOJ.

1.2 Objectives of the Study

The objectives of the Study are as follows:

- (1) To formulate the basic policies on port infrastructure development and port management and operation.
- (2) To formulate the Nationwide Port Development Master Plan (ULIMAP) in Turkey, targeted toward the year 2020 including;
 - 1) long term improvement plan of port facilities (Nationwide/Regional)
 - 2) phased plan in selected strategic ports
 - 3) public investment plan
 - 4) port management and operation plan
- (3) To strengthen institutional capacity of relevant organizations.

Chapter 2 Socio-economic Conditions

2.1 Socio-economic Activities

2.1.1 General Aspects

Turkey, thanks to with its geo-strategic position and improved relations with the European, Asian, Central Asian and Middle Eastern countries, is gaining even more importance now with the advent of globalization. Turkey has become the heart of the great trade and migration routes due to her place as a bridge between continents. Therefore, it is indispensable to formulate an extensive strategy for international trade such as the nationwide port development master plan.

The area of the country is 814,578 square kilometers. Three % of that area is located in Terace on the European continent. The remaining 97% which is located on the Asian continent is usually called Anatolia.

Surrounded by Georgia, Armenia, Nakhichvan and Iran to the east, Bulgaria and Greece to the west, and Syria and Iraq to the south, Turkey has a width of approximately 550km and a length of about 1,500km. Turkey's coastlines, which encompass her three sides with the Mediterranean Sea to the south, the Black sea to the north and the Aegean Sea to the west, total 8,333km in length while the length of her land borders is 2,875km.

The population of Turkey is approximately 63million. It is estimated to reach 74 million in 2010 and 82 million in 2020. According to the data compiled by the State Statistics Institute (SIS), the per capita national income in Turkey has become US\$3,079 in 1997.

The country is composed of 80 provinces and can be divided into seven different geographic regions as shown in Table 2-1-1.

Three Regions were named after the seas which are adjacent to them (the Marmara, the Aegean, the Mediterranean and the Black Sea Regions). The other regions were named in accordance with their location in the whole of Anatolia (Central, Southeastern and Eastern Anatolia Regions)

Table 2.1.1 General characteristics of Regions and provinces

(continued)

REGION	PROVINCE	AREA		POPULATION (1997)			GDP(1997)			GDP/CAPITA (at cur. pri. in mil. of TL/ ind.)
		AREA (km2)	SHARE %	POPULATION (1997)	SHARE %	GROWTH % *1	(at current prices in millions of TL)	SHARE %	GROWTH % *2	

MARMARA

BALIKESIR	14,272	1.8	1,030,978	1.6	0.8	427,436,050	1.48	1.3	415
BILECIK	4,310	0.6	192,060	0.3	1.3	119,359,488	0.41	6.8	621
BURSA	10,882	1.4	1,958,529	3.1	2.9	1,017,908,052	3.53	4.4	520
CANAKKALE	9,629	1.2	448,815	0.7	0.5	241,787,094	0.84	3.5	539
EDIRNE	6,119	0.8	398,125	0.6	-0.2	209,368,298	0.73	3.8	526
ISTANBUL	5,289	0.7	9,198,809	14.6	3.5	6,583,172,304	22.83	5.7	716
KIRKLARELI	6,304	0.8	318,866	0.5	0.4	213,277,967	0.74	5.9	669
KOCAELI	3,623	0.5	1,177,379	1.9	3.5	1,398,385,109	4.85	5.4	1,188
SAKARYA	4,878	0.6	731,800	1.2	1.0	302,789,457	1.05	5.6	414
TEKIRDAG	6,339	0.8	567,396	0.9	2.7	305,414,265	1.06	6.8	538
YALOVA	850	0.1	163,916	0.3	2.8	123,322,677	0.43	13.2	752
Marmara region	72,495	9.3	16,186,673	25.7	2.8	10,942,220,761	37.95	5.4	676

AEGEAN

AFYON	14,722	1.9	797,589	1.3	1.1	215,249,273	0.75	3.6	270
AYDIN	7,943	1.0	899,980	1.4	1.2	416,112,657	1.44	3.3	462
DENIZLI	11,861	1.5	816,250	1.3	1.2	368,785,423	1.28	4.8	452
IZMIR	12,003	1.5	3,114,859	5.0	2.0	2,056,620,055	7.13	4.4	660
KUTAHYA	12,043	1.5	639,629	1.0	1.4	227,969,822	0.79	3.0	356
MANISA	13,269	1.7	1,232,015	2.0	0.9	625,797,209	2.17	5.4	508
MUGLA	12,974	1.7	640,011	1.0	1.8	395,108,011	1.37	4.9	617
USAK	5,382	0.7	311,754	0.5	1.0	102,552,128	0.36	3.3	329
Aegean region	90,197	11.5	8,452,087	13.4	1.5	4,408,194,578	15.3	4.4	522

BLACKSEA

AMASYA	5,702	0.7	346,191	0.6	-0.5	120,615,088	0.42	2.9	348
ARTVIN	7,359	0.9	184,070	0.3	-2.0	77,495,322	0.27	4.4	421
BOLU	10,915	1.4	553,022	0.9	0.4	259,700,244	0.90	3.7	470
CORUM	12,797	1.6	578,187	0.9	-0.7	209,826,768	0.73	4.0	363
GIRESUN	6,831	0.9	460,805	0.7	-1.1	166,791,521	0.58	2.6	362
GUMUSHANE	6,440	0.8	153,990	0.2	-1.3	31,355,811.0	0.11	-2.3	204
KASTAMONU	13,136	1.7	363,700	0.6	-2.1	142,496,459	0.49	3.6	392
ORDU	5,952	0.8	840,148	1.3	0.2	197,873,155	0.69	4.2	236
RIZE	3,919	0.5	325,581	0.5	-1.0	114,771,284	0.40	-0.3	353
SAMSUN	9,352	1.2	1,153,763	1.8	-0.1	415,170,374	1.44	2.9	360
SINOP	5,805	0.7	214,925	0.3	-3.0	67,550,509	0.23	1.0	314
TOKAT	10,073	1.3	695,862	1.1	-0.5	211,602,635	0.73	4.1	304
TRABZON	4,662	0.6	846,876	1.3	0.9	277,038,908	0.96	1.9	327
ZONGULDAK	3,306	0.4	612,722	1.0	-0.9	347,490,991	1.21	-1.7	567
BAYBURT	3,741	0.5	99,638	0.2	-1.0	16,537,952	0.06	6.4	166
BARTIN	2,076	0.3	187,008	0.3	-1.3	37,217,738	0.13	6.7	199
KARABUK	3,364	0.4	227,478	0.4	-1.0	94,799,905	0.33	13.0	417
Blacksea region	115,430	14.8	7,843,966	12.5	-0.5	2,788,334,664	9.67	3.4	355

MEDITERRANEAN

ADANA	14,125	1.8	1,682,483	2.7	1.2	908,832,287	3.15	3.1	540
ANTALYA	20,909	2.7	1,509,616	2.4	4.0	776,787,211	2.69	6.4	515
BURDUR	7,174	0.9	252,791	0.4	-0.1	105,682,463	0.37	3.3	418
HATAY	5,867	0.8	1,197,139	1.9	1.1	466,637,127	1.62	3.7	390
ISPARTA	8,913	1.1	461,571	0.7	0.8	147,858,110	0.51	4.3	320
ICEL	15,620	2.0	1,508,232	2.4	2.4	797,355,508	2.77	4.3	529
KAHRAMANMARAS	14,525	1.9	1,008,107	1.6	1.7	274,648,376	0.95	4.4	272
OSMANIYE	3,215	0.4	438,372	0.7	1.9	113,790,736	0.39	-	260
Mediterranean region	90,348	11.6	8,058,311	12.8	1.9	3,591,591,818	12.46	4.7	446

(continued)

REGION	PROVINCE	AREA		POPULATION (1997)			GDP(1997)			GDP/CAPITA (at cur. pri. in mil. of TL/ ind.)
		AREA (km2)	SHARE %	POPULATION (1997)	SHARE %	GROWTH % *1	(at current prices in millions of TL)	SHARE %	GROWTH % *2	

CENTRAL ANATOLIAN

ANKARA	25,437	3.3	3,693,390	5.9	1.9	1,971,691,868	6.84	2.9	534
CANKIRI	8,230	1.1	248,599	0.4	0.0	60,231,111	0.21	1.5	242
ESKISEHIR	13,925	1.8	660,843	1.1	0.4	334,027,934	1.16	3.3	505
KAYSERİ	17,170	2.2	974,035	1.5	0.4	341,351,671	1.18	3.4	350
KIRSEHIR	6,544	0.8	241,507	0.4	-0.9	78,518,199	0.27	1.7	325
KONYA	41,001	5.2	1,931,773	3.1	1.4	696,343,564	2.41	0.6	360
NEVSEHIR	5,407	0.7	287,866	0.5	-0.1	142,502,819	0.49	3.2	495
NIGDE	7,400	0.9	315,925	0.5	0.6	122,814,560	0.43	-1.6	389
SIVAS	28,619	3.7	698,019	1.1	-1.3	181,636,307	0.63	3.2	260
YOZGAT	14,097	1.8	599,690	1.0	0.5	116,691,542	0.40	2.0	195
AKSARAY	7,997	1.0	347,163	0.6	0.7	96,761,962	0.34	8.4	279
KARAMAN	8,924	1.1	224,303	0.4	0.6	123,285,808	0.43	8.4	550
KIRIKKALE	4,575	0.6	357,544	0.6	0.3	183,267,654	0.64	3.8	513
Centr. anat. region	189,326	24.2	10,580,657	16.8	0.9	4,449,124,999	15.43	3.4	420

SOUTH-EAST ANATOLIAN

ADIYAMAN	7,644	1.0	678,999	1.1	3.9	127,156,517	0.44	4.1	187
DIYARBAKIR	15,272	2.0	1,282,678	2.0	2.2	336,804,456	1.17	1.0	263
GAZIANTEP	6,887	0.9	1,127,686	1.8	1.5	390,917,710	1.36	2.5	347
MARDIN	8,858	1.1	646,826	1.0	2.1	131,920,565	0.46	1.5	204
SIIRT	5,499	0.7	262,371	0.4	1.1	53,739,161	0.19	-9.5	205
SANLIURFA	19,451	2.5	1,303,589	2.1	3.7	269,722,006	0.94	8.3	207
BATMAN	4,680	0.6	400,380	0.6	2.1	99,109,997	0.34	3.1	248
SIRNAK	7,203	0.9	316,536	0.5	2.8	53,361,009	0.19	14.8	169
KILIS	1,444	0.2	109,908	0.2	-2.4	39,760,382	0.14	-9.1	362
South-east region	76,938	9.8	6,128,973	9.7	2.4	1,502,491,803	5.21	3.9	245

EAST ANATOLIAN

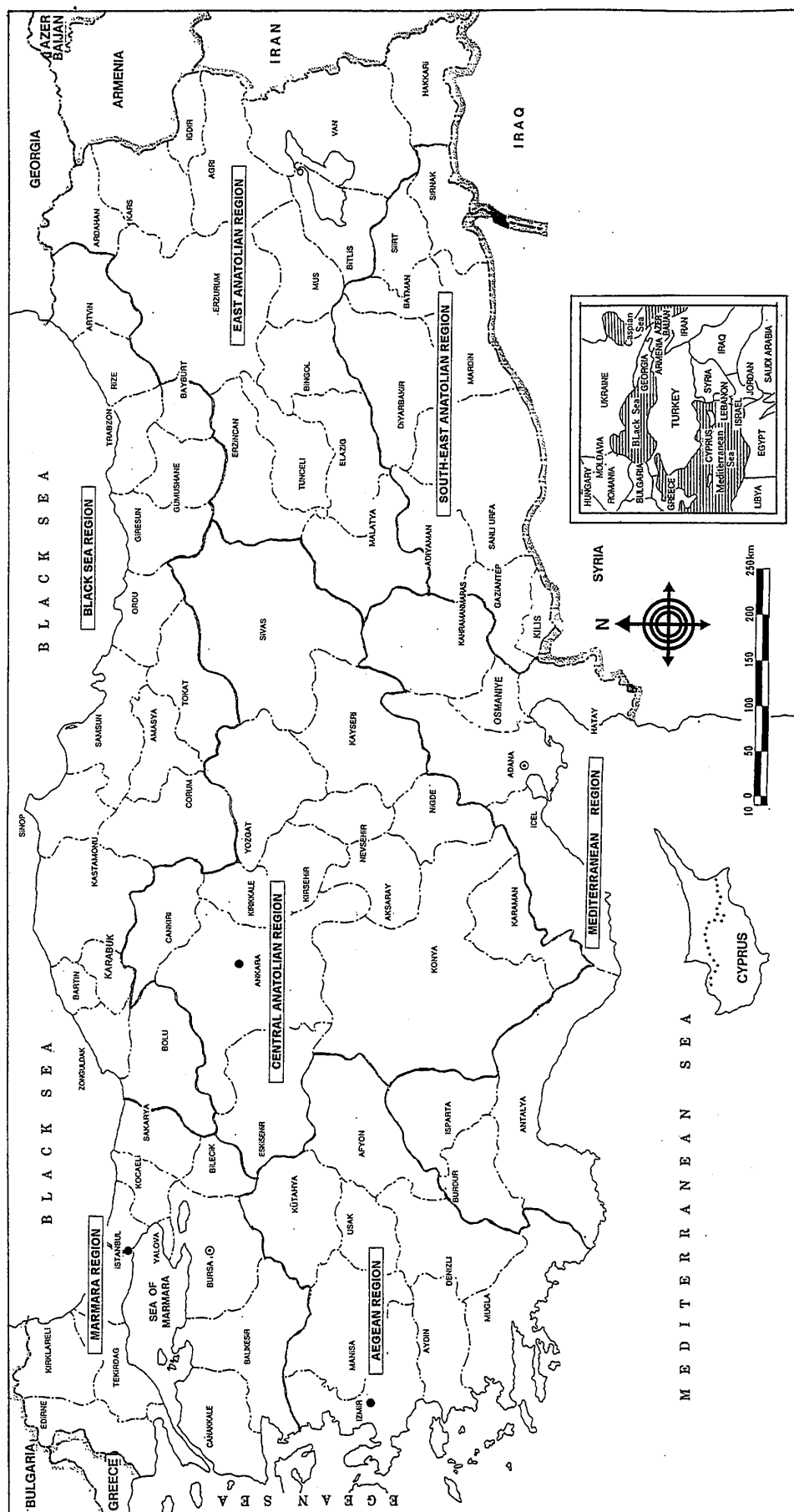
AGRI	11,520	1.5	466,058	0.7	0.9	52,785,151	0.18	1.4	113
BINGOL	8,277	1.1	234,790	0.4	-0.8	37,163,983	0.13	3.4	158
BITLIS	7,123	0.9	339,645	0.5	0.4	52,780,145	0.18	3.4	155
ELAZIG	9,313	1.2	518,360	0.8	0.6	184,070,877	0.64	1.2	355
ERZINCAN	11,746	1.5	280,118	0.4	-0.9	86,938,147	0.30	0.3	310
ERZURUM	25,355	3.2	873,289	1.4	0.4	176,254,378	0.61	0.7	202
HAKKARI	7,228	0.9	219,345	0.3	3.4	34,701,003	0.12	0.8	158
KARS	10,144	1.3	322,973	0.5	-1.1	51,185,359	0.18	-4.6	158
MALATYA	12,146	1.6	815,105	1.3	2.1	235,198,157	0.82	3.8	289
MUS	8,090	1.0	422,247	0.7	1.6	48,896,718	0.17	1.9	116
TUNCELI	7,705	1.0	86,268	0.1	-6.2	26,561,276	0.09	-1.8	308
VAN	19,483	2.5	762,719	1.2	2.5	121,422,453	0.42	3.4	159
ARDAHAN	4,951	0.6	128,606	0.2	-3.9	20,468,159	0.07	7.3	159
IGDIR	3,546	0.5	145,384	0.2	0.3	25,498,707	0.09	6.9	175
East anatolian region	146,627	18.8	5,614,907	8.9	0.7	1,153,924,513	4.00	1.9	206

TURKEY	80 Provinces	100.0	62,865,574	100.0	1.5	28,835,883,136	100.00	4.4	459
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note. *1: Annual average growth rate (1990-1997)

note. *2: Annual average growth rate (1988-1997) at 1987 prices

Ref: DIE (State Statistics Institute), DPT(State Planning Organization)



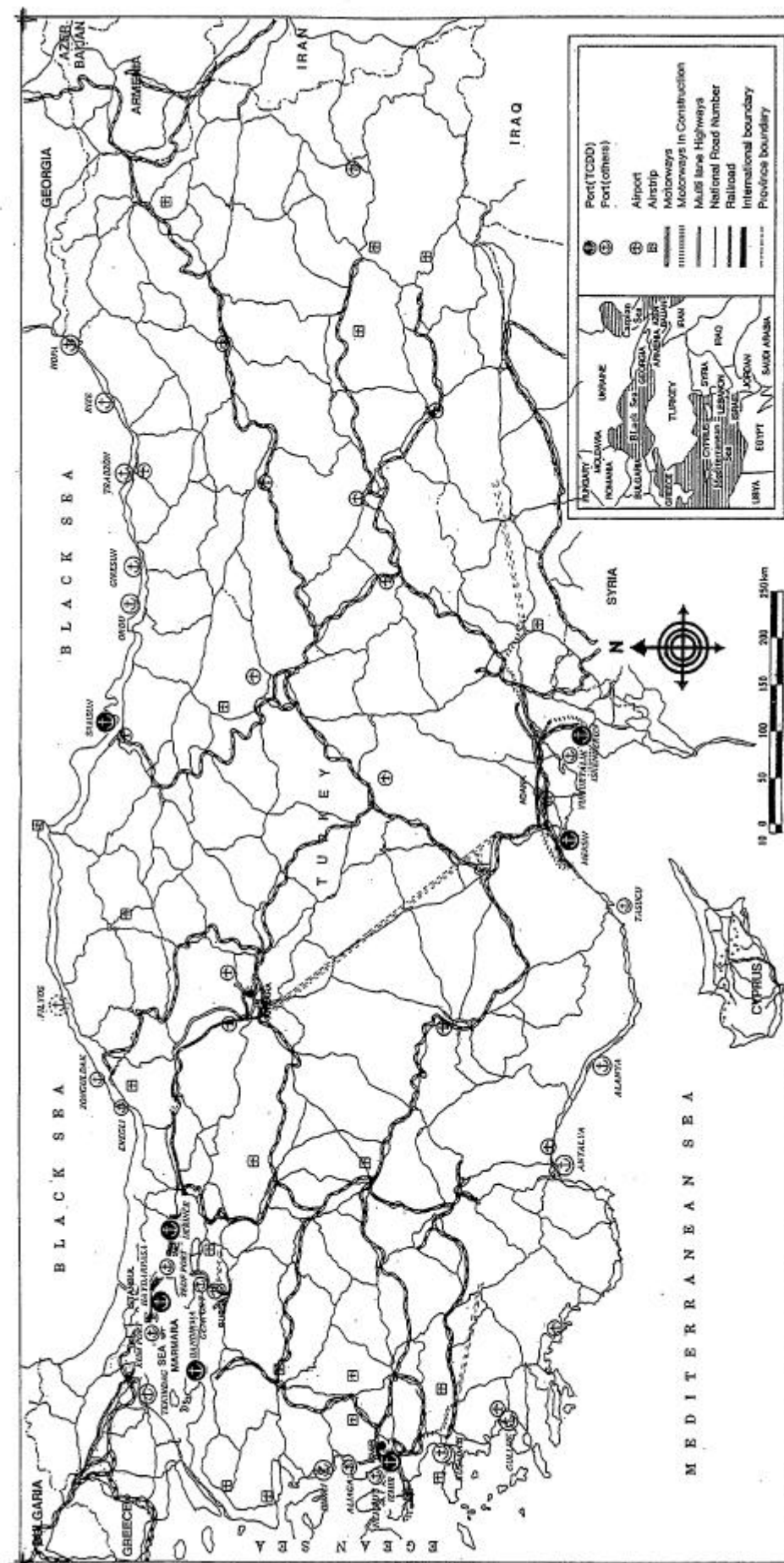


Figure 2.1.2 Major Transportation Infrastructure in Turkey

2.1.2 Population

Social and economic developments, and the increases and structure of the population are two elements that bear impact on each other. According to the results of the November 1997 census, the population is 62.9 million.

Of that, 50.5 % are male, and 49.5 are female. Urban population is 40.9 million.

According to the population census of 1997, the population of the Black Sea Region has decreased in the 1990-1997 period, and the populations of other regions have increased. Among them, Marmara Region had the highest rate of population increase at 2.76 %.

Table 2.1.2 Population According to Gender by Year

(Unit:Thousand)

	Total Population	Women	2/1	Men	3/1
	(1)	(2)	%	(3)	%
1927	13,648	7,084	51.9	6,564	48.1
1935	16,158	8,221	50.9	7,937	49.1
1940	17,821	8,922	50.1	8,899	49.9
1945	18,790	9,344	49.7	9,446	50.3
1950	20,947	10,375	49.5	10,572	50.5
1955	24,065	11,832	49.2	12,233	50.8
1960	27,755	13,591	49.0	14,164	51.0
1965	31,391	15,394	49.0	15,997	51.0
1970	35,605	17,598	49.4	18,007	50.6
1975	40,348	19,603	48.6	20,745	51.4
1980	44,737	22,042	49.3	22,695	50.7
1985	50,664	24,992	49.3	25,672	50.7
1990	56,473	27,866	49.3	28,607	50.7
1997(*)	62,866	31,095	49.5	31,771	50.5

Ref: DİE (State Statistics Institute)

(*) Exact results according to November 30, 1997 Census, Administrative Distribution;

Table 2.1.3 Birth, Mortality and Population Increase Rates
(Change In Thousands)

	Raw Birth Rate	Raw Mortality Rate	Popln.Incr. Rate
1965-1970	39.0	13.5	25.2
1970-1975	34.5	11.6	25.0
1975-1980	32.2	10.0	20.7
1980-1985	30.8	9.0	24.9
1985-1990	29.9	7.8	21.7
1990-1995(*)	23.5	6.7	16.8
1995-2000(*)	21.4	6.4	14.9

Ref: D/E (State Statistics Institute), DPT (State Planning Org.)

Note: Terms indicated encompasses second half of the starting year, and first half of the end year.

(*) D/E (State Statistics Institute) Interim Population Projection Study (Natural Population Increase Rates given.)

2.1.3 Labor Force

The civilian work force that was 9.9 million in urban areas in 1994, reached 10.5 million in 1997. Civilian work force which was 11.5 million in rural areas in 1994, became 11.4 million in 1997.

Civilian employment, on the other hand, was 8.7 million in urban areas in 1994, and rose to 9.5 million in 1997. The level of rural civilian employment 11 million in 1994 has almost remained constant. The unemployment rate that was 11.8 % in urban areas in 1994, dropped to 9.4 % in 1997. In the rural areas, on the other hand, the unemployment rate that was 5 % in 1994, retreated to 3.6 % in 1997.

Total unemployment rate in 1994 was 8.1 %, and decreased to 6.9 % in 1995, to 6 % in 1996, and became 6.4 % in 1997.

On the other hand, the share of agricultural sector in employment has dropped, while the shares of industrial and services sector have increased.

Table 2.1.4 SECTORAL DISTRIBUTION OF CIVILIAN EMPLOYMENT

(Thousands)											
		Percentage Distribution									
		1994	1995	1996	1997	1998(*)	1994	1995	1996	1997	1998(*)
Agriculture		8807	9538	9380	8584	8684	44.8	46.8	44.9	41.9	41.9
Industry		3224	3112	3327	3529	3577	16.4	15.3	15.9	17.2	17.2
Services		7635	7745	8188	8392	8488	38.8	38.0	39.2	40.9	40.9
TOTAL		19666	20395	20895	20505	20749	100.0	100.0	100.0	100.0	100.0
Ref: DVE (State Statistics Institute), DPT (State Planning Org.).											
Note: Sectoral Distribution of Total Employment of the 15 years of age and older group.											
(*) Ref: DE (State Statistics Institute), Results of the April 1998 Household Workforce Survey.											

Table 2.1.5 DOMESTIC EMPLOYEMENT

Table 2.1.5 DOMESTIC EMPLOYEMENT														(Thous ands)	
	1994			1995			1996			1997			1998(*)		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	
Civilian Workforce	9883	11521	21404	9942	11966	21908	10151	12085	22236	10496	11404	21900	10753	11425	
Civilian Employment	8715	10950	19665	8927	11468	20395	9216	11679	20895	9513	10992	20505	9691	11058	
Unemployed	1168	571	1739	1015	498	1513	935	406	1341	983	412	1395	1062	367	
Unemployment Rate %	11.8	5.0	8.1	10.2	4.2	6.9	9.2	3.4	6.0	9.4	3.6	6.4	9.9	2.2	
Employment Gap	844	913	1757	724	749	1473	623	778	1401	660	578	1238	744	597	
Rate of Employment	8.5	7.9	8.2	7.3	6.3	6.7	6.1	6.4	6.3	6.3	5.1	5.7	6.9	5.2	
Gap (%)															
Ref: DfE (State Statistics Institute), DPT (State Planning Org.). (Revised in line with population projections, and encompasses 15 years of age and above)															
(*) DfE, Interim Results of the April 1998 Household Workforce Survey.															

2.1.4 National Income

(1) GNP

The growth in GNP that started following the 6.1 % fall in 1994 continued in 1998 as well.

The annual growth rate in 1998 was 3.8 % on the strength of 1.8 % growth in the industrial sector, and 7.7 % growth in the agricultural sector.

Table 2.1.6 Major Event on Economy by Year

Year	Major Event	Trend
1963-	Industrialization policy (Substitutes for Imports)	Headed by the government
1960-early 1970's		Development of Industrialization
late 1970's-	Oil crisis(1),(2), Foreign exchange crisis	
1980 (Jan.)	Stabilization program on economy (Reformation of industry structure)	Control of inflation, balance of international account
1983-	Liberation policy for trade and	High economic growth
	Progress of inflation and deficit financing	
1988-	Total demand control policy	Convergence of inflation
1990 (Aug.)	Iraqi invade Kuwait	
Early 1991	Gulf War, embargo for Iraqi on crude oil exporting through Turkey	Huge damage to exports
	Unbalance of international account	Progress of inflation
1994	Serious economic crisis by steep fall in TL	(Decision of April 5th)
1996 (Jan.)	Joining to EU Customs Union	Progress of imports from EU
1998	Economic crisis in Asia, followed by Latin America and Russia	

(At 1987 Producers' Prices, In Billions Of TL.)

Table 2.1.7 Gross National Product

Sectors	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Agriculture	13,314	14,356	13,272	14,177	14,049	14,651	14,463	14,358	14,640	15,284	14,927	16,069
Industry	19,276	19,618	20,529	22,302	22,909	24,268	26,260	24,775	27,766	29,743	32,835	33,438
Mining & Quarrying	1,475	1,407	1,590	1,550	1,620	1,624	1,521	1,642	1,529	1,565	1,639	1,736
Manufacturing	16,319	16,575	17,076	18,729	19,175	20,281	22,166	20,473	23,321	24,980	27,839	28,166
Energy	1,482	1,636	1,863	2,023	2,114	2,363	2,573	2,660	2,916	3,199	3,358	3,536
Construction	5,452	5,159	5,472	5,411	5,473	5,814	6,272	6,144	5,857	6,200	6,511	6,489
Trade	14,850	15,376	15,017	16,868	16,748	17,902	19,975	18,445	20,587	22,413	25,024	25,332
Transport & Communication	8,660	8,761	9,045	10,123	10,085	10,899	12,081	11,835	12,511	13,458	14,485	15,350
Financial Institutions	2,288	2,389	2,447	2,496	2,515	2,463	2,453	2,417	2,424	2,476	2,573	2,751
Ownership Of Dwellings	4,384	4,387	4,504	4,616	4,725	4,841	4,976	5,117	5,224	5,352	5,475	5,601
Business & and Personnel Services	1,736	1,776	1,781	1,926	1,944	2,051	2,192	2,098	2,252	2,399	2,564	2,650
(-) Imputed Bank Serv. Charges	1,997	2,079	2,122	2,161	2,166	2,116	2,103	2,066	2,059	2,073	2,113	2,240
Sectoral Total	67,962	69,743	69,945	75,759	76,282	80,774	86,568	83,134	89,202	95,253	102,282	105,441
Government Services	3,789	3,859	3,906	4,019	4,117	4,259	4,336	4,371	4,481	4,469	4,473	4,501
Private Non-Profit Institutions	319	325	331	365	377	386	397	388	383	386	390	397
Import Duties	2,652	2,379	2,317	3,436	3,576	3,982	5,289	3,429	3,822	4,637	5,486	5,430
G.D.P. (In Purchasers' Value)	74,722	76,306	76,498	83,578	84,353	89,401	96,590	91,321	97,888	104,745	112,631	115,768
N.F.I From Abroad	297	198	849	1,013	534	922	1,056	412	1,140	1,335	2,243	3,441
G.N.P (In Purchasers' Value)	75,019	76,108	77,347	84,592	84,887	90,323	97,647	91,733	99,028	106,080	114,874	119,209

Table 2.1.8 Gross national Product (Annual)

(According to 1987 Producers' Prices)									
	VALUE			SECTORAL SHARES (%)			DEVELOPMENT RATE (%)		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
A. AGRICULTURE	14,230	14,879	14,550	14.4	14.0	12.7	1.3	4.6	-2.2
a. Farming and Husbandry	13,084	13,773	13,510	13.2	13.0	11.8	1.0	5.3	-1.9
b. Forestry	830	791	727	0.8	0.7	0.6	10.5	-4.7	-8.1
c. Fisheries	316	314	312	0.3	0.3	0.3	-6.8	-0.6	-0.7
B. INDUSTRY	27,476	29,335	32,337	27.7	27.7	28.1	12.5	6.8	10.2
a. Mining and Stout Stone Mining	1,520	1,554	1,618	1.5	1.5	1.4	-6.3	2.2	4.1
b. Manufacturing Industry	23,044	24,589	27,371	23.3	23.2	23.8	14.3	6.7	11.3
c. Electricity, Gas and Water	2,912	3,192	3,348	2.9	3.0	2.9	9.6	9.6	4.9
C. SERVICES TOTAL (a-i)	56,182	60,531	65,745	56.7	57.1	57.2	6.3	7.7	8.6
a. Construction Industry	5,775	6,097	6,401	5.8	5.7	5.6	-4.5	5.6	5.0
b. Trade	19,768	21,565	24,214	20.0	20.3	21.1	12.4	9.1	12.3
1. Wholesale and retail trade	16,780	18,260	20,339	16.9	17.2	17.7	14.6	8.8	11.4
2. Hotel-Restaurant services	2,988	3,305	3,875	3.0	3.1	3.4	1.9	10.6	17.3
c. Transportation and Communication	12,491	13,438	14,458	12.6	12.7	12.6	5.8	7.6	7.6
d. Financial Institutions	2,141	2,283	2,376	2.2	2.2	2.1	-1.0	6.6	4.1
e. House ownership	5,086	5,282	5,430	5.1	5.0	4.7	2.4	3.9	2.8
f. Free Enterprises and Services	2,235	2,376	2,517	2.3	2.2	2.2	7.2	6.3	5.9
SECTORAL TOTAL	89,202	95,253	102,282	90.1	89.8	89.0	7.3	6.8	7.4
g. State Services	4,481	4,469	4,473	4.5	4.2	3.9	2.5	-0.3	0.1
h. Non-profit private service organizations	383	386	390	0.4	0.4	0.3	-1.3	0.9	1.0
i. Import Tax	3,822	4,637	5,486	3.9	4.4	4.8	11.5	21.3	18.3
GDP (In Consumer Prices)	97,888	104,745	112,631	98.8	98.7	98.0	7.2	7.0	7.5
j. Net Factor Reserves from abroad	1,140	1,335	2,243	1.2	1.3	2.0			
1. From Abroad	4,238	4,525	5,769	4.3	4.3	5.0	18.8	6.8	27.5
2. To Abroad	3,097	3,191	3,526	3.1	3.0	3.1	-1.8	3.0	10.5
C. SERVICES TOTAL (a-j)	57,322	61,866	67,988	57.9	58.3	59.2	7.6	7.9	9.9
GNP (In Consumer Prices)	99,028	106,080	114,874	100.0	100.0	100.0	8.0	7.1	8.3

Ref: DVE (State Statistics Institute)

Note: Relative bank services distributed among sectors

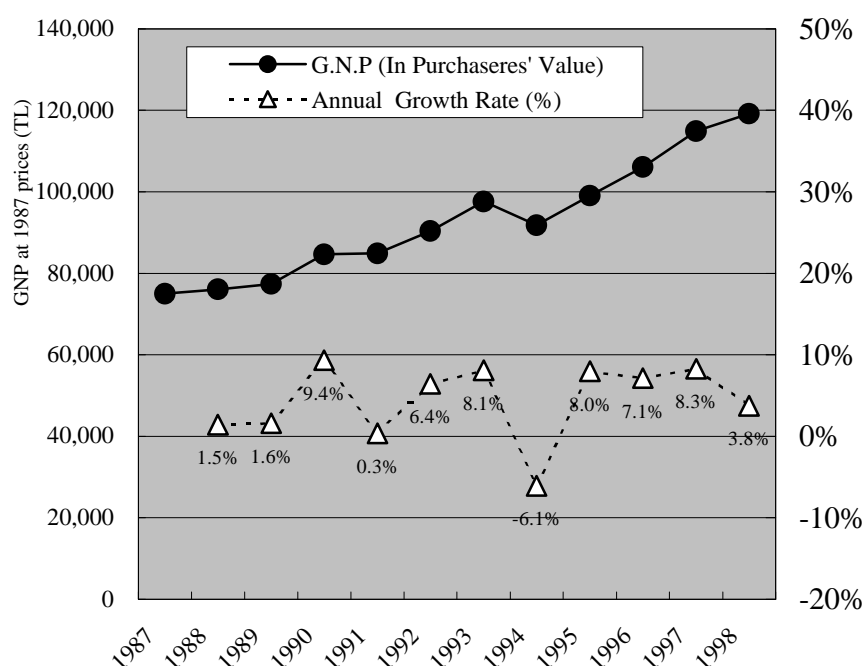


Figure 2.1.3 GNP past 10 years and the Growth

(2) Per Capita Gross National Product

The per capita gross national product that was TL 1.68 million in 1987 prices in 1996, increased at a rate of 8.7 % in 1997 to become TL 1.84 million. The per capita GNP that was US\$ 2,928 as of 1996, rose 5.1 % in 1997 to become US\$ 3,079.

Table 2.1.9 Per Capita Gross National Product

	In Current Prices			In 1987 Prices		
	TL	Growth Rate (Percentage)	Dollar	Growth Rate (Percentage)	TL	Growth Rate (Percentage)
1985	702,706	55.5	1,330	10.4	1,271,997	1.7
1986	995,174	41.6	1,462	9.9	1,328,231	4.4
1987	1,427,282	43.4	1,636	11.9	1,427,282	7.5
1988	2,404,824	68.5	1,684	3.0	1,416,888	0.7
1989	4,196,709	74.5	1,959	16.3	1,409,056	0.6
1990	7,066,839	68.4	2,682	36.9	1,505,110	6.8
1991	11,070,462	56.7	2,621	2.3	1,481,321	1.6
1992	18,897,021	70.7	2,708	3.3	1,546,592	4.4
1993	33,573,525	77.7	3,004	11.0	1,641,872	6.2
1994	64,182,233	91.2	2,184	27.3	1,514,346	7.8
1995	127,423,385	98.5	2,759	26.3	1,606,454	6.1
1996	238,896,076	87.5	2,928	6.1	1,691,943	5.3
1997	470,442,977	96.9	3,079	5.1	1,838,576	8.7

Ref: DYE (State Statistics Institute)

(3) Gross Domestic Product

The gross domestic product (GDP) grew 2.8 % in 1998. The private final consumption expenditures that comprise 68.8 % of the GDP increased 8.4 %, and the public consumption expenditures increased 4.1 % in 1997. Growth in total fixed capital investments in 1997 was 14.8 % with the effect of increases by 28.4 % in the public sector, and by 11.9 % in the private sector.

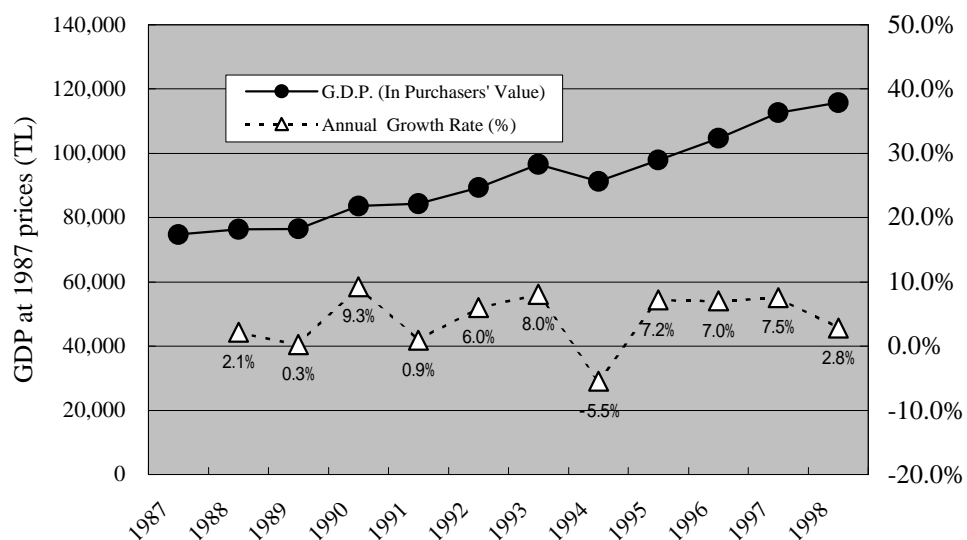


Figure 2.1.4 GDP past 10 years and the Growth

Table 2.1.10 Gross Domestic Product (Annual)
(According to Expenditures Bulletin in 1987 Prices)

	VALUE (Billion TL)			SHARE (%)			DEVELOPMENT RATE (%)		
	1995	1996	1997	1995	1996	1997	1995	1996	1997
1. Consumption Expenditures	73422	79660	85999	75.1	75.9	76.2	5	8.5	8
A. Private Final Consumption Expenditures	66011	71614	77620	67.5	68.2	68.8	4.8	8.5	8.4
a. Food, Drinks	26122	26752	26979	39.6	37.4	34.8	4.4	2.4	0.8
b. Enduring Consumption Goods	6919	9384	12533	10.5	13.1	16.1	15.1	35.6	33.6
c. Half Enduring and Temporary Cons. Goods	10719	11938	12975	16.2	16.7	16.7	6	11.4	8.7
d. Energy, Transportation, Communication	9914	10440	10805	15	14.6	13.9	0.9	5.3	3.5
e. Services	6627	7251	8348	10	10.1	10.8	2.6	9.4	15.1
f. House ownership	5709	5847	5981	8.6	8.2	7.7	2.1	2.4	2.3
B. Public Final Consumption Expenditures	7411	8047	8379	7.6	7.7	7.4	6.8	8.6	4.1
a. Salaries, stipends	4481	4469	4473	60.5	55.5	53.4	2.5	-0.3	0.1
b. Other Current	2929	3578	3906	39.5	44.5	46.6	14.1	22.2	9.2
2. Gross Fixed Capital Formation	26823	30598	35137	27.4	29.2	31.1	9.1	14.1	14.8
A. Public Sector	4341	5400	6933	16.2	17.6	19.7	-18.8	24.4	28.4
a. Machinery Equipment	1282	1436	1956	29.5	26.6	28.2	-14	12	36.2
b. Building Construction	935	1218	1496	21.5	22.6	21.6	6.2	30.2	22.8
c. Non-building Construction	2123	2746	3481	48.9	50.8	50.2	-28.6	29.3	26.8
B. Private Sector	22482	25197	28204	83.8	82.4	80.3	16.9	12.1	11.9
a. Machinery Equipment	11495	14393	17438	51.1	57.1	61.8	32.3	25.2	21.2
b. Building Construction	1927	1979	2058	8.6	7.9	7.3	4.8	2.7	4
c. Residence construction	9060	8825	8708	40.3	35	30.9	4.1	-2.6	-1.3
3. Changes in Stocks	1772	-463	-1420	1.8	-0.4	-1.3	-160.6	-126.1	206.9
TOTAL DOMESTIC DEMAND	102016	109796	119716				11.4	7.6	9
4. Goods and services Exports	21746	26521	31593	22.3	25.3	28	8	22	19.1
5. Goods and Services Imports (-)	26033	31376	38417	26.6	29.9	34	29.6	20.5	22.4
GROSS DOMESTIC PRODUCT	97729	104940	112892	100	100	100	6.7	7.4	7.6
6. Statistical Error	159	-195	-261						
(*) GROSS DOMESTIC PRODUCT	97888	104745	112631				7.2	7	7.5

Ref: DİE (State Statistics Institute)

(*) Gross Domestic Product through Production

2.2 Trade

2.2.1 Current Situation of Turkish and World Trade

Turkey's trade volume grew at a rate of 11.3% for imports, 10.1% for exports and 10.9% for total volume between 1990 and 1996. In the same period, Turkey exceeded North America(7.5%), the European Union(4.5%), Africa(5%), the Middle Eastern Countries(6.5%) and Japan(7%). In 1997, Turkey's exports with increased 13% and had a value of US\$ 26.2billion with her imports increased 11.4% and had a value of US\$ 48.6billion.

In recent years, significant progress has been made, particularly in the exports of services. The share of the exports of services in the total world exports of goods and services between 1980 and 1995 increased from 16 % to 18 %. In Turkey, of the total exports of goods and services an average of 20% was for the exports of services. Turkey accounts for 1.2% of total world exports of services. Tourism, transportation, insurance, banking, advertising, construction and communications are among the most important services within the exports of services in Turkey and in the world.

2.2.2 Balance of Payment

(1) Exports

Exports with had a value of 23.2 billion dollars in 1996, increased 13 % in 1997 and were worth 26.2 billion dollars. And in the January-June 1998 period they had increased 2.4 percent in comparison to the same period of 1997, and had a value of 12.7 billion dollars.

In 1997, the exports of agricultural products rose 8.8 percent and had a value of 2.9 billion dollars, while exports of industrial products rose 13.7%, and had a value of 22.9 billion dollars. The exports of the mining sector on the other hand rose 9 % and had a value of 424 million dollars.

Exports have been industrial products oriented in the past years. In the January-June period of 1998, 10.9 % of the total exports was comprised of agricultural products, 1.6 % was of the mining sector, and 87.5 % was of the industrial products. Distribution of the export value among sectors is shown in Table 2.2.1.

Table 2.2.1 Distribution of Export Value Among Sectors

	VALUE (Million Dollars)						PERCENTAGE CHANGE (Relative to Preceding Year)						SHARE IN TOTAL (Percentage)			
	ANNUAL			JUNE (Cumulative)			ANNUAL			JUNE						
	1995	1996	1997	1996	1997	1998	1995	1996	1997	1996	1997	1998	1995	1996	1997	1998(*)
TOTAL	21637	23224	26245	10739	12415	12714	19.5	7.3	13.0	7.9	15.6	2.4	100.0	100.0	100.0	100.0
I-AGRICULTURE	2314	2709	2947	1193	1358	1382	-6.3	17.1	8.8	11.4	13.8	1.8	10.7	11.7	11.2	10.9
A.PLANTS	2101	2474	2673	1081	1224	1261	-2.9	17.8	8.0	18.1	13.2	3.0	9.7	10.7	10.2	9.9
-Cereals	73	28	77	3	25	122	-51.7	-61.6	175.0	-95.6	733.3	388.0	0.3	0.1	0.3	1.0
-Leguminous Plants	198	269	255	107	114	66	19.3	35.9	-5.2	234.4	6.5	-42.1	0.9	1.2	1.0	0.5
-Industrial Plants	366	784	743	452	458	469	-29.8	114.2	-5.2	102.7	1.3	2.4	1.7	3.4	2.8	3.7
-Fruits	1235	1138	1309	388	457	464	10.9	-7.9	15.0	-19.8	17.8	1.5	5.7	4.9	5.0	3.6
-Vegetables	180	208	236	113		114	4.0	15.6	13.5	25.6	27.4	-20.8	0.8	0.9	0.9	0.9
-Other	49	47	53	18	26	26	28.9	-4.1	12.8	0.0	44.4	0.0	0.2	0.2	0.2	0.2
B.ANIMAL PRODUCTS	155	170	195	85	99	91	-36.7	9.7	14.7	-33.6	16.5	-8.1	0.7	0.7	0.7	0.7
C WATER PRODUCTS	54	59	71	24	32	25	1.9	9.3	20.3	-7.7	33.3	-21.9	0.2	0.3	0.3	0.2
D.FORESTRY PRODUCTS	4	6	8	3	3	5	-42.9	50.0	33.3	50.0	0.0	66.7	0.0	0.0	0.0	0.0
II-MINERY & QUARRY STONE PR.	406	389	424	189	189	201	48.7	-4.2	9.0	14.5	0.0	6.3	1.9	1.7	1.6	1.6
-Quarry Stone Products	249	253	261	119	115	123	15.8	1.6	3.2	-1.7	-3.4	7.0	1.2	1.1	1.0	1.0
-Mine Ores	144	118	148	61	66	68	188.0	-18.1	25.4	69.4	8.2	3.0	0.7	0.5	0.6	0.5
-Other	13	18	15	9	8	10	333.3	38.5	-16.7	12.5	-11.1	25.0	0.1	0.1	0.1	0.1
III-INDUSTRY	18917	20126	22874	9357	10868	11131	23.1	6.4	13.7	7.3	16.1	2.4	87.4	86.7	87.2	87.5
A.PROCESSED AGRICUL. PRODUCTS	2097	2118	2397	957	1177	871	26.3	1.0	13.2	9.1	23.0	-26.0	9.7	9.1	9.1	6.9
-Food Products	1940	2008	2271	907	1121	829	20.1	3.5	13.1	11.3	23.6	-26.0	9.0	8.6	8.7	6.5
-Processed Tobacco Products	137	95	118	40	51	40	380.6	-30.7	24.2	-24.5	27.5	-21.6	0.6	0.4	0.4	0.3
-Processed Forestry Products	7	1	1	0	0	0	9.7	-85.7	0.0				0.0	0.0	0.0	0.0
-Other	13	14	7	10	5	2	30.7	7.7	-50.0	100.0	-50.0	-60.0	0.1	0.1	0.0	0.0
B.PROCESSED PETROLEUM PRODUCTS	277	274	189	169	115	115	17.7	-1.1	-31.0	18.2	-32.0	0.0	1.3	1.2	0.7	0.9
C.INDUSTRIAL PRODUCTS	16543	17734	20288	8231	9576	10145	22.8	7.2	14.4	6.9	16.3	5.9	76.5	76.4	77.3	79.8
-Cement	141	135	171	61	76	80	-2.9	-4.3	26.7	-19.7	24.6	5.3	0.7	0.6	0.7	0.6
-Chemical Industry Products	711	823	953	398	444	462	23.7	15.8	15.8	17.1	11.6	4.1	3.3	3.5	3.6	3.6
-Leather & Stout Leather Products	537	434	512	157	196	177	1.4	-19.2	18.0	-31.7	24.8	-9.7	2.5	1.9	2.0	1.4
-Textile - Clothing	8262	8528	9710	3865	4636	4924	29.8	3.2	13.9	2.1	19.9	6.2	38.2	36.7	37.0	38.7
-Glass and Ceramics	530	621	736	296	343	361	27.3	17.2	18.5	16.5	15.9	5.2	2.4	2.7	2.8	2.8
-Steel & Iron Products	2248	2256	2599	1104	1266	1102	-4.6	0.4	15.2	-5.3	14.7	-13.0	10.4	9.7	9.9	8.7
-Machinery Industry Products	685	806	982	378	450	547	26.4	17.7	21.8	15.6	19.0	21.6	3.2	3.5	3.7	4.3
-Electric Machinery & Devices	915	1328	1450	602	685	818	34.0	45.1	9.2	55.2	13.8	19.4	4.2	5.7	5.5	6.4
-Transportation Vehicles	804	991	1022	514	462	555	62.9	23.3	3.1	61.1	-10.1	20.1	3.7	4.3	3.9	4.4
-Other	1710	1812	2153	856	1018	1119	200.1	6.0	18.8	5.4	18.9	9.9	7.9	7.8	8.2	8.8

Source: State Statistics Institute (SIS)

(2) Imports

Imports which increased 11.4 % in 1997 over the preceding year, and had a value of 48.6 billion dollars, have increased 3.7 % as of the end of the first six months of 1998, in comparison to the same period of the preceding year, and reached 23.1 billion dollars in value.

Industrial products have persisted as the primary element in imports, as 85 percent of the imports in 1997 were industrial goods, while 6.5 % were agricultural products, and 8.5 % were mining products.

Of the 23.1 billion dollars of imports in the first six months of 1998, 88 percent were industrial products, and its share has increased 8.9 percent in comparison to the same period of the preceding year, accounting for 20.3 billion dollars. It is followed by mining products (6.4 % of the total imports), and agricultural products (5.7 %). In this period the imports in mining sector fell 27.3 percent, and that of agricultural products fell 18 percent.

In the distribution of imports into primary groups of goods, the majority are goods that are employed in the industrial sector as inputs. The share of the input goods in the total imports was 65.6 % in 1997, and the share of the capital goods was 23 %, and the share of the consumption goods was 11 %.

In the first half of 1998 too, there has not been a major change in this composition of the imports. Input goods have comprised the 66.3 % of the total imports, and the shares of capital goods, and consumption goods have been 22 % and 11.2 % respectively (See Table 2.2.2).

Table 2.2.2 Distribution of Import Value by Categories Among Sectors

	VALUE (Million Dollars)						PERCENTAGE CHANGE (Relative to Preceding Year)						SHARE IN TOTAL (Percentage)			
	ANNUAL			JUNE (Cumulative)			ANNUAL			JUNE						
	1995	1996	1997	1996	1997	1998	1995	1996	1997	1996	1997	1998	1995	1996	1997	1998(*)
TOTAL	35709	43626	48586	20743	22266	23086	53.5	22.2	11.4	34.1	7.3	3.7	100.0	100.0	100.0	100.0
I-AGRICULTURE	2452	2955	3170	1652	1602	1314	102.0	20.5	7.3	54.7	-3.0	-18.0	6.9	6.8	6.5	5.7
A.PLANTS	1369	1769	2111	1013	1192	926	101.3	29.2	25.0	34.5	17.7	-22.3	3.8	4.1	4.6	4.0
-Cereals	455	775	701	532	437	177	193.5	70.3	-9.5	202.3	-17.9	-59.5	1.3	1.8	1.4	0.8
-Leguminous Plants	20	7	71	2	28	34	233.3	-65.0	914.3	-86.7	#####	21.4	0.1	0.0	0.1	0.1
-Industrial Plants	596	619	1047	272	524	494	56.8	3.9	69.1	-32.7	92.6	-5.7	1.7	1.4	2.2	2.1
-Fruits	48	61	59	32	31	29	60.0	27.1	-3.3	45.5	-3.1	-6.5	0.1	0.1	0.1	0.1
-Vegetables	7	14	22	12	17	11	40.0	100.0	57.1	140.0	41.7	-35.3	0.0	0.0	0.0	0.0
-Other	243	293	311	163	155	181	133.7	20.6	6.1	24.4	-4.9	16.8	0.7	0.7	0.6	0.8
B.ANIMAL PRODUCTS	927	1003	775	553	335	306	158.2	8.2	-22.7	119.4	-39.4	-8.7	2.6	2.3	1.6	1.3
C.WATER PRODUCTS	34	35	51	17	17	18	36.0	2.9	45.7	41.7	0.0	6.9	0.1	0.1	0.1	0.1
D.FORESTRY PRODUCTS	122	148	133	69	58	64	-18.7	21.3	-10.1	35.3	-15.9	10.3	0.3	0.3	0.3	0.3
II-MINERY & QUARRY STONE PR.	3479	4297	4139	1918	2018	1467	16.9	23.5	-3.7	17.9	5.2	-27.3	9.7	9.8	8.5	6.4
-Quarry Stone Products	113	115	160	51	68	68	46.8	1.8	39.1	6.3	33.3	0.0	0.3	0.3	0.3	0.3
-Mine Ores	121	138	147	41	66	86	120.0	14.0	6.5	-28.1	61.0	30.3	0.3	0.3	0.3	0.4
-Fuel Material	3240	4039	3821	1824	1878	1309	14.1	24.7	-4.4	20.1	3.0	-30.3	9.1	9.3	7.9	5.7
-Other	5	5	11	2	6	4	66.7	0.0	120.0	-33.3	200.0	-33.3	0.0	0.0	0.0	0.0
III-INDUSTRY	29778	36374	41277	17173	18646	20305	56.1	22.2	13.5	34.4	8.6	8.9	83.4	83.4	85.0	88.0
A.PROCESSED AGRICUL. PRODUCT	1500	1367	1211	707	591	558	78.1	-8.9	-11.4	28.5	-16.4	-5.6	4.2	3.1	2.5	2.4
-Food Products	1057	1042	825	525	389	368	87.7	-1.4	-20.8	45.8	-25.9	-5.4	3.0	2.4	1.7	1.6
-Processed Tobacco Products	26	34	42	17	21	29	-50.9	30.8	23.5	21.4	23.5	38.1	0.1	0.1	0.1	0.1
-Processed Forestry Products	257	137	156	77	76	86	133.6	-46.7	13.9	-24.5	-1.3	13.2	0.7	0.3	0.3	0.4
-Other	160	154	188	88	105	75	37.9	-3.8	22.1	18.9	19.3	-28.6	0.4	0.4	0.4	0.3
B.PROCESSED PETROLEUM PRODU	1374	1871	2241	745	1157	1078	41.1	36.2	19.8	22.3	55.3	-6.8	3.8	4.3	4.6	4.7
C.INDUSTRIAL PRODUCTS	26904	33136	37825	15721	16898	18669	55.8	23.2	14.2	35.4	7.5	10.5	75.3	76.0	77.9	80.9
-Cement	13	7	14	2	5	10	8.3	-46.2	100.0	-33.3	150.0	100.0	0.0	0.0	0.0	0.0
-Chemistry	4292	4546	4993	2265	2336	2610	62.0	5.9	9.8	15.5	3.1	11.7	12.0	10.4	10.3	11.3
-Leather & Plastics	1784	2157	2414	1021	1114	1269	77.3	20.9	11.9	26.0	9.1	13.9	5.0	4.9	5.0	5.5
-Leather & Stout Leather	238	315	321	155	141	136	30.8	32.4	1.9	50.5	-9.0	-3.5	0.7	0.7	0.7	0.6
-Forestry Products	64	89	87	46	37	52	88.2	39.1	-2.2	84.0	-19.6	40.5	0.2	0.2	0.2	0.2
-Textile - Clothing	2125	2535	2825	1267	1260	1457	62.6	19.3	11.4	29.0	-0.6	15.6	6.0	5.8	5.8	6.3
-Glass and Ceramics	297	404	377	204	168	211	69.7	36.0	-6.7	71.4	-17.6	25.6	0.8	0.9	0.8	0.9
-Steel & Iron Products	3534	3405	3723	1654	1702	1880	47.2	-3.7	9.3	1.2	2.9	10.5	9.9	7.8	7.7	8.1
-Non-ferrous Metals	823	943	1114	478	516	510	85.4	14.6	18.1	33.9	7.9	-1.2	2.3	2.2	2.3	2.2
-Metal Goods	200	300	296	158	134	161	44.9	50.0	-1.3	83.7	-15.2	20.1	0.6	0.7	0.6	0.7
-Machinery Industry Products	5666	8463	9157	3593	4009	4476	52.2	49.4	8.2	66.7	11.6	11.6	15.9	19.4	18.8	19.4
-Electric Machinery & Devices	2152	2966	3849	1334	1660	1943	20.6	37.8	29.8	46.1	24.4	17.0	6.0	6.8	7.9	8.4
-Transportation Vehicles	3600	4394	5698	2299	2460	2435	68.5	22.1	29.7	41.7	7.0	-1.0	10.1	10.1	11.7	10.5
-Other	2116	2613	2957	1245	1355	1519	66.2	23.5	13.2	48.6	8.8	12.1	5.9	6.0	6.1	6.6

Source: State Statistics Institute (SIS)

Note: (*)As of January- June.

2.2.3 Trading Partners

Traditionally, OECD Countries have been Turkey's major trading partners. The share of OECD countries in Turkey's export was 59.3% and the share of the OECD countries in Turkey's import was 71.7%. The European Union(EU) countries have an important place in the OECD. As a matter of fact, 49.7% of Turkey's total exports in 1996 and 46.7% in 1997 were to the EU countries. The share of this region in Turkey's total imports increased from 47.2% to 53% between 1995 and 1996 as the result of the Customs Union Agreement which went into effect as of 1996.

Germany has the most significant share of Turkey's imports and exports among the EU countries. Germany has always preserved its primary importance in Turkey's export and imports, followed by the US or Italy or Switzerland in second place at different times. Germany had a share of 22% in Turkey's total exports in 1978 and while this ratio decreased to below 20% between 1981 and 1986, it sustained an average level of over 20% during the following years. The ratio of imports from Germany is around 15%.

In particular, the Middle Eastern and North African Islamic countries had an important place in Turkey's foreign trade. The share of Islamic countries, constituting the second most important country group in Turkey's foreign trade, was 17.1% in total exports and 10.9% in total imports as of 1997.

The Russian Federation gradually started to gain importance in Turkey's foreign trade after the dispersion of the Soviet Union in 1990. Turkey's exports to the Russian Federation were valued at US\$ 1.5billion in 1996 which represented a 22% increase compared with 1995 and the exports increased 36% in 1997 and had a value of US\$ 2.1 billion (See Table 2.2.3).

Table 2.2.3 Balance of Trade by Trading Partners

(Unit: US\$ thousand)

Trading Partners	Import			Share	Export			Share	Foreign Trade Balance		
	1996	1997	1998(*)	1997	1996	1997	1998(*)	1997	1996	1997	1998(*)
Total	43627	48585	23086	100.0	23224	26245	12717	100.0	-20402	-22340	-10369
<i>I. OECD Countries</i>	<i>31092</i>	<i>34815</i>	<i>16731</i>	<i>71.7</i>	<i>14427</i>	<i>15574</i>	<i>7994</i>	<i>59.3</i>	<i>-16665</i>	<i>-19241</i>	<i>-8737</i>
<u>A-EU Countries</u>	23138	24870	11901	51.2	11549	12248	6200	46.7	-11589	-12622	-5701
Germany	7814	8021	3648	16.5	5187	5253	2494	20.0	-2627	-2768	-1154
Italy	4286	4463	2126	9.2	1447	1387	760	5.3	-2839	-3076	-1367
France	2771	2967	1560	6.1	1053	1163	607	4.4	-1718	-1804	-953
Britain	2510	2763	1334	5.7	1261	1511	783	5.8	-1250	-1252	-551
Netherland	1449	1485	694	3.1	770	779	389	3.0	-679	-706	-305
Belgium & Luxembourg	1129	1217	590	2.5	493	564	330	2.1	-636	-653	-260
Spain	1034	1276	656	2.6	363	439	223	1.7	-670	-837	-434
Austria	245	503	328	1.0	291	300	141	1.1	-255	-202	-186
Sweden	660	897	360	1.8	122	146	76	0.6	-538	-751	-284
Greece	285	431	183	0.9	236	298	167	1.1	-48	-133	-16
Finland	255	341	173	0.7	45	49	26	0.2	-210	-292	-148
Ireland	145	207	126	0.4	60	87	42	0.3	-85	-120	-84
Denmark	171	201	78	0.4	148	172	86	0.7	-24	-29	8
Portugal	85	98	44	0.2	75	98	77	0.4	-10	0	33
<u>B-EFTA</u>	1112	1287	645	2.6	336	414	165	1.6	-776	-873	-480
Iceland	4	5	3	0.0	2	3	10	0.0	-2	-2	7
Norway	93	178	84	0.4	58	93	50	0.4	-35	-86	-34
Switzerland	1015	1104	558	2.3	276	318	105	1.2	-739	-786	-453
<u>C-Other OECD</u>	6842	8658	4185	17.8	2542	2912	1546	11.1	-4300	-5746	-2639
U.S.A.	3516	4330	2207	8.9	1639	2027	1235	7.7	-1877	-2303	-972
Canada	344	311	86	0.6	100	117	74	0.4	-243	-194	-12
Japan	1422	2040	1006	4.2	168	144	46	0.5	-1254	-1896	-961
Other	1560	1978	886	4.1	635	624	192	2.4	-925	-1354	-694
<i>II. Non-OECD Countries</i>	<i>12535</i>	<i>13770</i>	<i>6309</i>	<i>28.3</i>	<i>8798</i>	<i>10671</i>	<i>4791</i>	<i>40.7</i>	<i>-3737</i>	<i>-3099</i>	<i>-1518</i>
<u>A-Other European Countries</u>	4102	4646	2345	9.6	3646	4684	2111	17.8	-456	38	-234
1. Romania	441	394	145	0.8	314	359	220	1.4	-127	-35	74
2. Commonwealth of Independent States	3074	3615	1939	7.4	2665	3512	1418	13.4	-409	-103	-521
a. Turkish Republic	304	399	228	0.8	747	908	404	3.5	443	508	176
Azerbaijan	39	58	30	0.1	240	320	158	1.2	201	261	129
Kazakhstan	101	165	127	0.3	164	211	99	0.8	63	45	-28
Kyrgyzstan	6	8	5	0.0	47	49	22	0.2	41	42	17
Uzbekistan	58	95	46	0.2	231	211	80	0.8	173	116	34
Turkmenistan	100	74	21	0.2	66	118	45	0.4	-35	44	24
b. Russian Federation	1921	2174	1071	4.5	1510	2057	777	7.8	-411	-118	-294
3. Other	587	637	261	1.3	666	813	473	3.1	80	176	212
<u>B-Asian Countries</u>	5438	5273	2325	10.9	3200	3545	1366	13.5	-2238	-1728	-959
1. Middle Eastern Countries	3209	2726	1044	5.6	1985	2295	1031	8.7	-1225	-430	-13
Iran	806	646	192	1.3	298	307	113	1.2	-509	-339	-79
Saudi Arabia	1708	1018	380	2.1	431	535	229	2.0	-1277	-483	-150
Kuwait	104	172	50	0.4	107	126	42	0.5	-3	-46	-8
Other	592	890	423	1.8	1150	1328	647	5.1	558	438	224
2. Other Asian Countries	2229	2547	1282	5.2	1215	1250	335	4.8	-1014	-1298	-947
China	556	787	385	1.6	65	44	25	0.2	-491	-743	-360
Taiwan	452	511	247	1.1	40	49	12	0.2	-412	-461	-235
Malaysia	237	283	144	0.6	134	134	24	0.5	-103	-149	-120
Singapore	131	103	58	0.2	248	366	92	1.4	117	263	33
Thailand	87	133	65	0.3	76	66	4	0.3	-12	-67	-60
Indonesia	154	144	85	0.3	57	47	14	0.2	-97	-97	-71
Philippines	17	27	19	0.1	46	27	10	0.1	29	0	-8
India	258	301	155	0.6	59	61	23	0.2	-199	-240	-132
Other	335	258	125	0.5	490	455	131	1.7	155	197	6
<u>C-African Countries</u>	1993	2197	942	4.5	1159	1233	741	4.7	-834	-965	-201
1. North African Countries	1618	1813	802	3.7	985	979	591	3.7	-632	-834	-212
Morocco	82	53	15	0.1	52	52	38	0.2	-30	-1	23
Algiers	737	768	401	1.6	278	316	198	1.2	-459	-452	-203
Tunisia	50	60	14	0.1	95	120	142	0.5	45	60	128
Libya	476	533	186	1.1	244	187	45	0.7	-232	-346	-141
Egypt	272	399	187	0.8	316	304	169	1.2	44	-94	-18
2. Other African Countries	376	385	140	0.8	174	254	150	1.0	-202	-131	11
<u>D-American Countries</u>	644	764	182	1.6	140	205	101	0.8	-504	-559	-280
<u>E-Other</u>	357	890	314	1.8	653	1004	471	3.8	295	114	157

Source: State Statistics Institute (SIS)

Note: (*) As of January- June.

2.3 Industries

2.3.1 Agriculture

In this country which has an important agriculture potential with its 77.8 million hectares of land, and an appropriate climate, agricultural production is undertaken in 28 million hectares, and of that 4 million hectares are used for wet soil agriculture. In 1998, the production increased 7.7 % due to favorable weather.

One other important input that helps production increase is chemical fertilizers. The use of chemical fertilizers increased in physical figures 4.8 % in 1996, and 1 % in 1997.

Production of chemical fertilizers, on the other hand, rose 1.3 % in 1996, yet that trend was reversed in 1997 when the production fell 1.9 %.

Table 2.3.1 CHEMICAL FERTILIZER PRODUCTION AND CONSUMPTION
(Thousand Tons)

	1995	1996	1997	1998(*)
Production				
Physical	3,770	3,819	3,746	4,040
PNS(1)	1,400	1,399	1,524	1,530
Consumption				
Physical	4,386	4,596	4,641	5,225
PNS	1,701	1,799	1,954	2,057

Ref: Ministry of Agriculture and Village Affairs, Association of Fertiliser Producers

(*) Forecast

(1) PNS - Plant Nutrition Substance

In vegetable production, one of the most important sub-sectors in agricultural production, the yields of leguminous plants, oily seed plants, tuber plants dropped in 1996, while production of the cereal grains, industrial plants, fruits, tea and vegetables have increased. Of the important field crops, the production of wheat increased by 2.8 %, the production of barley increased by was 6.7%, corn by 5.3 %, rice by 12 %, tobacco by 10.3 %, and beet by 30.2 %, yet the production of pure cotton dropped by 7.9 %, and sun-flower production dropped 13.3 %. Among fruits, production of fig fell 3.3 %, hazel-nut fell 2 %, olive production increased by 249.5 %, and grape production increased by 4.2 %. Production of fresh tea and vegetable increased 14.7 % and 6.7 % respectively.

Table 2.3.2 AGRICULTURAL PRODUCTION AND MAIN PRODUCTS

(Thousand Tons)

	1995	1996	1997	1998(*)	Rate Of Change		
					1996	1997	1998(*)
CEREALS	2804	29231	29651	33051	4.1	1.4	11.5
Wheat	18000	18500	18650	21000	2.8	0.8	12.6
Barley	7500	8000	8200	9000	6.7	2.5	9.8
Corn	1900	2000	2080	2200	5.3	4.0	5.8
Rice	150	168	165	300	12.0	-1.8	81.8
LEGUMINOSAE	1843	1832	1700	1697	-0.6	-7.2	-0.2
Lentil	665	645	515	599	-3.0	-20.2	16.3
Haricot	225	230	235	242	2.2	2.2	3.0
Chick-pea	730	732	720	652	0.3	-1.6	-9.4
INDUSTRIAL PLANTS	12286	15603	19706	21102	27.0	26.3	7.1
Tobacco	204	225	300	235	10.3	33.3	21.7
Cotton (Pure)	851	784	795	802	-7.9	1.4	0.9
Sugar-Beet	11171	14543	18553	20000	30.2	27.6	7.8
TUBERCLE	7785	7040	7400	7800	-9.6	5.1	5.4
Potato	4750	4950	5100	5300	4.2	3.0	3.9
Onion (Dry)	2850	1900	2100	2300	-33.3	10.5	9.5
OILY SEED PLANTS	2367	2166	2238	2241	-8.5	3.3	0.1
Sun Flower	900	780	900	880	-13.3	15.4	-2.2
Pea-nut	70	80	82	72	14.3	2.5	-12.2
Soya Bean	75	50	40	27	-33.3	-20.0	-32.5
FRUITS	10824	12478	11153	12046	15.3	-10.6	3.0
Apple	2100	2200	2550	2250	4.8	15.9	11.8
Citrus Fruits	1782	1820	1433	1603	2.1	-21.3	11.9
Grape	3550	3700	3700	3650	4.2	0.0	-1.4
Fig	300	290	243	290	-3.3	-16.2	19.3
Hazel-nut	455	446	410	580	-2.0	-8.1	41.5
Olive	515	1800	520	1300	249.5	-71.1	150.0
TEA (Fresh)	523	600	752	790	14.7	25.3	5.1
VEGETABLES (1)	18944	20216	18785	20397	6.7	-7.1	8.6

Ref: DŸ (State Statistics Institute)

(*) Forecast

(1) Melon-Watermelon Included

2.3.2 Industry

(1) Manufacturing Industry

The production of the manufacturing industry, a decisive sub-sector of the industrial sector, has entered a expansion trend from 1995 onwards, and the added value of it has increased 7.1 % in 1996, 11.4 % in 1997 and 1.2 % in 1998.

In the food industry, one of the leading manufacturing industries, the production of crystal and cubic sugar rose 9.2 %, and of the tobacco manufactures, the production of filter cigarettes has expanded 2.4 %. In the paper industry, the production of writing paper increased 16.4 %, while that of newspaper paper decreased 19.2 % in 1997.

Cement, iron, liquid steel, cast iron, and tire productions continued to rise. In the textile industry, cotton thread production rose 21.9 %, cotton cloth production rose 30.1 %, wool production rose 16.5 %, and the wool cloth production rose 32.1 % in 1997. Of the petrochemicals, the productions of polyethylene and PVC rose 2.3 % and 6 % respectively in 1997. Of the petroleum products, the production of gasoline rose 7.6 %, and jet fuel production rose 27 %, while productions of LPG, naphtha, diesel fuel, fuel-oil and Kerosene decreased in 1997.

Table 2.3.3 OUTPUTS OF LEADING MANUFACTURING INDUSTRY PRODUCTION

	Unit	1994	1995	1996	1997
Food Industry (1)					
Crystal Sugar	Thousand Tons	1681.9	1254.4	1819.5	1987.6
Cubic Sugar	Thousand Tons	45.3	35.2	22.8	24.9
Tobacco Products (1)					
Filter Cigarettes	Thousand Tons	77.9	75.4	70.7	72.4
Paper Industry (1)					
Writing Paper	Thousand Tons	79.7	102.2	69.5	80.9
Newspaper Paper	Thousand Tons	109.9	137.6	74.3	60.0
Cement Industry (1)					
Cement	Million Tons	29.5	33.2	35.2	36.0
Iron-Steel Industry (1)					
Iron Ore	Thousand Tons	4603.8	4363.5	5263.1	5566.9
Liquid Steel	Thousand Tons	12178.6	12797.7	13382.2	13644.1
Cast Iron	Thousand Tons	394.1	330.1	489.5	577.4
Tire Industry					
Tires	Thousand Pieces	8728.7	11377.0	12022.9	13499.5
Textile Industry (1)					
Cotton Thread	Thousand Tons	358.1	369.2	421.1	513.3
Cotton Cloth	Million Mt.	486.8	498.1	493.6	642.2
Wool Thread	Thousand Tons	54.4	52.2	55.7	64.9
Wool Cloth	Million Mt.	23.4	30.4	35.8	47.3
Petroleum-Chemical Industry (2)					
Polyethylene	Thousand Tons	283.0	303.1	299.5	292.6
PVC	Thousand Tons	154.1	178.6	201.2	189.2
Oil Products Industry (3)					
LPG	Thousand Tons	702.5	748.4	777.4	748.0
Gasoline	Thousand Tons	3362.4	3619.7	3517.5	3785.3
Naphta	Thousand Tons	1220.3	1450.8	1607.2	1604.2
Jet Fuel	Thousand Tons	976.7	1146.1	1017.0	1291.2
Diezel Fuel	Thousand Tons	7168.9	7706.6	7208.6	7150.4
Fuel Oil	Thousand Tons	8577.3	9410.2	8884.9	8790.1
Kerosene	Thousand Tons	107.5	78.3	93.9	72.5

Ref: (1) DVE (State Statistics Institute)

(2) PETKIM Petrochemicals Co.

(3) General Directorate of Petroleum

(2) Mining

Together with the strengthening of foreign markets that fostered a rise in exports of mining products, the production in the mining industry returned to a rising trend from 1994 onwards, and the production rose 3.1 % in 1995, 1.1 % in 1996, and 5.6 % in 1997.

In terms of sub-sectors; the production of coal mining, crude oil and natural gas has dropped, while metal ores production has been on the rise.

Table 2.3.4 MINING INDUSTRY PRODUCTION INDEX

(Added Value Dominated)

(1992=100)

		Annual Average Index		
		State	Private	Total
MINING INDUSTRY	1994	100.3	90.6	98.3
	1995	91.9	137.5	101.3
	1996	102.8	101.1	102.4
	1997	107.9	109.0	108.1
1. Coal	1994	99.5	85.5	97.5
	1995	102.7	76.9	99.0
	1996	104.9	73.4	100.4
	1997	105.6	54.8	98.4
2. Crude Oil Natural Gas	1994	85.9	85.6	85.8
	1995	82.5	79.5	81.9
	1996	84.2	73.3	81.8
	1997	80.0	76.6	79.3
3. Metal Ores	1994	122.1	112.7	119.1
	1995	89.0	395.9	187.3
	1996	94.8	221.7	135.5
	1997	149.6	302.5	198.6
4. Other	1994	117.6		117.6
	1995	66.5		66.5
	1996	136.5		136.5
	1997	144.7		144.7

Ref: DYE (State Statistics Institute)

2.3.3 Energy

According to the energy production index of the State Statistics Institute that encompasses electric, gas and hydro energy productions, the production has increased 9.6 %, and 4.9 % in the years 1996 and 1997 respectively.

In the energy consumption, which is a leading input for the other sectors of the economy, primary energy sources, such as bituminous coal, lignite, petroleum, natural gas, hydraulic and geo-thermal energy, wood, dried dung, etc, and solar energy are used. Electric energy and coke are used as secondary energy sources. Production planning is undertaken to utilize nuclear energy as well.

Table 2.3.5 PRIMARY ENERGY CONSUMPTION

	Unit	1994	1995	1996	1997	1998
Bituminous Coal (**)	Thousand Tons	9392	9573	13173	15056	14979
Lignite	Thousand Tons	51178	52405	54961	59474	64509
Asphaltite	Thousand Tons	0	66	34	29	23
Petroleum	Thousand Tons	25859	27918	29604	29176	29022
Wood	Thousand Tons	18272	18374	18374	18374	18374
Animal and Plant Remnants	Thousand Tons	7074	6765	6666	6575	6739
Geothermal	GWh	79	86	84	83	85
Hdraulic	GWh	30586	35541	40475	39816	42229
Natural Gas	10(6) M3	5408	6937	8114	10072	10648
Solar & Other	Thousand TEP	92	116	170	188	253

Ref: Ministry of Energy and Natural Resources

Table 2.3.6 RATES OF UTILIZATION OF VARIOUS ENERGY SOURCES

	Primary Energy Consumption (1000 TEP)				Shares			
	1995	1996	1997	1998	1995	1996	1997	1998(*)
Bituminous Coal (**)	6690	9116	10349	10290	10.6	13.1	14.1	13.9
Lignite	10605	11187	12317	12631	16.8	16.1	16.8	17.0
Asphaltite	28	15	13	10	0.0	0.0	0.0	0.0
Petroleum & Oil Products	29324	30939	30515	30349	46.4	44.6	41.7	40.9
Naturalgas & LNG	6313	7384	9165	9690	10.0	10.6	12.5	13.1
Geothermal	74	72	71	73	0.1	0.1	0.1	0.1
Hydraulic	3057	3481	3424	3632	4.8	5.0	4.7	4.9
Solar & Other	116	170	188	253	0.2	0.2	0.3	0.3
Electric Import	0	23	214	284	0.0	0.0	0.3	0.4
Electric Export	-60	-30	-23	-26	-0.1	0.0	0.0	0.0
TOTAL COMMERCIAL	56147	62357	66233	67186	88.8	89.8	90.4	90.5
Wood	5512	5512	5512	5512	8.7	7.9	7.5	7.4
Animal and Plant Remnants	1556	1533	1512	1550	2.5	2.2	2.1	2.1
TOT.NON-COMMERCIAL	7068	7045	7024	7062	11.2	10.2	9.6	9.5
GRAND TOTAL	63215	69402	73257	74248	100.0	100.0	100.0	100.0

Ref: Ministry of Energy and Natural Resources

(1000 TEP = Thousand Tons Equivalent of Petroleum)

The distribution of energy consumption among various sources in 1998, petroleum and petroleum products had the largest share with a 40.9 %, and was followed by natural gas which had a share of 13.1 %.

The general energy outlook of Turkey, and the developments of related activities are summarized below.

(1) Bituminous coal

The known reserves of bituminous coal, an important primary energy source, are 1.1 billion tons.

According to the data from the Ministry of Energy and Natural Resources, the bituminous coal consumption rose to 13.2 million tons in 1996, 15.1 and 15.1 million tons in 1997 and 1998 respectively.

(2) Lignite

The reserves of lignite, which is more abundant than other energy source in this country, is today known to be around 8.8 billion tons.

The lignite production in 1996 was 53.9 million tons, the production rose to 57.4 million tons in 1997 and to 65.2 million tons in 1998.

The consumption of lignite in 1996 was 54 million 961 thousand tons, that rose by an 8% and reached 59 million 474 thousand tons in 1997 and 64.5 million tons in 1998.

(3) Crude Oil

Ascertained remaining extractable petroleum reserves in this country equals around 46.3 million tons.

The drop in crude oil production continued in 1996 and 1997 as well, and production was 3.50 million tons in 1996, and retreated to 3.46 million tons in 1997. The amount of crude oil processed at the refineries was 26.7 million tons in 1997.

Table 2.3.7 PRODUCTION AND IMPORTS OF CRUDE OIL
(Thousand Tons)

	1995	1996	1997
Total production	3516	3499	3457
Turkish Companies	2673	2726	2657
Foreign Companies	843	773	800
Import	23511	22916	23337
Total Crude Oil			
Processed in Refineries	27039	26459	26669

Ref: General Directorate of Petroleum

2.3.4 Tourism

While the number of tourists arriving in this country was 7.7 million in 1995, that number rose 11.5 % in 1996 and became 8.6 million, and in 1997 rose another 12.5 % and reached 9.7 million.

The number of citizens leaving for abroad, on the other hand, rose 8.7 % in 1997 and reached 4.6 million.

Table 2.3.8 TOURISM MOVEMENTS
(Thousand)

	Arriving Tourists				Leaving Nationals			
	1995	1996	1997	1998(*)	1995	1996	1997	1998(*)
January	275	284	301	346	289	314	352	311
February	302	325	314	372	177	212	268	250
March	368	537	555	477	220	227	298	309
April	535	556	640	642	269	318	342	338
May	732	875	1021	986	264	276	331	284
June	810	902	1046	1063	264	265	286	275
July	1009	1106	1206	1288	391	373	418	405
August	1070	1154	1405	1462	745	809	788	803
September	1055	1117	1297		512	509	577	
October	836	909	947		325	372	375	
November	393	452	538		257	297	291	
December	340	396	418		267	289	307	
TOTAL	7727	8614	9689	6636	3981	4261	4633	2976

Ref: Ministry of Tourism

(*) Interim

2.4 Transport

The transportation sector consists of the land, sea, air and railroad transportation activities. The transportation sector has a significant place in the economy since Turkey covers an extensive area, is surrounded by three seas to the south, north and west, and is located between Europe and Asia as an intersection of trade. For this reason, the transportation investments with an annual average share of more than 30% of the total public investment, took the first place during the period between 1963 and 1997.

The activities related to the development and coordination of the services provided by the transportation sector in Turkey and abroad are carried out by the Ministry of Transport. In parallel with the new developments, the activities for the establishment of a separate unit within the structure of the Ministry of Transport which will be responsible for the coordination of organizations engaged in activities in the transportation sub-sectors are continuing, because this sector is gradually contributing more to the development of Turkey's economy. The highway lead the domestic cargo transportation with a share of 93.6% in 1996. The ratio is 6.2% for railway, 0% for seaways and 0.2% for Airline. Furthermore, 95% of the domestic passenger transportation in Turkey is by land.

2.4.1 Road

(1) Highway Network

Turkey's highway network spreads across land from west to east and north to south. Turkey's highways are separated into four groups: the motorway, the state, the provincial and the village road. The construction, maintenance and repair of these roads are carried out by separate public organizations. The state roads are the primary highways connecting the regional or provincial centers, the airport and the seaports. The General Directorate of Highways connected to the Ministry of Public Works is responsible for the maintenance and repair of the state roads. In recent years, construction of motorway has increased rapidly and the total length reached 1,749km in 1999. Length and network of Turkey's highways are shown in Table 2.4.1, and total length of motorway, state roads and provincial road by surface condition is shown in Table 2.4.2.

Table 2.4.1 Length of Highway Network by Systems and Years

(Unit: Km)

Years	Motorways	State Roads	Provincial Roras	Sub Total = + +	Village Roads	Total = +
1950	-	24,306	22,774	47,080	-	47,080
1960	-	26,711	34,831	61,542	-	61,542
1970	-	35,016	24,437	59,453	76,957	136,410
1980	27	31,976	28,785	60,788	172,413	233,201
1981	27	31,888	28,824	60,739	268,817	329,556
1982	27	31,953	29,001	60,981	234,145	295,126
1983	61	31,210	28,087	59,358	243,350	302,708
1984	81	30,982	28,130	59,193	251,209	310,402
1985	81	30,997	28,305	59,383	257,508	316,891
1986	95	30,986	28,153	59,234	261,558	320,792
1987	115	31,062	27,853	59,030	269,154	328,184
1988	138	30,999	27,852	58,989	271,511	330,500
1989	160	31,048	27,504	58,712	297,579	356,291
1990	281	31,149	27,979	59,409	308,597	368,006
1991	387	31,261	27,960	59,608	308,602	368,210
1992	757	31,343	28,499	60,599	326,522	387,121
1993	1,070	31,424	28,346	60,840	327,253	388,093
1994	1,167	31,389	28,443	60,999	320,029	381,028
1995	1,246	31,422	28,577	61,245	320,055	381,300
1996	1,514	31,412	28,813	61,739	320,001	381,740
1997	1,528	31,320	29,516	62,364	319,448	381,812
1998	1,726	31,345	29,540	62,611	319,218	381,829
1999	1,749	31,388	29,535	62,672	323,000	385,672

Source: General Directorate of Highways Maintenance Division
General Directorate of Rural Service

Table 2.4.2 Network Conditions(km)

Year	Road Category	Asphalt	Stabilized Pavement	Earth Pavement	Unusable	Total
1950	Motorways					
	State Roads	1,322	16,136	3,070	3,778	24,306
	Provincial Roads	302	6,454	7,241	8,777	22,774
	Total	1,624	22,590	10,311	12,555	47,080
1960	Motorways					
	State Roads	6,347	17,355	1,161	1,848	26,711
	Provincial Roads	702	17,635	8,007	8,487	34,831
	Total	7,049	34,990	9,168	10,335	61,542
1970	Motorways					
	State Roads	17,214	14,750	1,116	1,936	35,016
	Provincial Roads	2,012	14,149	4,287	3,989	24,437
	Total	19,226	28,899	5,403	5,925	59,453
1980	Motorways	27				27
	State Roads	24,545	5,977	988	698	32,208
	Provincial Roads	9,633	12,768	3,967	1,483	27,851
	Total	34,205	18,745	4,955	2,181	60,086
1990	Motorways	174				174
	State Roads	28,687	1,874	80	393	31,034
	Provincial Roads	17,609	7,684	1,154	1,057	27,504
	Total	46,470	9,558	1,234	1,450	58,712
1997	Motorways	1,500				1,500
	State Roads	29,989	1,012	81	330	31,412
	Provincial Roads	21,830	4,995	1,095	893	28,813
	Total	53,319	6,007	1,176	1,223	61,725
1998	Motorways	1,528				1,528
	State Roads	30,101	825	81	313	31,320
	Provincial Roads	22,821	4,749	1,120	826	29,516
	Total	54,450	5,574	1,201	1,139	62,364
1999	Motorways	1,726				1,726
	State Roads	30,434	618	39	254	31,345
	Provincial Roads	23,991	3,523	1,141	885	29,540
	Total	56,151	4,141	1,180	1,139	62,611
2000	Motorways	1,749				1,749
	State Roads	30,540	545	89	214	31,388
	Provincial Roads	24,398	3,216	1,106	815	29,535
	Total	56,687	3,761	1,195	1,029	62,672

Source: General Directorate of Highway

Note: Beginning of year data.

(2) Transportation Activities

1) Freight Transportation

Freight transportation(ton-km) by highways accounts for 93.6% of the total volume in 1996, followed railways (6.2%) airlines (0.2%). As to growth rate of freight transportation, highway transport showed steady growth of 12.8% between 1990 and 1996. In the same period, railway transportation was stable at 2%. On the other hand, airline transportation experienced a rapid growth of 14.4% instead of low price of cargoes.(See Table 2.4.3 and Figure 2.4.1)

2) Passenger Transportation

Passenger Transportation (number-km) by highways amount to 167, 871 number-km million (share to total volume is 93.6%) in 1996. Railways and airlines transportation is 5,299number-km million (6.2%) and 2,754number-km million (0.2%), respectively. As to growth rate of passenger transportation, airlines accelerate to 14.5%, highway indicate as 3.7% while railways decline to -3.3%. (see Table 2.4.4 and Figure 2.4.2)

3) Traffic Volume

According to the "Traffic and Transportation Survey 1998" conducted by General Directorate of Highways, congested lines/areas and its average annual daily traffic value are shown in Table 2.4.5.(see Figure 2.4.3)

Table 2.4.5 Congested Line in Turkey

Line and Area	Average Annual Daily Traffic Value (number)			
	Motorway	Route No.	State Highway	Route No.
Edirne – Ankara via Istanbul	155,800	Bosphorus	149,293	-
Ankara-Izmir via Eskisehir, Burusa and Balikesir, surrounding lines of Izmir,	12,224	Tahtalicay -Torballi	19,640	200-06
Adana	9,978	Pozanti-Ta.Kavsak	39,505	400-23
Samusun	-	-	41,529	010-16
Trabzon	-	-	58,380	010-22

Source: General Directorate of Highway

Table 2.4.3 Trend of Freight Transport by Transport Systems

(Unit: ton-km million)

Yerars	Highways		Railways		Marinelines		Airlines		Total	
	Ton-km	%	Ton-km	%	Ton-km	%	Ton-km	%	Ton-km	%
1950	957		3,078		262		-		-	
1960	3,678	37.8	4,632	47.6	1,400	14.4	12	0.1	9,722	100
1970	17,447	60.9	6,092	21.3	5,100	17.8	25	0.1	28,664	100
1980	36,418	73.5	5,029	10.1	8,100	16.3	32	0.1	49,579	100
1981	39,007	75.9	6,091	11.9	6,228	12.1	54	0.1	51,380	100
1982	40,567	77.3	6,212	11.8	5,675	10.8	54	0.1	52,508	100
1983	42,189	82.0	6,301	12.2	2,934	5.7	57	0.1	51,481	100
1984	43,878	73.9	7,679	12.9	7,719	13.0	63	0.1	59,339	100
1985	45,634	78.5	7,959	13.7	4,504	7.7	59	0.1	58,156	100
1986	48,463	80.0	7,396	12.2	4,682	7.7	64	0.1	60,605	100
1987	58,832	83.0	7,403	10.4	4,541	6.4	79	0.1	70,855	100
1988	62,480	77.9	8,149	10.2	9,454	11.8	88	0.1	80,171	100
1989	55,416	78.7	7,707	11.0	7,152	10.2	95	0.1	70,370	100
1990	65,710	81.0	8,031	9.9	7,234	8.9	107	0.1	81,082	100
1991	61,969	85.0	8,093	11.1	2,780	3.8	76	0.1	72,918	100
1992	67,704	86.9	8,383	10.8	1,756	2.3	102	0.1	77,945	100
1993	97,843	91.1	8,511	7.9	901	0.8	152	0.1	107,407	100
1994	95,020	91.2	8,338	8.0	587	0.6	198	0.2	104,143	100
1995	112,515	92.5	8,632	7.1	276	0.2	231	0.2	121,654	100
1996	135,781	93.6	9,018	6.2	9	0.0	240	0.2	145,048	100
GR*(%)	12.9		2.0		-		14.4		10.2	

Source: General Directorate of Highways, State Institute of Statistics

Note: * Annual average growth rate between 1960 and 1996

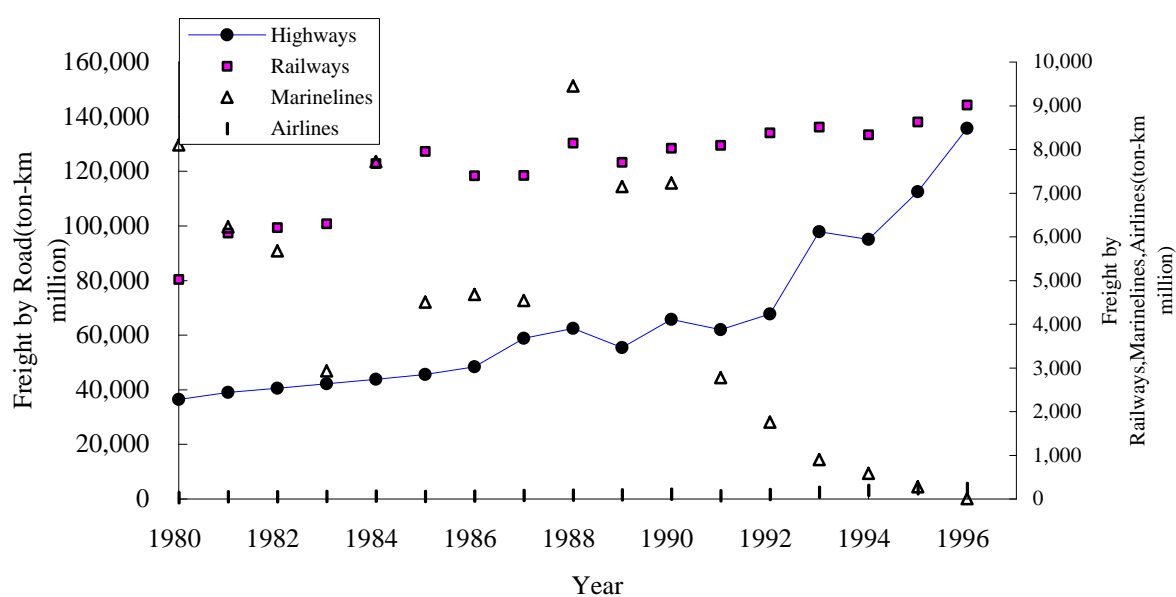


Figure 2.4.1 Trend of Freight Transport by Transport System

Table 2.4.4 Trend of Passenger Transport by Transport Systems

(Unit: passenger-km million)

Yerars	Highways		Railways		Marinelines		Airlines		Total	
	Num-km	%	Num-km	%	Num-km	%	Num-km	%	Num-km	%
1950	2,597		2,182		389		-		-	
1960	10,880	72.9	3,633	24.3	304	2.0	115	0.8	14,932	100
1970	41,311	91.4	3,444	7.6	133	0.3	308	0.7	45,196	100
1980	74,721	94.8	3,549	4.5	120	0.2	395	0.5	78,785	100
1981	76,491	91.7	6,105	7.3	131	0.2	670	0.8	83,397	100
1982	80,010	92.8	5,440	6.3	131	0.2	663	0.8	86,244	100
1983	83,690	92.7	5,722	6.3	121	0.1	713	0.8	90,246	100
1984	87,539	92.3	6,277	6.6	120	0.1	864	0.9	94,800	100
1985	91,567	92.6	6,489	6.6	131	0.1	718	0.7	98,905	100
1986	97,609	93.3	6,052	5.8	139	0.1	785	0.8	104,585	100
1987	112,034	93.9	6,174	5.2	157	0.1	945	0.8	119,310	100
1988	123,237	94.0	6,708	5.1	186	0.1	991	0.8	131,122	100
1989	131,001	94.2	6,844	4.9	171	0.1	1,079	0.8	139,095	100
1990	134,991	94.6	6,410	4.5	127	0.1	1,208	0.8	142,736	100
1991	131,029	94.9	6,048	4.4	92	0.1	845	0.6	138,014	100
1992	142,172	95.0	6,259	4.2	58	0.0	1,138	0.8	149,627	100
1993	146,029	94.2	7,147	4.6	53	0.0	1,721	1.1	154,950	100
1994	140,743	94.2	6,335	4.2	47	0.0	2,268	1.5	149,393	100
1995	155,202	94.8	5,797	3.5	61	0.0	2,666	1.6	163,726	100
1996	167,871	95.4	5,229	3.0	58	0.0	2,754	1.6	175,912	100
GR*(%)	3.7		(3.3)		-		14.7		3.5	

Source: General Directorate of Highways, State Institute of Statistics

Note: * Annual growth rate between 1990 and 1996

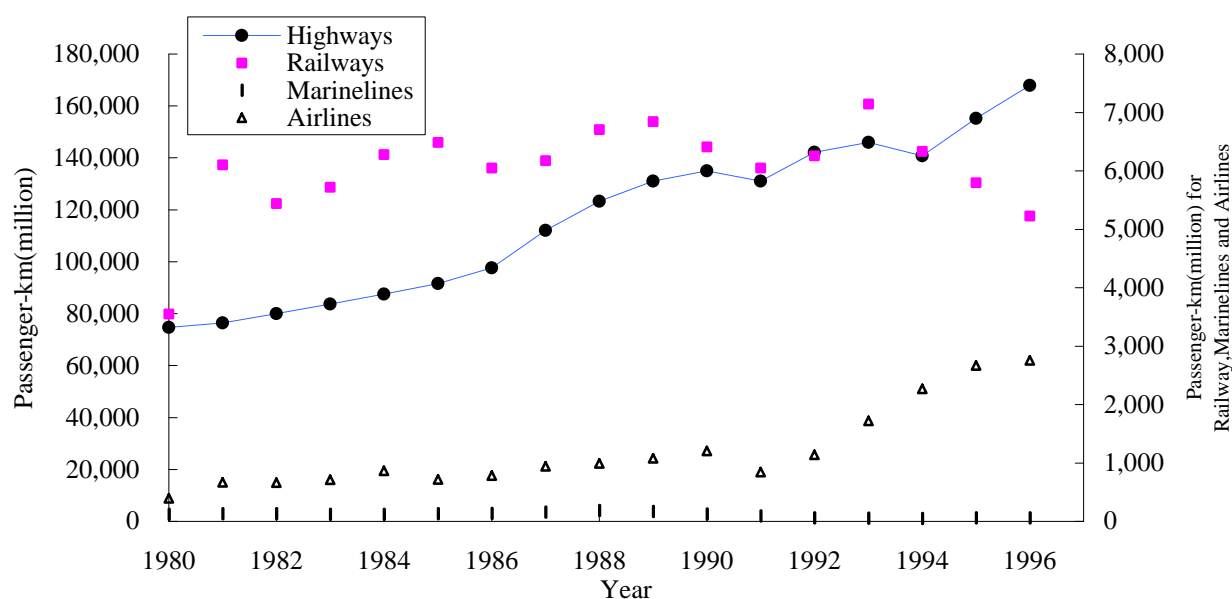


Table 2.4.3 Trend of Passenger Transport by Transport System

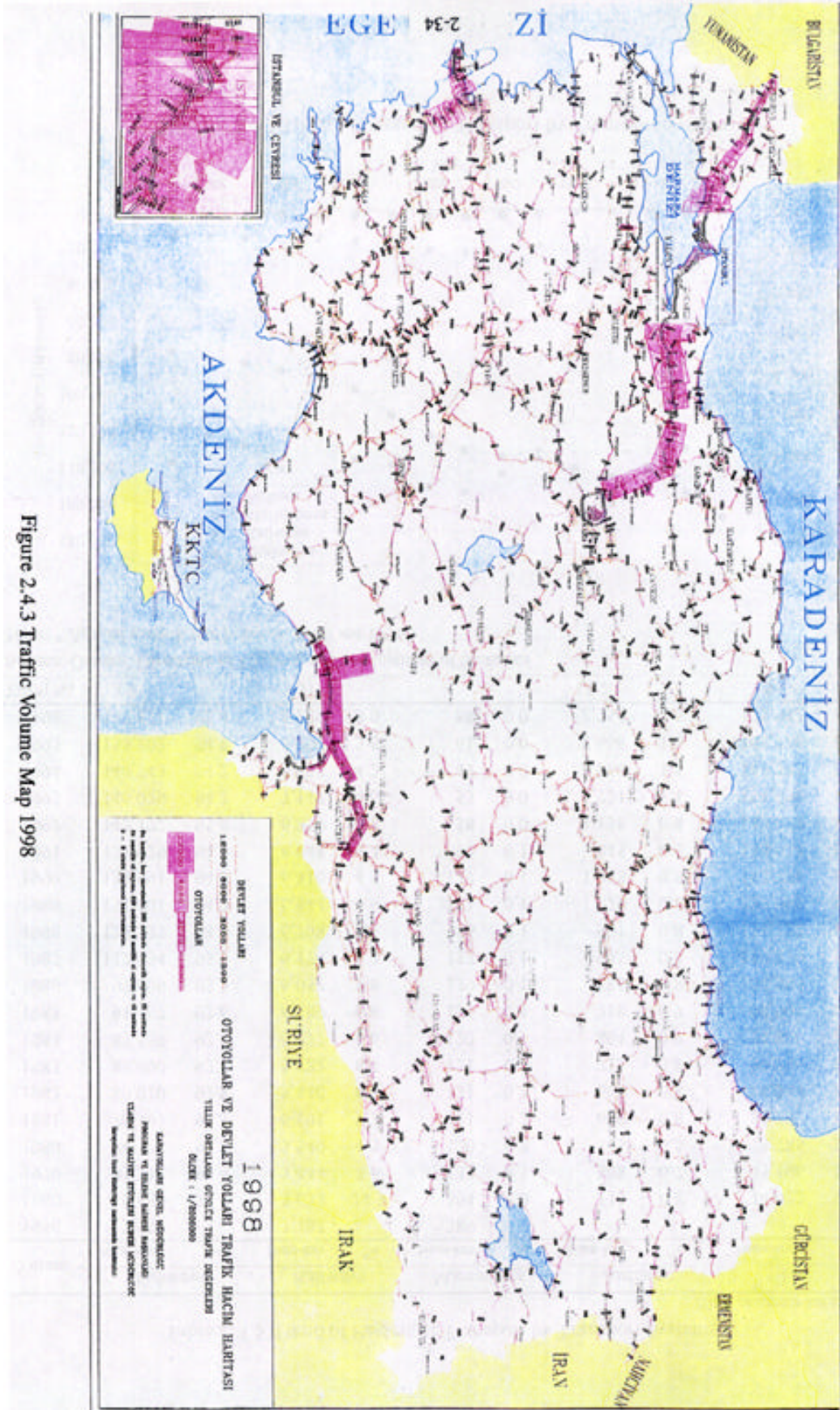


Figure 2.4.3 Traffic Volume Map 1998

4) Highway Network related to Neighboring Countries

There are several kinds of highway network development plans through out Turkey related to neighboring countries. Some parts of those lines have been constructed and used as national highways in Turkey. Major highway network plans are mentioned below.

E-Highway Network

The highway known as E-Highway is the European International Network. European Economic Commission, of which Turkey is a member, encourages the improvement of highways that connect member countries(See Figure 2.4.4).

The North-South European Highway (TEM) Project

The North-South European Highway Project (TEM) has been started with the support of the European Economic Commission and the United Nations Development Program with the participation of ten European countries in accordance with the terms of Helsinki Final Document decisions. The National Coordination of TEM is carried by the General Directory of Highways(see Figure 2.4.5, Figure2.4.6). Table 2.4.6 shows current situation of development of TEM.

Table 2.4.6 Current Situation of TEM's Development in Turkey(December,1997)
(Unit: km)

No.*	Line	Used	Under Construction	Planning	Total
1	Kapikule-Gerede	597	47		626
2	Gerede-Konya	193	33		226
3	Konya-Aksaray			225	225
4	Aksaray-Rarsus			247	247
5	Tarsus-Mersin			52	52
6	Tarsus-Toprakkale	60			60
7	Toprakkale-Cizre	118	25	503	646
8	Topprakale-Yayladagi			184	184
9	Izmir-Afyon			331	331
10	Afyon-Konya			222	222
11	Konya-Aksaray			141	141
12	Afyon-Ankara			252	252
13	Ankara-Askale			821	821
14	Askale-Gurbulak			389	389
15	Trabzon-Askale			247	247
16	Gerede-Sarp			887	887
Total		905	105	4,501	5,556

Source: General directorate of Highway

Note: * Refer to Figure 2.4.6

Economic Cooperation Organization (ECO) Highway

In the beginning, this organization was established to promote cooperation between Turkey, Iran and Pakistan in economic, social, technical, and commercial fields. In the Banks Council Meeting in Islamabad on 28-29 November 1992, ECO has increased to ten with the participation of Azerbaijan, Turkmenistan, Uzbekistan, Kirgistan, and Afghanistan and then Tajikistan. In addition, the Northern Cyprus Turkish Republic has also joined this organization as an observer. With the new participation, the role and the importance of the regional cooperation of the ECO has increased and around it there is a need for additional routes for uninterrupted highway transportation, and works on this subject are being carried on.

The Black Sea Economic Cooperation(BEC) Project

Turkey, Greece, Bulgaria, Rumania, Albania, Azerbaijan, Armenia, Georgia, Moldova and Ukraine are the members of this project. The most important point in this project is that firstly the network formed with the main axes of the member countries will be determined and will be reached to a specific standard.

In addition to the Black Sea Ring Corridor determination works, there are works about the Pan European Corridors and integration in the context of this project.

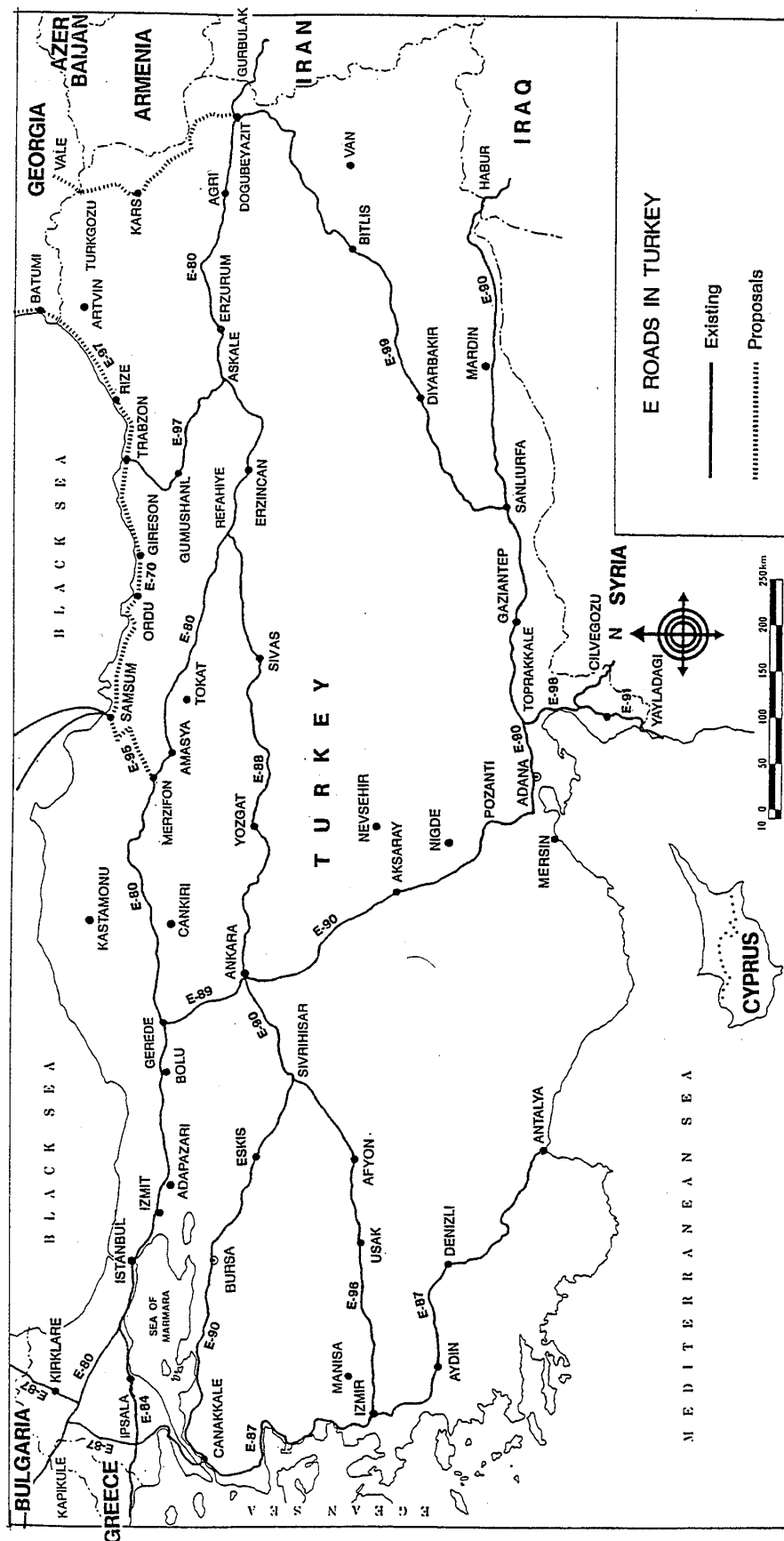


Figure 2.4.4 E-Road Network in Turkey

1996

TEM Member Country	Observer and/or Other Country
TEM Motorway or Expressway in operation	Non-TEM Section connected to TEM Network
Approved TEM Section (TEM Corridor)	Non-TEM Section connected to TEM Network
Section to be considered (Inside TEM Region)	Section to be considered (Outside TEM Region)



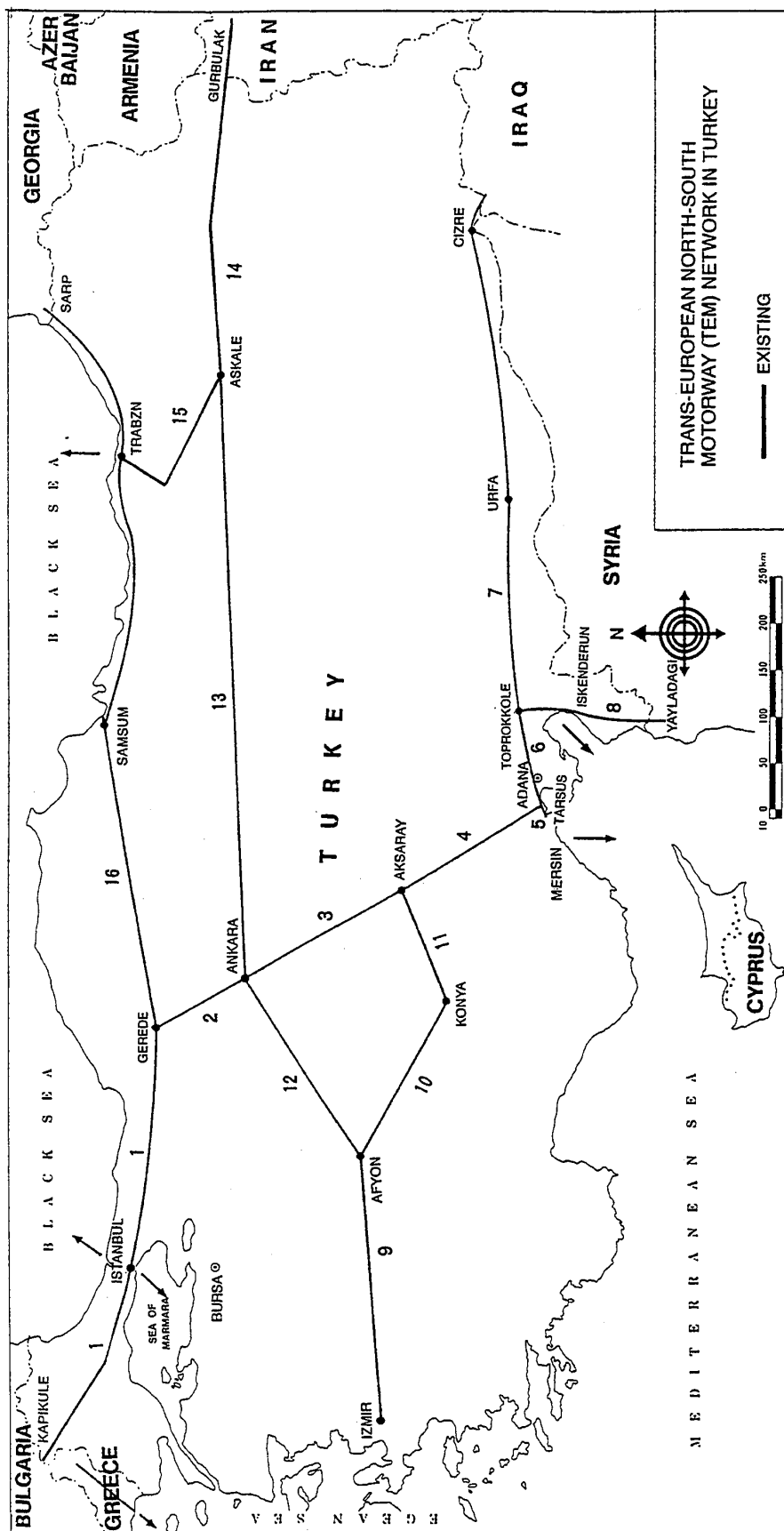


Figure 2.4.6 TEM Network in Turkey

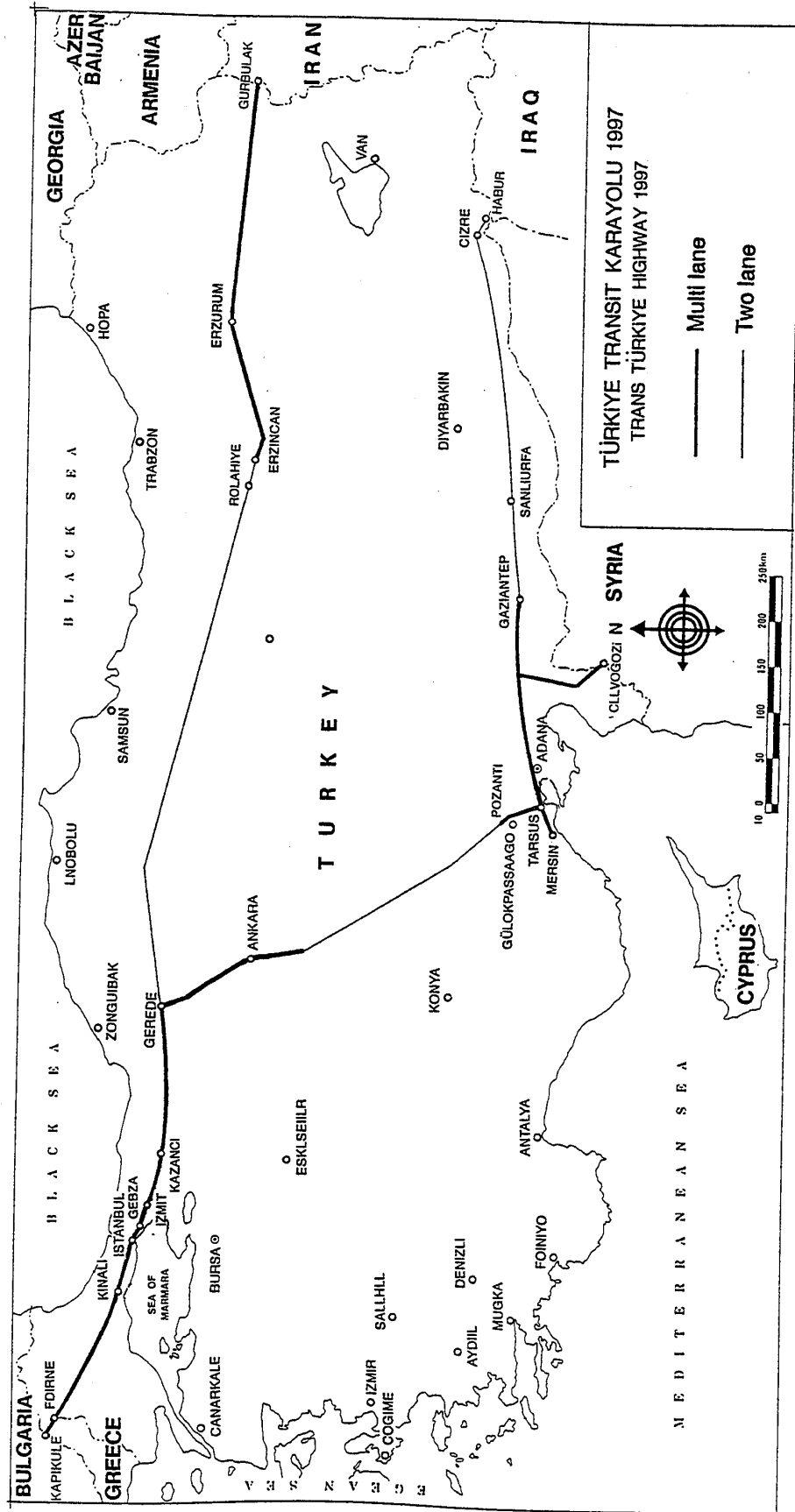


Figure 2.4.7 TTH Network

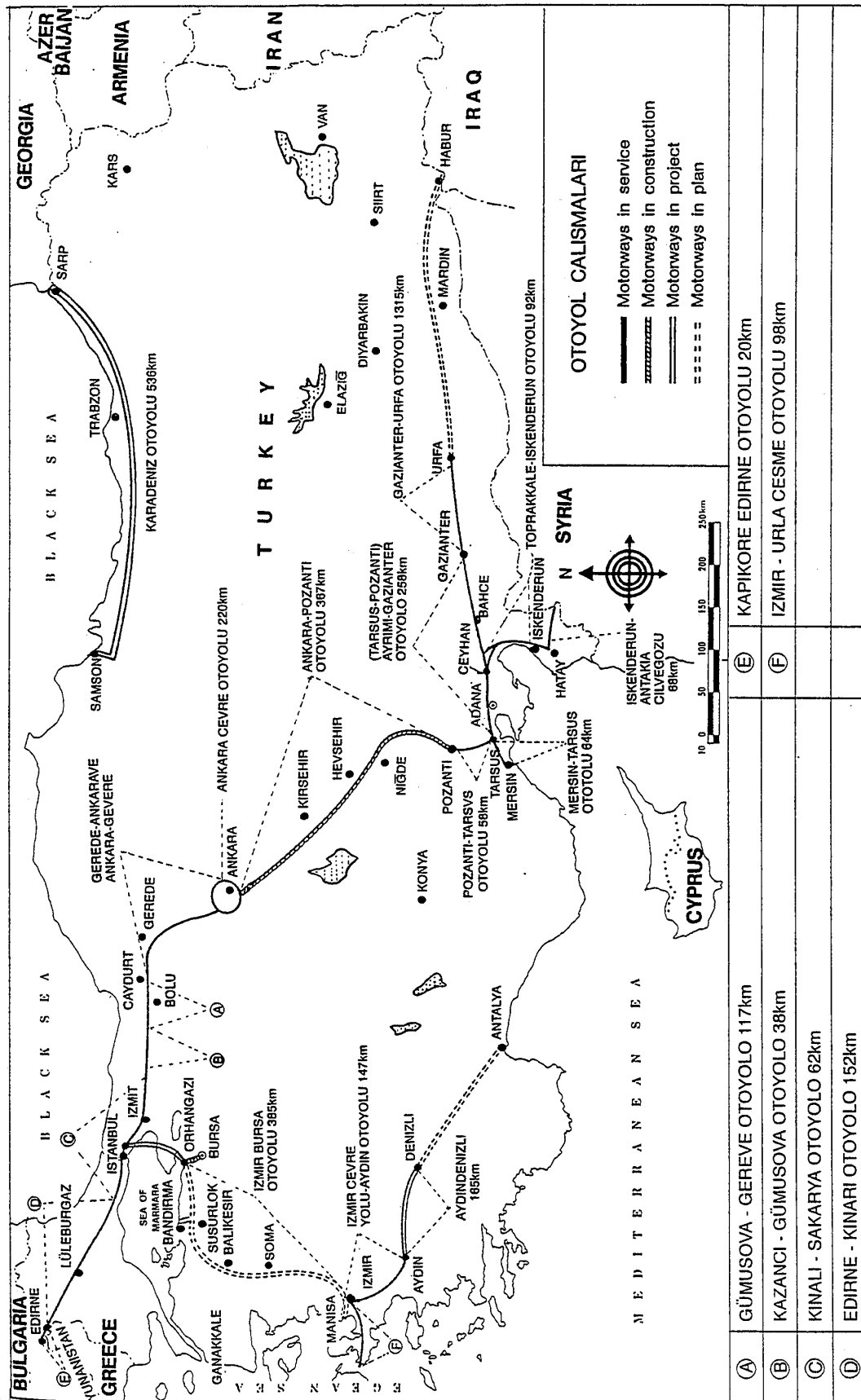


Figure 2.4.8 Motorway Network

2.4.2 Railway

(1) Railway Network

In spite of the rapid highway development, similar development could not be attained in railway. The construction of the railway network between 1923-1938 was given special importance and a total of 3,000km of new railways were constructed. Eastern and Southeastern Anatolia were connected to Ankara and the cities by railway.

The railway network in Turkey, as of 1997, exceeded 10,500km. The length of the railways with electrification is 2,065km, which is 20% of the total main lines. A study for the restructuring of the State Railroads Enterprise (TCDD) with the objective of reviving railway transportation and enlarging the railway network was realized in 1996. Furthermore, activities to realize the Asia-Europe Railway connection and the Istanbul Bosphorus Tube Crossing Project have commenced (see Table 2.4.7, Figure 2.4.9).

Table 2.4.7 Distribution of the Railway Lines by Regions in 1997

(Unit: km)

Regions	Main Lines		2nd, 3rd and 4th Main Lines		Total Main Lines		Subsidiary Lines		Total Lines	
	Non Electrified	Electrified	Non Electrified	Electrified	Non Electrified	Electrified	Non Electrified	Electrified	Non Electrified	Electrified
1	77	794	-	163	77	957	229	147	306	1,104
2	973	102	-	65	973	167	258	66	1,231	233
3	1,023	-	55	-	1,078	-	221	-	1,299	-
4	1,455	65	6	-	1,461	65	310	26	1,771	91
5	904	323	-	-	90	323	155	64	1,059	387
6	1,141	194	78	-	1,219	94	181	56	1,400	250
7	1,189	-	-	-	1,189	-	188	-	1,377	-
Total	6,762	1,478	139	228	6,901	1,706	1,542	59	8,443	2,065
Ground Total	8,240		367		8,607		1,901		10,508	

Source: Annual Statistics 1993-1997, TCDD

TCDD ŞEBEKESİ Network of TCDD

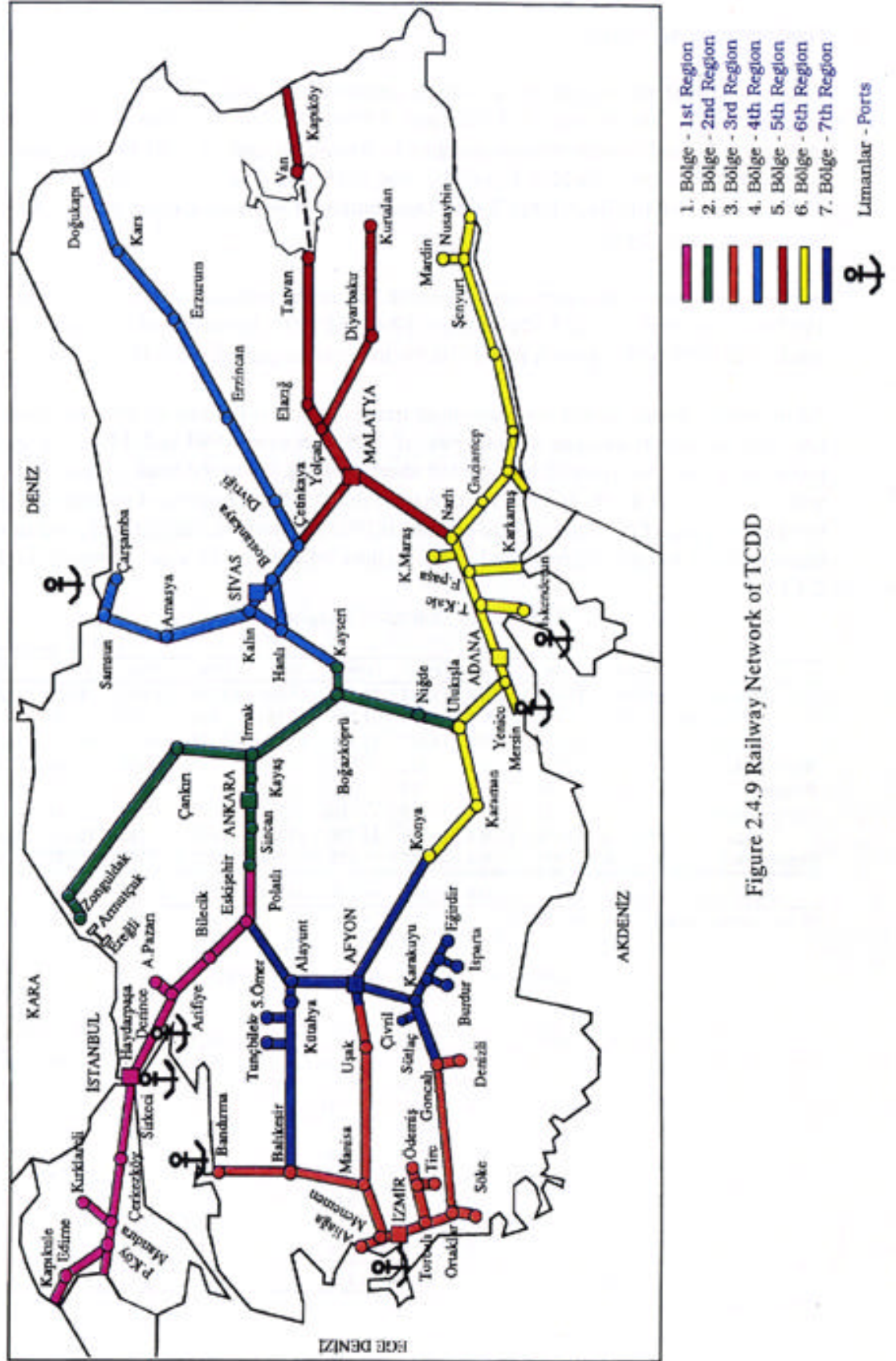


Figure 2.4.9 Railway Network of TCDD

(2) Transportation Activities

Volume of domestic freight transportation registered 16.1 million tons in 1997 with an annual average growth rate of 4.4% from 1990-1997. On the other hand, volume of international freight transportation dropped to 0.6million tons in 1994 but then increased rapidly for three years reaching 1.1million tons in 1997 with annual average growth rate of 21.0% from 1994-1997(see Table 2.4.8). Distribution of international freight transportation is shown in Table 2.4.9.

In case of passenger transportation, domestic passenger volume reached 106.8 million in 1997 with a growth rate of 1.6% between 1990 and 1997. International passenger volume reached 231,000 with a growth rate of 10.5% in the same period(see Table 2.4.10).

As to gross ton-km, freight and passenger transportation amounted 25.5billion gross ton-km with an annual average growth rate of 1.2% between 1990 and 1997. By type of locomotive, electric type still has a small share with 18.7% to the total volume compared with diesel type of 81.3% to total volume(see Table 2.4.11). Freight and passenger in gross ton-km by types of locomotives and regions in1997 is shown in Table 2.4.12, and trend of passenger and freight in gross ton-km by regions for the last 10 years is shown in Table 2.4.13.

Table 2.4.8 Domestic Freight Traffic

		(Unit: thousand ton)									
		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
	Domestic	13,219	11,695	11,870	13,443	14,330	14,669	13,850	14,046	14,933	16,056
	International	872	1,172	1,320	1,194	1,185	924	628	993	740	1,112
	Total	14,091	12,867	13,190	14,637	15,515	15,593	14,478	15,039	15,673	17,168
High Speed		217	236	236	211	233	200	177	232	166	223
Baggage		14	16	15	13	11	10	9	7	5	5
Express Parcel		31	27	23	19	16	15	11	10	12	9
Total		14,353	13,146	13,464	14,880	15,775	15,818	14,675	15,288	15,856	17,405
Departmental		478	451	384	367	458	256	412	386	345	341
Ground Total		14,831	13,597	13,848	15,247	16,233	16,074	15,087	15,674	16,201	17,746

Source: Annual Statistics 1988-1997, TCDD

Table 2.4.9 International Freight Traffic

		(Unit: thousand ton)									
		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Europea n Trade	Export	17	63	60	111	104	115	100	102	119	128
	Import	187	257	379	423	600	556	382	747	468	524
	Transit	8	11	24	19	25	10	5	4	2	1
Middle East Trade	Export	576	747	750	503	315	121	75	94	129	143
	Import	64	70	82	126	128	116	61	33	14	299
	Transit	19	24	25	12	13	6	5	13	8	17
Total	Export	593	810	811	614	419	236	175	196	248	271
	Import	251	327	460	549	728	672	443	780	482	823
	Transit	27	35	49	31	38	16	10	17	10	18
Ground Total		871	1,172	1,320	1,194	1,185	924	628	993	740	1,112

Source: Annual Statistics 1988-1997, TCDD

Table 2.4.10 Number of Passenger by type of Train for the Last 10 Years

(Unit:thousand)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Suburban										
Sirkeci	45,143	45,682	43,197	42,493	43,860	50,458	42,510	33,707	30,137	34,151
Haydarpasa	41,540	43,753	38,576	38,857	36,867	39,692	30,275	28,457	29,535	30,052
Ankara	19,272	22,196	22,338	21,107	20,430	19,227	13,805	15,187	15,185	17,191
Basmane	5,630	8,304	8,382	6,838	6,213	7,118	4,540	2,605	1,998	1,294
Alsancak	1,485	2,951	3,029	2,434	2,056	2,092	1,365	1,027	1,062	1,183
Total	67,927	77,204	72,325	69,236	65,566	118,587	92,495	80,983	77,917	83,871
Main line										
Blue Train	1,561	1,384	1,317	969	939	1,166	923	943	687	832
Express	14,271	16,402	16,070	14,283	14,857	20,687	20,813	18,517	16,157	18,289
Ordinary Passenger	6,511	5,416	5,708	5,926	5,752	5,447	4,957	3,908	3,234	3,654
Sleeping Cars	181	162	177	136	176	194	149	154	147	176
Total	22,524	23,364	23,272	21,314	21,724	27,494	26,842	23,522	20,225	22,951
International	112	109	115	200	102	237	196	130	173	231
Ground total	90,563	100,677	95,712	90,750	87,392	146,318	119,533	104,635	98,315	107,053

Source: Annual Statistics 1988-1997, TCDD

Table 2.4.11 Grosston-km by Types of Locomotives

(Unit: Grosston-km thousand)

		Passenger			Freight	Passenger and Freight	Service Train	Grand Total	Share (%)
		Suburban	Mainline	Total					
1988	Steam	19	26,359	26,378	106,545	132,923	10,322	143,245	0.6
	Diesel	73,307	4,737,488	4,810,795	#####	20,712,909	161,051	#####	91.1
	Electric	1,380,474	378,236	1,758,710	134,529	1,893,239	19	1,893,258	8.3
	Total	1,453,800	5,142,083	6,595,883	#####	22,739,071	171,392	#####	100.0
1989	Steam		9,261	9,261	38,699	47,960	11,710	59,670	0.3
	Diesel	89,994	4,835,898	4,925,892	#####	20,278,255	239,244	#####	91.2
	Electric	1,346,405	373,396	1,719,801	198,934	1,918,735	296	1,919,031	8.5
	Total	1,436,399	5,218,555	6,654,954	#####	22,244,950	251,250	#####	100.0
1990	Steam		6,697	6,697	8,903	15,601	366	15,967	0.1
	Diesel	105,988	4,638,905	4,744,893	#####	21,105,543	303,726	#####	90.4
	Electric	1,367,900	601,869	1,969,769	281,412	2,251,180	2,749	2,253,929	9.5
	Total	1,473,888	5,247,471	6,721,359	#####	23,372,324	306,841	#####	100.0
1991	Steam		1,471	1,471	267	1,738		1,738	0.0
	Diesel	97,901	3,962,571	4,060,472	#####	20,226,461	258,702	#####	88.0
	Electric	1,467,170	895,207	2,362,377	436,085	2,798,462	2,108	2,800,570	12.0
	Total	1,565,071	4,859,249	6,424,320	#####	23,026,661	260,810	#####	100.0
1992	Steam		1,797	1,797	86	1,884		1,884	0.0
	Diesel	91,864	3,880,117	3,971,981	#####	20,096,024	211,481	#####	87.3
	Electric	1,468,387	1,026,060	2,494,447	465,370	2,959,816	3,265	2,963,081	12.7
	Total	1,560,251	4,907,975	6,468,226	#####	23,057,724	214,747	#####	100.0
1993	Steam		1,318	1,318	547	1,865		1,865	0.0
	Diesel	92,482	3,355,533	3,448,015	#####	19,614,719	151,575	#####	84.5
	Electric	1,441,063	1,415,750	2,856,813	764,572	3,621,385	3,398	3,624,783	15.5
	Total	1,533,544	4,772,602	6,306,146	#####	23,237,970	154,972	#####	100.0
1994	Steam		490	490	370	860		860	0.0
	Diesel	72,054	3,316,912	3,388,966	#####	19,329,468	156,134	#####	84.7
	Electric	1,314,122	1,493,452	2,807,574	704,436	3,512,010	3,553	3,515,563	15.3
	Total	1,386,176	4,810,855	6,197,031	#####	22,842,339	159,687	#####	100.0
1995	Steam		1,406	1,406	265	1,671		1,671	0.0
	Diesel	49,707	3,107,542	3,157,249	#####	19,465,048	130,753	#####	84.5
	Electric	1,258,898	1,476,116	2,735,014	861,604	3,596,618	3,350	3,599,968	15.5
	Total	1,308,605	4,585,063	5,893,668	#####	23,063,336	134,104	#####	100.0
1996	Steam		773	773	7	780		780	0.0
	Diesel	54,335	3,180,333	3,234,668	#####	19,284,875	164,791	#####	82.0
	Electric	1,381,849	1,487,376	2,869,225	1,405,620	4,274,845	935	4,275,780	18.0
	Total	1,436,184	4,668,481	6,104,665	#####	23,560,499	165,726	#####	100.0
1997	Steam		348	348	444	792		792	0.0
	Diesel	49,574	3,483,230	3,532,804	#####	20,664,638	119,571	#####	81.3
	Electric	1,440,158	1,553,772	2,993,930	1,790,985	4,784,915	532	4,785,447	18.7
	Total	1,489,732	5,037,350	6,527,082	#####	25,450,345	120,103	#####	100.0

Source: Annual Statistics 1988-1997, TCDD

* Railbusses are included

Table 2.4.12 Grosston - Km by Types of Locomotives and Regions 1997

(Unit: Grosston-km thousand)

	Passengers						Freight						Passenger and Freight Total	Service Train	Grand Total
	Suburban	Blue Train	Express	Ordinary Passenger	Mixed	Total Passenger	Blue Train	Express	Ordinary Passenger	Mixed	Freight	Freight Total			
1. REGION															
Steam Loco	0	0	13	0	0	13	0	0	0	0	0	0	13	0	13
Diesel Loco	0	46,394	322,357	0	4,130	372,881	2	553	0	1,641	1,190,679	1,192,875	1,565,756	3,910	1,569,666
Electric Loco	0	317,749	986,216	0	85	1,304,050	0	3,049	0	0	345,346	348,395	1,652,445	367	1,652,812
Electric Railcar	1,018,631	0	94,077	0	0	1,112,708	0	23	0	0	0	23	1,112,731	0	1,112,731
Total	1,018,631	364,143	1,402,663	0	4,215	2,789,652	2	3,625	0	1,641	1,536,025	1,541,293	4,330,945	4,277	4,335,222
2. REGION															
Steam Loco	0	0	72	0	0	72	0	0	0	0	0	0	72	0	72
Diesel Loco	31	83,866	397,428	165,782	2,056	649,163	90	6,228	269	3,214	5,558,897	5,568,698	6,217,862	27,700	6,245,562
Railbus	0	0	2,143	6	0	2,149	0	0	0	0	0	0	2,149	0	2,149
Electric Loco	0	51,323	99,321	0	0	150,644	0	398	0	0	16,833	17,231	167,875	22	167,897
Electric Railcar	421,528	0	4,857	0	0	426,385	0	0	0	0	0	0	426,384	0	426,384
Total	421,559	135,189	503,821	165,788	2,056	1,228,413	90	6,626	269	3,214	5,575,730	5,585,929	6,814,342	27,722	6,842,064
3. REGION															
Steam Loco	0	0	73	0	0	73	0	0	0	0	0	0	73	0	73
Diesel Loco	39,926	55,180	208,556	72,740	529	376,931	0	634	53,869	731	558,423	613,657	990,588	6,984	997,572
Railbus	529	0	91,837	54	0	92,420	0	0	0	0	0	0	92,419	0	92,419
Diesel Railcar	9,088	0	49,842	0	0	58,930	0	0	0	0	0	0	58,929	0	58,929
Total	49,543	55,180	350,308	72,794	529	528,354	0	634	53,869	731	558,423	613,657	1,142,009	6,984	1,148,993
4. REGION															
Steam Loco	0	47,948	304,168	56,367	80,448	488,931	33	6,191	26,113	199,832	2,986,511	3,218,680	3,707,610	25,735	3,733,345
Railbus	0	0	0	1,564	0	1,564	0	0	0	0	0	0	1,564	0	1,564
Electric Loco	0	0	0	0	0	0	0	0	0	0	121,339	121,339	121,339	0	121,339
Total	0	47,948	304,168	57,931	80,448	490,495	33	6,191	26,113	199,832	3,107,850	3,340,019	3,830,513	25,735	3,856,248
5. REGION															
Diesel Loco	0	22,082	126,611	86,164	2,511	237,368	17	6,389	24,473	4,392	1,814,612	1,849,883	2,087,251	31,133	2,118,384
Electric Loco	0	12	15	24	0	51	0	1	16	0	777,890	777,907	777,958	57	778,015
Total	0	22,094	126,626	86,188	2,511	237,419	17	6,390	24,489	4,392	2,592,502	2,627,790	2,865,209	31,190	2,896,399
6. REGION															
Steam Loco	0	0	157	1	0	158	0	0	0	0	0	0	157	0	157
Diesel Loco	0	13,239	199,190	117,153	38,830	368,412	22	6,414	37,963	108,452	2,600,848	2,753,699	3,122,110	14,486	3,136,596
Electric Loco	0	0	22	19	52	93	0	0	23	0	526,067	526,090	526,182	87	526,269
Railbus	0	0	142,546	134	0	142,680	0	0	0	0	0	0	142,680	0	142,680
Total	0	13,239	341,915	117,307	38,882	511,343	22	6,414	37,986	108,452	3,126,915	3,279,789	3,791,129	14,573	3,805,702
7. REGION															
Steam Loco	0	0	33	0	0	33	0	0	0	0	0	0	33	0	33
Diesel Loco	0	113,371	374,988	189,488	926	678,773	12	835	190,423	0	1,743,516	1,934,786	2,613,559	9,624	2,623,183
Railbus	0	0	20,104	0	0	20,104	0	0	0	0	0	0	20,104	0	20,104
Diesel Railcar	0	0	40,107	2,394	0	42,501	0	0	0	0	0	0	42,501	0	42,501
Total	0	113,371	435,232	191,882	926	741,411	12	835	190,423	0	1,743,516	1,934,786	2,676,197	9,624	2,685,821
Grand Total															
Steam Loco	0	0	347	1	0	348	0	0	0	0	0	0	348	0	348
Diesel Loco	39,957	382,080	1,933,297	687,694	129,429	3,172,457	178	27,243	333,110	318,262	16,453,485	17,132,278	20,304,735	119,571	20,424,306
Railbus	529	0	256,629	1,759	0	258,917	0	0	0	0	0	0	258,916	0	258,916
Diesel Railcar	9,088	0	89,949	2,394	0	101,431	0	0	0	0	0	0	101,431	0	101,431
Electric Loco	0	369,084	1,085,573	43	137	1,454,837	0	3,449	39	0	1,787,475	1,790,963	3,245,800	532	3,246,332
Electric Railcar	1,440,158	0	98,934	0	0	1,539,092	0	23	0	0	0	23	1,539,115	0	1,539,115
Total	1,489,732	751,164	3,464,729	691,891	129,566	6,527,082	178	30,715	333,149	318,262	18,240,960	18,923,264	25,450,345	120,103	25,570,448

Source: Annual Statistics 1988-1997, TCDD

Table 2.4.13 Passenger and Freight Gross ton-Km by Regions for the Last 10 Years

(Unit: Grosston-km thousand)										
REGIONS	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
1. REGION										
Passenger	3,108,302	3,131,100	3,042,011	2,972,598	3,052,611	3,019,456	2,558,516	2,408,913	2,618,384	2,789,651
Freight	2,222,589	2,502,643	2,361,758	2,371,325	2,465,107	2,315,893	1,195,721	1,353,424	1,317,734	1,541,293
Srv. Train	31,281	47,321	64,464	52,458	35,725	24,379	17,302	24,263	2,761	4,277
Total	5,362,172	5,681,064	5,468,233	5,396,381	5,553,443	5,359,728	3,771,539	3,786,600	3,938,879	4,335,221
2. REGION										
Passenger	1,151,387	1,138,340	1,141,722	1,118,804	1,194,220	1,147,574	1,140,052	1,151,479	1,127,155	1,228,412
Freight	3,658,778	3,188,167	4,162,838	4,276,516	4,453,089	4,305,852	4,263,165	4,290,957	4,845,586	5,585,930
Srv. Train	43,966	44,297	53,855	43,589	40,666	38,399	32,333	22,675	32,953	27,721
Total	4,854,131	4,370,804	5,358,415	5,438,909	5,687,975	5,491,825	5,435,550	5,465,111	6,005,694	6,842,063
3. REGION										
Passenger	711,094	744,964	744,699	698,022	688,535	685,657	575,505	528,346	530,904	528,353
Freight	628,578	605,660	493,349	463,289	529,003	493,154	432,539	509,739	428,882	613,657
Srv. Train	12,788	24,088	28,028	18,832	22,176	25,011	23,083	17,528	22,192	6,984
Total	1,352,460	1,374,712	1,266,076	1,180,143	1,239,714	1,203,822	1,031,127	1,055,613	981,978	1,148,994
4. REGION										
Passenger	608,259	579,412	633,909	491,327	504,034	446,438	477,895	450,398	453,906	490,495
Freight	3,909,407	3,887,096	3,861,560	3,539,031	3,358,682	3,536,176	3,375,336	3,568,664	3,316,516	3,340,018
Srv. Train	30,444	38,403	50,429	67,143	58,335	24,451	29,624	27,506	40,554	25,735
Total	4,548,110	4,504,911	4,545,898	4,097,501	3,921,051	4,007,065	3,882,855	4,046,568	3,810,976	3,856,248
5. REGION										
Passenger	365,315	366,767	387,881	394,752	340,516	249,300	220,101	211,530	220,062	237,419
Freight	2,576,497	2,397,635	2,906,744	2,736,334	2,437,398	2,517,679	2,514,550	2,534,140	2,669,119	2,627,791
Srv. Train	11,494	18,703	51,024	47,258	28,896	17,363	15,179	18,542	21,623	31,189
Total	2,953,306	2,783,105	3,345,649	3,178,344	2,806,810	2,784,342	2,749,830	2,764,212	2,910,804	2,896,399
6. REGION										
Passenger	651,526	694,371	771,137	748,817	688,309	647,432	509,831	446,410	468,918	511,340
Freight	3,147,338	3,008,795	2,864,716	3,215,846	3,346,220	3,399,455	3,197,128	3,157,448	3,201,647	3,279,788
Srv. Train	41,419	78,438	59,041	31,530	28,949	18,707	19,747	8,863	24,193	14,572
Total	3,840,283	3,781,604	3,694,894	3,996,193	4,063,478	4,065,594	3,726,706	3,612,721	3,694,758	3,805,700
7. REGION										
Passenger						*110289	715,131	696,592	685,336	741,411
Freight						363,614	1,666,869	1,755,296	1,676,350	1,934,787
Srv. Train						6,662	22,419	14,727	21,450	9,624
Total						480,565	2,404,419	2,466,615	2,383,136	2,685,822
GRAND TOTAL										
Passenger	6,595,883	6,654,954	6,721,359	6,424,320	6,468,225	6,306,146	6,197,031	5,893,668	6,104,665	6,527,081
Freight	16,143,188	15,589,996	16,650,965	16,602,341	16,589,499	16,931,823	16,645,308	17,169,668	17,455,834	18,923,264
Srv. Train	171,392	251,250	306,841	260,810	214,747	154,972	159,687	134,104	165,726	120,102
Total	22,910,463	22,496,200	23,679,165	23,287,471	23,272,471	23,392,941	23,002,026	23,197,440	23,726,225	25,570,447

Source: TCDD, By Operating Information

Note: * November - December Figures

2.4.3 Airway

(1) Current Situation

Airports in Turkey are classified into three categories according to function international and domestic, domestic and charter, and domestic only. The number of airports and airfields operated by the General Directorate of the State Airports Enterprises(DHMI), is 36, including 10 international airports(see Table 2.4.14, Figure 2.4.11).

Table 2.4.14 Turkey's Airports	
Airport	Number
International and Domestic	10
Domestic and Charter	9
Domestic	16
Cargo	1
Total	36

Source: DHMI

Turkey's Airline Fleet which consisted of 36 planes and a 5,646 seat capacity in 1989 reached 66 planes including three cargo planes and 10,038 seats by the end of 1997. By the end of the Sixth Plan period, the number of passenger arrivals and departures reached a total of 22.3 million, 13.5million of which were on international lines, intensified at Ataturk, Antalya, Esenboga, Adana Menderes and Dalaman Airports. International lines terminal lines terminal investment for the Ataturk and Antalya Airports maintain their significance and priority for the sector.

(2) Airport Activities

In 1998, 90% of the total movements, 99.6% of the international movements, 99% of the international passengers and 95% of the total passenger traffic were covered by the eight most important international airports in Turkey which are Ataturk, Esenboga, A.Menderes, Antalya, Dalaman, Adana, Trabzon and Milas-Bodrum.

Istanbul Ataturk International Airport's traffic is most significant in all of Turkey's airport traffic. In 1998, half of the total number of departing international passengers departed from Ataturuk Airport. Also in 1998, 42.1% of the total passengers, 43% of the international passengers, 44% of the total movent, 56% of the international movement and 59% of the total freight traffic was verified in Ataturk Airport. Freight and passenger traffic activities are shown from Table 2.4.15 to Table 2.4.18 and from Figure 2.4.12 to Figure 2.4.15.

Table 2.4.15 Domestic Cargo Volume for the last 10 years

Airports	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ATATURK	18,109	20,232	12,791	17,812	25,861	27,726	30,553	30,085	38,431	28,671
ESEBBOGA	10,019	8,673	5,946	7,517	9,391	9,292	9,540	8,856	10,792	11,498
A. MENDERES	4,862	5,001	3,541	5,518	7,109	8,136	8,971	9,813	11,576	10,590
ANTALYA	2,671	3,027	1,557	2,073	2,660	2,383	2,186	2,343	2,933	4,330
DALAMAN		77	48	51	826	158	160	177	186	210
ADANA	3,595	3,981	2,633	3,507	4,393	4,950	5,991	6,069	7,018	6,760
TRABZON	110	191	120	75	202	270	195	98	71	105
MILAS-BODRUM										59
S.DEMIREL										
ADIIYAMAN										
AGRI										
BURSA	15	8	17	14	7	9	13	52	17	9
CANAKKALE										
CARDAK				4					417	
CORLU										
DIYARBAKIR	883	383	286	111	288	314	261	215	176	209
ELAZIG	19									
ERZINCAN	3	1								
ERZURUM	212	185	128	148	114	109	69	90	130	97
GAZIANTEP	28	39	41	56	50	43	43	127	49	83
K.MARAS										
KARS	13	17	1	9	5	14	17	27	226	846
KAYSERI										5
KORFEZ										
MALATYA	52	38	25	39	74	56	64	56	38	59
MUS					1					
SAMSUN						1	2		2	3
SIIRT										
SINOP										
SIVAS	4				1					
SANLIURFA	3									
TOKAT										
VAN	150	166	532	109	145	182	222	190	166	182
TOTAL	40,748	42,019	27,666	37,043	51,127	53,643	58,287	58,198	72,228	63,716

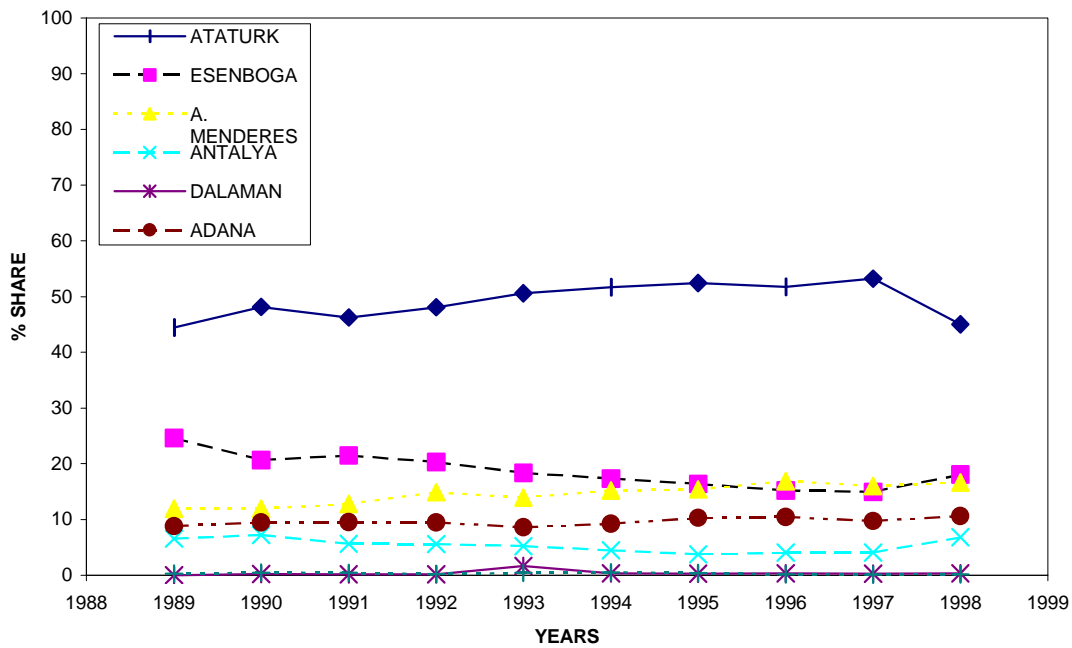


Figure 2.4.11 Trend of Domestic Cargo Volume by Major Airports

Table 2.4.16 International Cargo Volume for the last 10 years

Airports	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ATATURK	52,791	59,154	49,417	68,169	80,483	85,966	101,200	104,691	134,552	117,320
ESENBGA	6,577	4,289	4,154	7,171	5,408	4,760	7,021	8,712	9,742	9,324
A. MENDERES	3,633	3,998	2,120	3,011	3,021	3,514	3,956	2,596	3,894	3,350
ANTALYA	214	826	1,036	1,227	1,337	1,856	1,582	1,193	68	10
DALAMAN	0	3	3	0	4,590	9,042	51	0	96	206
ADANA	1,612	1,227	731	874	6,024	7,491	1,300	596	569	665
TRABZON	0	0	0	0	0	0	1,145	1,681	35	193
MILAS-BODRUM	0	0	0	0	0	0	0	0	0	0
S.DEMIREL	0	0	0	0	0	0	0	0	0	0
ADIYAMAN	0	0	0	0	0	0	0	0	0	0
AGRI	0	0	0	0	0	0	0	0	0	0
BURSA	0	0	0	0	0	0	0	0	0	0
CANAKKALE	0	0	0	0	0	0	0	0	0	0
CARDAK	0	0	0	0	0	0	0	0	0	0
CORLU	0	0	0	0	0	0	0	0	0	0
DIYARBAKIR	0	0	0	0	0	0	0	0	0	0
ELAZIG	0	0	0	0	0	0	0	0	0	0
ERZINCAN	0	0	0	0	0	0	0	0	0	0
ERZURUM	0	0	0	0	0	0	0	0	38	0
GAZIANTEP	0	0	0	0	51	30	0	0	0	0
K.MARAS	0	0	0	0	0	0	0	0	0	0
KARS	0	0	0	0	1	0	0	0	0	0
KAYSERI	0	0	0	0	0	0	0	0	0	0
KORFEZ	0	0	0	0	0	0	0	0	0	0
MALATYA	0	0	0	0	0	0	0	0	0	0
MUS	0	0	0	0	0	0	0	0	0	0
SAMSUN	0	0	0	0	0	0	0	0	0	0
SIIRT	0	0	0	0	0	0	0	0	0	0
SINOP	0	0	0	0	0	0	0	4	0	0
SIVAS	0	0	0	0	0	0	0	0	0	0
SANLIURFA	0	0	0	0	0	0	0	0	0	0
TOKAT	0	0	0	0	0	0	0	0	0	0
VAN	0	0	0	0	0	0	0	0	0	0
TOTAL	64,827	69,497	57,461	80,452	100,915	112,659	116,255	119,473	148,994	131,068

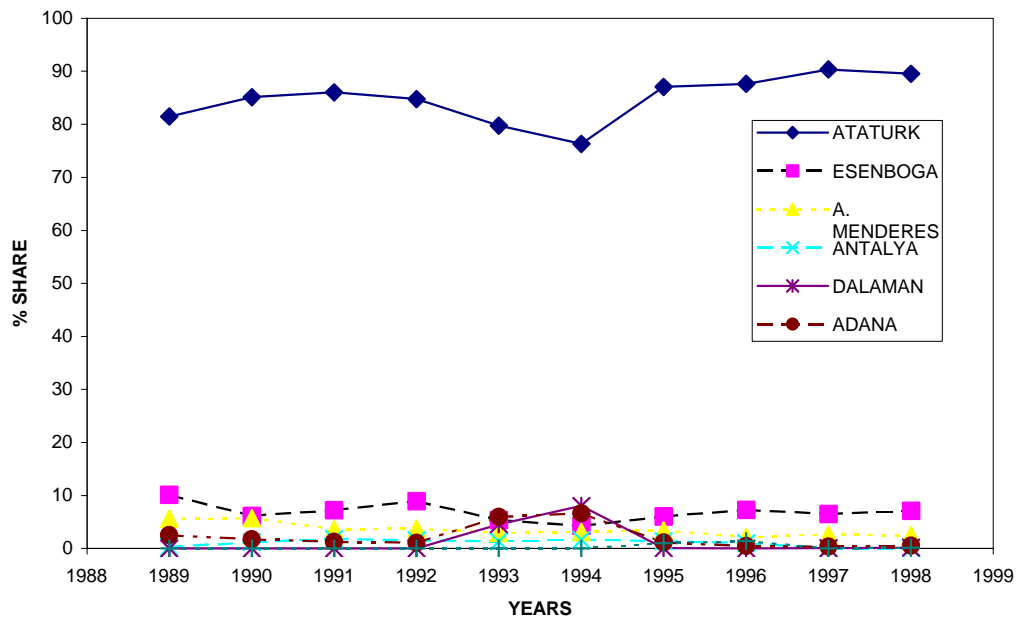


Figure 2.4.12 Trend of International Cargo Volume by Major Airport

Table 2.4.17 Domestic Passenger Traffic for the last 10 years

Airports	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ATATURK	1,863,292	2,134,345	1,570,293	2,105,084	2,875,038	3,241,500	3,804,376	4,139,370	4,779,128	5,202,542
ESENBGA	1,208,663	1,374,338	1,027,991	1,351,025	1,802,760	2,224,530	2,603,241	2,610,437	2,820,489	2,892,408
A. MENDERES	605,218	616,672	447,462	594,017	757,743	837,475	1,019,399	1,071,582	1,185,990	1,229,967
ANTALYA	287,757	333,188	243,656	374,735	446,954	509,717	594,466	637,816	721,909	704,885
DALAMAN	91,643	97,244	72,197	127,954	147,203	162,362	186,096	199,073	219,671	217,351
ADANA	275,737	328,516	260,535	351,029	448,833	484,375	545,345	569,923	629,612	671,438
TRABZON	88,760	124,197	113,056	176,513	229,311	315,136	387,991	406,462	424,170	515,805
MILAS-BODRUM	0	0	0	0	0	0	0	0	178,987	280,996
S.DEMIREL	0	0	0	0	0	0	0	0	2,258	5,109
ADIYAMAN	0	0	0	0	0	0	0	0	0	6,046
AGRI	0	0	0	0	0	0	0	0	7,824	14,967
BURSA	11,460	13,424	11,733	14,385	16,898	22,216	26,839	23,891	23,117	9,995
CANAKKALE	0	0	0	0	0	0	1,919	252	362	0
CARDAK	0	0	680	4,583	6,444	8,589	14,980	25,076	37,460	35,711
CORLU	0	0	0	0	0	0	0	0	0	261
DIYARBAKIR	92,776	104,027	88,735	74,226	215,558	261,124	290,625	276,735	304,138	309,192
ELAZIG	5,086	5,948	1,574	7,624	14,865	38,396	23,209	55,744	63,222	70,405
ERZINCAN	1,421	2,201	137	2,378	5,121	16,767	16,521	17,250	18,951	18,068
ERZURUM	57,136	58,193	46,083	57,342	95,566	110,181	127,732	133,704	162,769	151,513
GAZIANTEP	23,346	46,907	35,887	55,335	70,024	83,440	120,307	134,832	172,321	214,055
K.MARAS	0	0	0	0	0	0	0	48	7,673	8,595
KARS	2,447	3,009	54	3,876	19,835	66,277	84,049	85,995	103,747	101,119
KAYSERI	0	0	0	0	0	0	0	0	0	11,504
KORFEZ	0	0	0	0	0	0	0	0	2,160	4,085
MALATYA	27,949	36,540	33,273	44,992	57,997	61,036	87,769	61,872	74,216	82,670
MUS	0	0	0	1,401	8,601	36,130	46,048	54,423	56,572	55,293
SAMSUN	6,976	9,134	2,336	12,147	26,245	45,811	58,947	55,125	63,992	61,780
SIIRT	0	0	0	0	0	0	0	0	0	9,324
SINOP	0	0	0	315	761	0	0	74	697	901
SIVAS	1,435	2,525	437	95	0	3,977	6,307	4,987	8,421	7,807
SANLIURFA	4,475	7,503	332	5,416	594	23,758	31,293	37,877	49,348	54,253
TOKAT	0	0	0	0	0	0	185	1,026	950	1,228
VAN	40,943	49,812	53,273	80,609	146,390	231,513	269,884	258,965	293,566	289,559
TOTAL	4,696,520	5,347,723	4,009,724	5,445,081	7,392,741	8,784,310	10,347,528	10,862,539	12,413,720	13,238,832

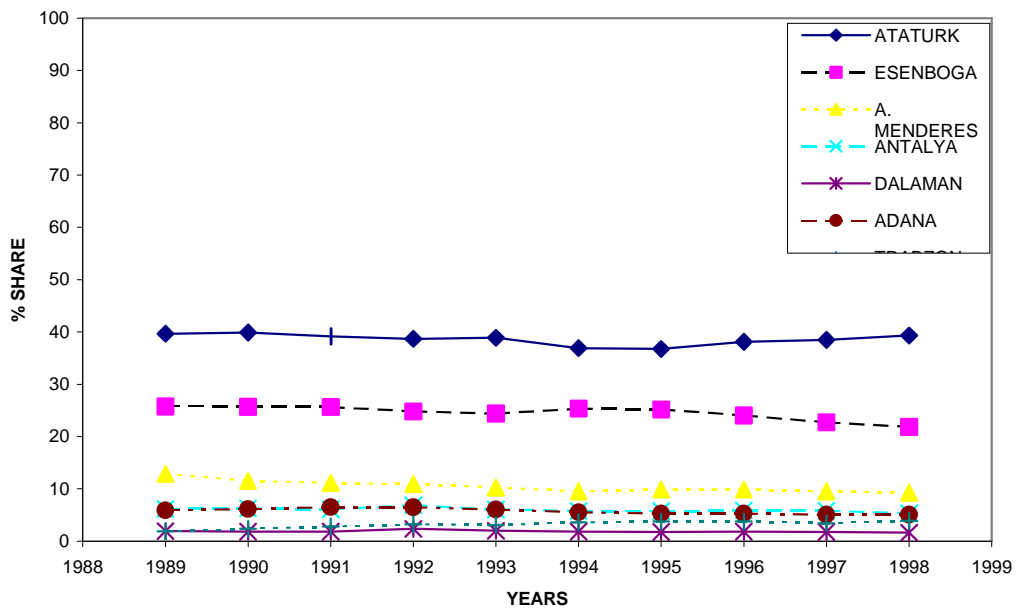


Figure 2.4.13 Trend of Domestic Passenger Traffic by Major Airports

Table 2.4.18 International Passenger Traffic for the last 10 years

Airports	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
ATATURK	3,977,240	4,098,273	3,634,312	5,266,553	6,521,192	6,847,122	8,120,742	9,255,296	9,828,769	9,189,657
ESENBGA	479,122	598,280	640,482	812,655	991,063	951,755	992,870	1,043,423	1,068,831	1,161,856
A. MENDERES	965,036	1,099,341	791,016	1,373,349	1,777,436	1,496,106	1,970,248	2,196,979	2,236,935	1,674,714
ANTALYA	1,123,804	1,773,908	1,321,077	2,359,996	2,424,576	2,546,782	4,133,203	4,955,089	5,965,724	5,595,482
DALAMAN	539,312	608,051	547,751	1,056,184	1,280,461	1,381,621	1,895,609	2,148,084	2,368,071	2,068,769
ADANA	65,502	91,960	70,606	148,894	198,542	217,903	231,070	243,208	271,280	247,753
TRABZON	27	136	1,472	32,406	68,498	97,479	58,251	58,960	58,212	57,633
MILAS-BODRUM	0	17	0	0	0	0	0	0	159,879	936,723
S.DEMIREL	0	12,276	0	0	0	0	0	0	0	1,167
ADIYAMAN	0	0	0	0	0	0	0	0	0	0
AGRI	0	0	0	0	0	0	0	0	0	0
BURSA	0	0	9	0	0	0	0	0	0	0
CANAKKALE	0	0	0	0	0	0	0	0	0	0
CARDAK	0	0	0	0	0	0	0	0	0	0
CORLU	0	0	0	0	0	0	0	0	0	1,578
DIYARBAKIR	0	0	3,015	0	2,996	2,907	6,208	6,059	6,396	8,579
ELAZIG	0	0	0	0	0	0	0	0	0	0
ERZINCAN	0	0	0	0	0	0	0	0	0	0
ERZURUM	0	0	0	0	3,032	3,340	3,297	5,642	7,342	5,304
GAZIANTEP	0	0	0	0	1,924	4,406	6,863	4,561	9,630	10,652
K.MARAS	0	0	0	0	0	0	0	0	0	0
KARS	0	0	0	0	216	0	0	0	0	0
KAYSERI	0	0	0	0	0	0	0	0	0	0
KORFEZ	0	0	0	0	0	0	0	0	0	0
MALATYA	0	0	0	0	0	0	0	0	0	0
MUS	0	0	0	0	0	0	0	0	0	0
SAMSUN	0	0	0	0	0	555	1,154	57	136	136
SIIRT	0	0	0	0	0	0	0	0	0	0
SINOP	0	0	0	0	0	0	336	373	253	0
SIVAS	0	0	0	0	0	0	0	0	289	0
SANLIURFA	0	0	0	0	0	0	0	0	0	0
TOKAT	0	0	0	0	0	0	0	0	0	0
VAN	0	0	0	0	654	0	0	392	867	844
TOTAL	7,150,043	8,282,242	7,009,740	11,050,037	13,270,590	13,549,976	17,419,851	19,918,123	21,982,614	20,960,847

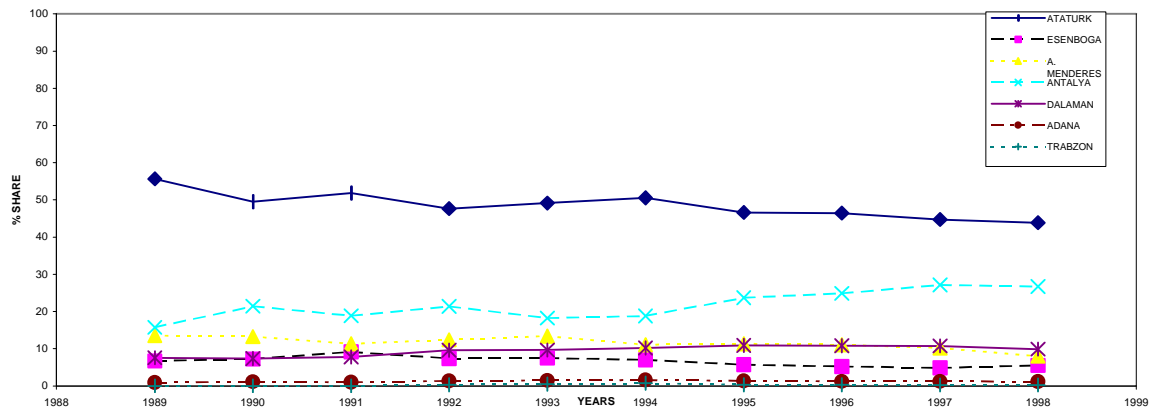


Figure 2.4.14 Trend of International Passenger Traffic by Major Ports

2.4.4 Pipeline

(1) Crude Oil Pipelines

Pipeline transportation, was rapidly developed, especially after the 1960s, for the transportation of crude oil and petroleum products abroad. However, the domestic transportation in Turkey remained based on highways and highway tankers. The first pipeline was laid between Batman and Dörtol (Iskenderun Gulf) by the Turkish Petroleum Corporation (TPAO) and came into service in 1996. This line was connected by secondary lines to the production fields of Shell and Mobil in Siirt and Diyarbakir Province.

The Iraq - Turkey Crude Oil Pipeline System

The Iraq-Turkey Crude Oil Pipeline is the most important petroleum pipeline in Turkey. This system carries the oil produced from Kerkuk in Iraq and other production fields to the Ceyhan (Yumurtalik) Maritime Terminal. The pipeline, capable of carrying 35 million tons per year, went into operation in 1976, and the first tanker loading was been carried out on May 25, 1977. With the First Extension Project, started in 1983 and completed in 1984, the annual carrying capacity of the pipeline has been raised to 46.5 million tons. With the Second Pipeline, parallel to the First Pipeline, which went into operation in 1987, the annual carrying capacity has reached 70.9 million tons.

BOTAS owns the portion of the line within Turkish boundaries, and is also responsible for the managing, controlling, repairing, and rectifying the line as well. The lengths of the First Line, having a diameter of 40'', and of the Second Line, having a diameter of 46'', are given below separately as the Turkish and Iraqi portions.

Table 2.4.19 Length of Iraq-Turkey Pipeline

	(Unit: Km)			
	Iraq	Turkey	Total	Diameter
First Line	345	641	986	40''
Second line	234	656	890	46''
Total	579	1,297	1,876	-

Source: BOTAS

The Iraq-Turkey Crude Oil Pipeline, closed for operations on August 1990 because of the embargo decision taken by the United Nations towards Iraq, reopened for operations in December 1996, with the decision by the United Nations to permit limited transportation of oil.

The Ceyhan - Kirikkale Crude Oil Pipeline System

The pipeline, which meets the crude oil demand of the Kirikkale Refinery, has been opened for operations in September 1986. The capacity of the pipeline, which has a 24'' diameter and a length of 448 km, is 5 million tons per year. The pipeline is laid between the Ceyhan Maritime Terminal and the Kirikkale Refinery.

The Batman - Dörtyol Crude Oil Pipeline System

This system carries the oil produced from Batman and the surrounding region to the Maritime Terminal at Dörtyol. The ownership of the line, which was opened for operations on January 4, 1967 by the Turkish Petroleum Anonymous Partnership (TPAO), was transferred to BOTA on February 10, 1984. The pipeline reaches the Bay of Iskenderun from Batman, and comes to an end at Dörtyol. The length of the pipeline, which has an annual capacity of 3.5 million tons, is 511 km, while its diameter is 18''.

The Selmo - Batman Crude Oil Pipeline System

With this pipeline, the crude oil produced in the Selmo field is carried to the Batman Terminal. The length of the pipeline, which has an annual carrying capacity of 800 thousand tons, is 42 km, while its diameter is 6 5/8''.

(2) Natural Gas Pipeline

The Russian Federation-Turkey Natural Gas Pipeline

The Russian Federation-Turkey Natural Gas Pipeline enters Turkey on the Bulgarian border, near the Malkoçlar region. It comes to Ambarlı via Hamitabat by pipes of 36'' diameter and 220 km length, and here it crosses the Sea of Marmara with 2 parallel lines, each of 30'' diameter and 53 km length, and arrives on land at Pendik. From here, it stretches with a 36'' diameter and 33 km length line to Demirciler, and from Demirciler one branch goes to Pazarcık with a 24'' diameter 17.8 km length line. From there, it reaches the GSA (Istanbul Fertilizer Industries Anonymous Company) with a 12'' diameter line of 1.2 km. Another branch from Demirciler goes to the Muallim area with a 24'' diameter line of 7.3 km. Here, the Bay of İzmit is passed with two parallel lines, each of 24'' diameter and 6 km length. The connection between Hersek and Yumurtatepe is 24'' diameter and 48.5 km length, and the Yumurtatepe – Gemlik line is 12'' diameter and 10.2 km length. The line extending to Ankara by following the Yumurtatepe – Bursa – Bozüyük – Eskişehir route is 24'' diameter and has a length of 370.4 km. The total length of the line is 842 km. The pipeline, designed for 75 bar pressure, has 31 line valves, 9 pig stations, 1 compressor station, and measurement and pressure decreasing stations for being able to supply customers with gas of appropriate pressure. The line, for which construction was launched October 1986, reached Ankara in August 1988.

Within the framework of extending the use of natural gas within the country by BOTA, the Russian Federation – Turkey Natural Gas Pipeline has been extended from İzmit to Kdz. Ereğli, and from Bursa to Çan. In the İzmit – Kdz. Ereğli Natural Gas Carrying Line, which is around 200 km long, 24'', 18'', and 16'' diameter pipes have been used, while in the Bursa – Çan Natural Gas Carrying Line, pipes with diameters of 24'', 16'', and 8'' diameter have been utilized.

. Other Natural Gas Pipelines

The natural gas pipelines, operated by the TPAO, are used in the carrying of natural gas from the production fields to the places of consuming. Each gas pipeline is shown in Table 2.4.20.

Table 2.4.20 Other Natural Gas Pipelines in Turkey

Pipelines	Length (km)	Diameter (inch)	Capacity (thousand m ³ /day)
a) Dodan–B.Raman Pipeline (Carbon Dioxide)	90	10''	1,700
b) Çamurlu–Mardin Pipeline	90	6''	200
c) Hamitabat–Trakya Glass Factory Pipeline	35	6''-8''	
d) De ırmenköy–Trakya Glass Factory Pipeline	48	8''	
e) Karacao ılan–Hamitabat Pipeline	15	4''	200
f) Kumrular–P ınarhisar Pipeline	15	4''	150
g) Silivri–De ırmenköy Pipeline	17.5	10''	
h) K.Marmara–Akenerji Pipeline	21	8''	
i) K.Marmara–BOTAS (Russian Federation–Turkey Natural Gas Main Pipeline)	17	10''	

Source: BOTAS

Liquid Natural Gas (LNG) Import Terminal

The LNG Import Terminal, has been operating since August 1994. The Terminal consists of a pier, depot tanks, processing units, supplementary facilities, and service buildings. The Terminal has two main functions: to stock the incoming LNG, and to turn the stocked LNG into gas for desired amounts and carry it to the main line with a 23 km long connection line.

The design of the Terminal, which can be counted as medium-scale with its 255 thousand m³ total stocking capacity and 439thousand m³/hour maximum economic carrying capacity, has been prepared with the philosophy of “a single terminal unit and reserve equipment.” Work for upgrading the present send-out capacity of the LNG Import Terminal to 685thousand m³/hour is still in progress.

Service activities of crude oil and natural gas through the pipeline for the last 11 years are shown in Table 2.4.21, and the present distribution of pipelines is given in Figure 2.4.16.

Table 2.4.21 Service Activities of Pipelines for the last 11 Years

Activities	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
1- Activities related with low Petroleum Pipeline and activities of low petroleum	927,107	1,211,656	1,278,350	747,928	73,321	73,416	58,013	49,774	49,824	58,669	187,946
1.1- Transportation('000barrels)	480,314	626,441	658,908	386,180	46,645	47,614	47,749	46,252	45,973	53,925	182,502
1.1.1- Low Petroleum Pipeline between Iraq-Turkey	441,974	586,695	616,763	341,354						(*)6,762	(*)135,574
1.1.2- Kirikkale	15,642	18,712	18,400	21,015	17,697	20,374	24,210	22,648	24,887	29,642	27,617
1.1.3- Low Petroleum Pipeline between Batman-	21,006	19,400	22,342	22,285	27,616	25,945	22,735	22,516	20,254	16,770	18,608
1.1.4- Low Petroleum Pipeline between Selmo-Batman	1,692	1,634	1,403	1,526	1,332	1,295	804	1,088	832	751	703
1.2- Port Service	425,604	566,650	598,707	339,849	0	0	0	0	0	0	0
1.2.1- Ceyhan Port	425,604	566,650	598,707	339,849							
1.3- Refined Petroleum	284	341	387	218	28	27	22	26	32	14	24
1.3.1- Ceyhan Refining Unity	186	304	324	167				9			
1.3.2- Dortyol Refining Unity	98	37	63	51	28	27	22	17	32	14	24
1.4- Booster Service	20,905	18,224	20,348	21,681	26,648	25,775	10,242	3,496	3,819	4,730	5,420
1.4.1- Booster which is given to Refinery	5,767	4,348	3,128	3,967	4,039	4,587	4,439	3,496	3,819	4,730	5,420
1.4.2- Booster which is given to Line	15,138	13,876	17,220	17,714	22,609	21,188	5,803				
2- Activities related with Natural Gas	512,730	1,166,052	3,309,336	3,311,663	4,063,091	4,433,091	4,912,520	5,209,215	6,768,624	7,916,614	9,721,333
2.1- Sale of Natural Gas ('000m ³)	512,730	1,166,052	3,309,336	3,311,663	4,063,091	4,433,091	4,912,520	5,209,215	6,768,624	7,916,614	9,721,333

Source: BOTAS

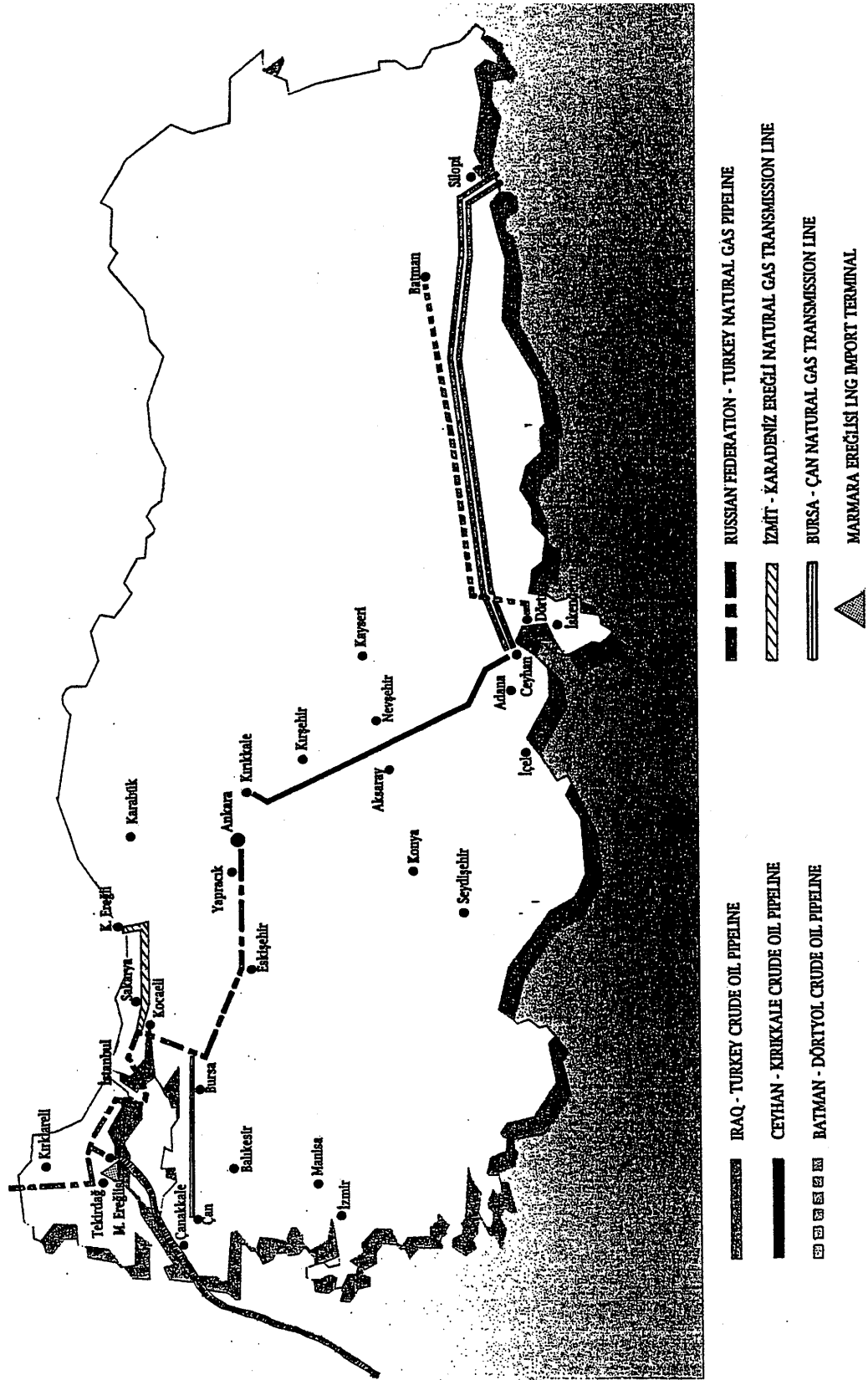


Figure 2.4.15 Existing Petroleum Pipelines in Turkey

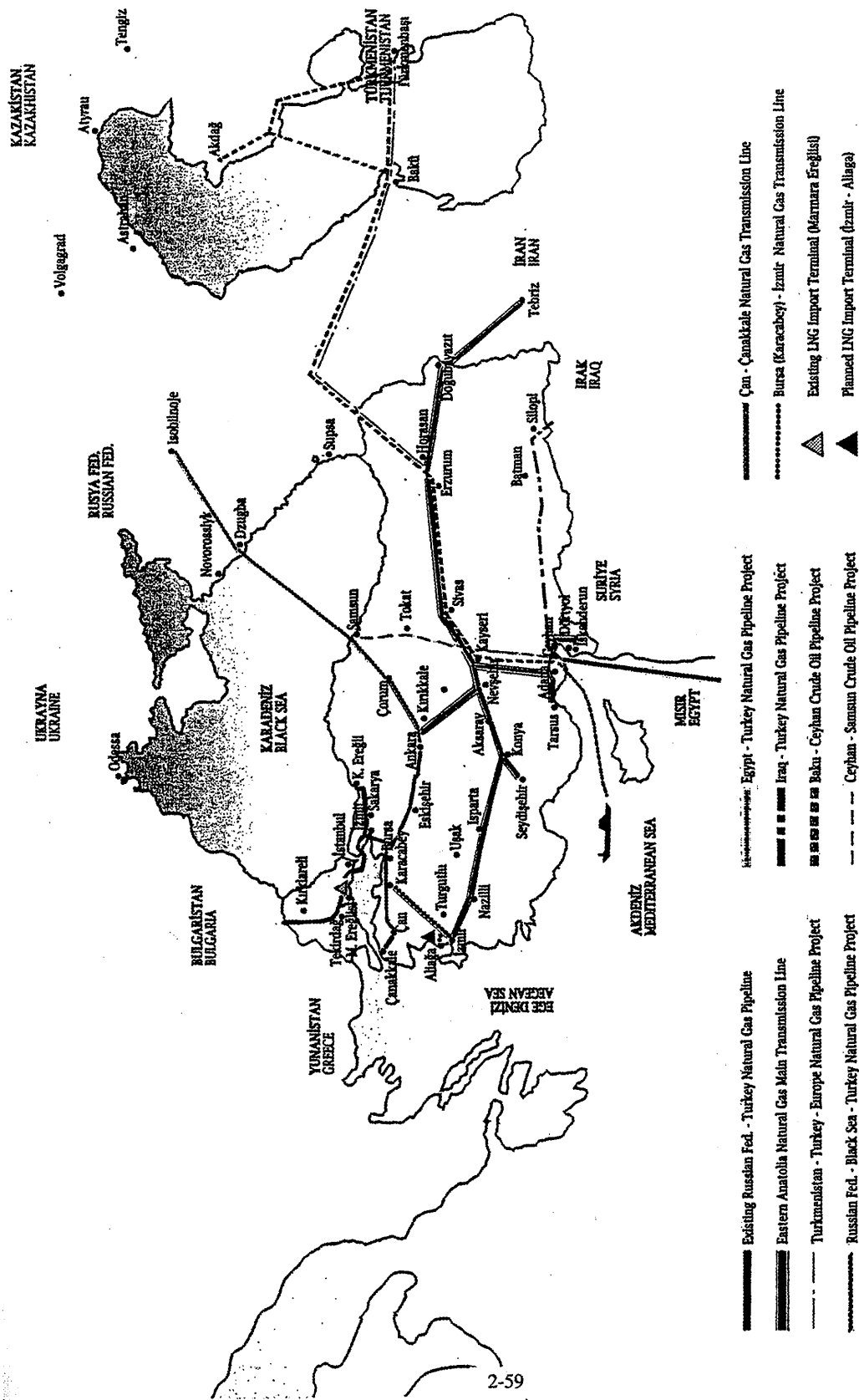


Figure 2.4.16 Existing Natural Gas Pipelines in Turkey

2.4.5 Foreign Trade by Transport System

In terms of the share of Turkey's foreign trade volume by transport system such as maritime lines, highways, airlines and railways and others, maritime lines accounted for 85.4% to the total volume followed by highways (12.5%), railways and others (1.7%) and airlines (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 highways (41.5%), airlines (9.8%) and railways and others (2.2%) in 1997.

As to trade of export and import, highways exceeded maritime lines in export value and in total value, highways came near maritime lines while maritime lines exceeded other transport systems in trade volume. This shows that high-value products such as industrial products were transported by highways instead of maritime lines(see Table 2.4.22, Table 2.4.23, Figure 2.4.17, Figure 2.4.18).

Table 2.4.22 Share of Trade Volume by Transport System of Turkey in 1997

		Transport system								
		Total	Maritime Lines		Highway		Airlines		Railway and others (*)	
			Tons	Share(%)	Tons	Share(%)	Tons	Share(%)	Tons	Share(%)
Turkey	Export	28,826,012	21,010,575	72.9	7,540,699	26.2	115,911	0.4	158,827	0.6
	Import	80,781,143	72,645,801	89.9	6,130,277	7.6	334,638	0.4	1,670,427	2.1
	Total	109,607,156	93,656,375	85.4	13,670,976	12.5	450,549	0.4	1,829,255	1.7

Source: Foreign Trade by transportation System, 1997 by SIS

Note: * Transportation by Railways, Post, Pipeline, Electrical energy and Moving vehicle by itself.

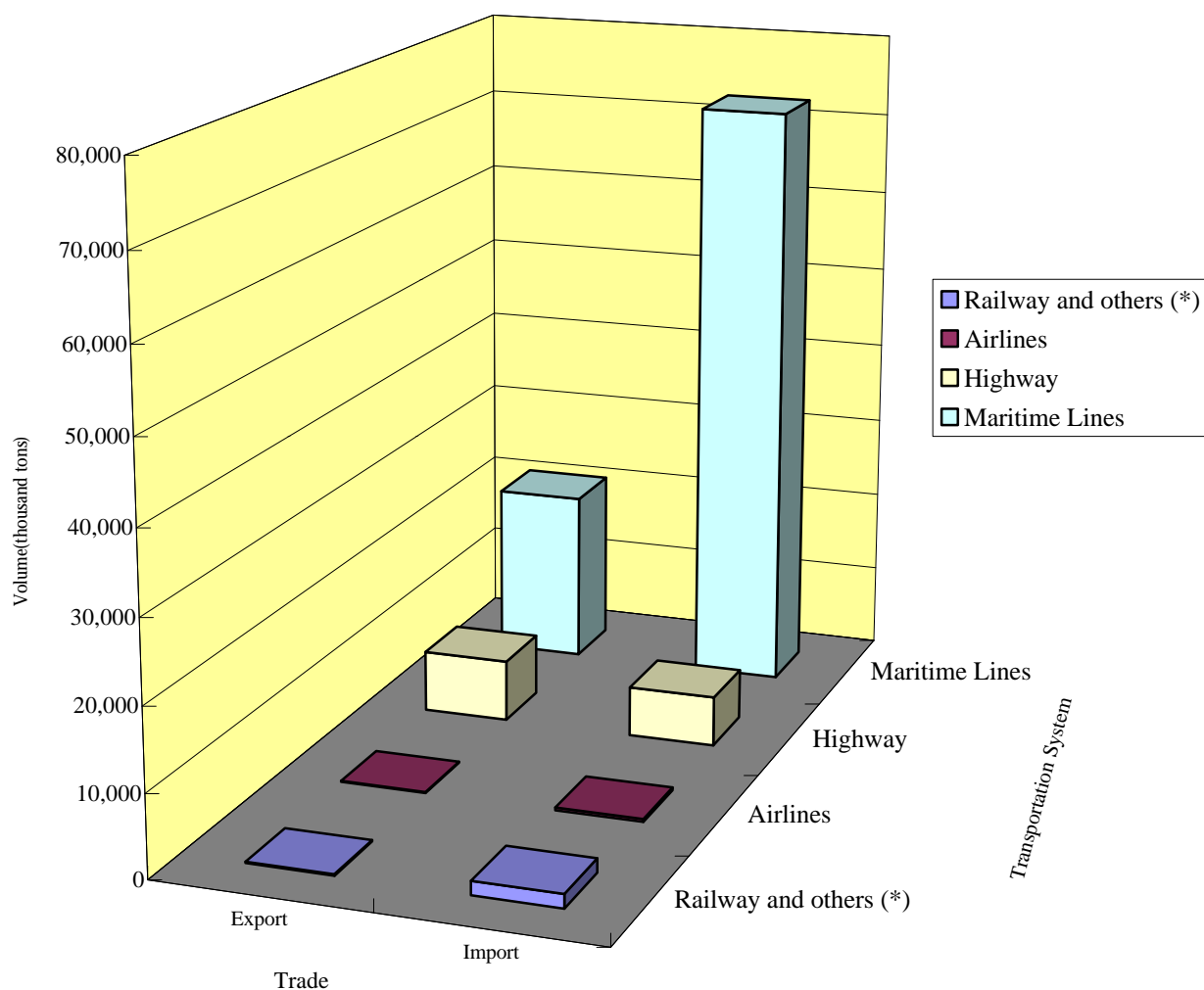


Figure 2.4.17 Share of Trade Volume by Transportation System of Turkey in 1997

Table 2.4.23 Share of Trade Value by Transportation System of Turkey in 1997

Table 2.12.2. Balance of Trade - Value by Transport System (Year of Turkey in 1997)											
		Transport system									
		Total		Maritime Lines		Highway		Airlines		Railway and others (*)	
		000US\$	000US\$	Share(%)	000US\$	Share(%)	000US\$	Share(%)	000US\$	Share(%)	
Turkey	Export	26,244,700	10,250,412	39.1	13,945,679	53.1	1,867,588	7.1	181,019	0.7	
	Import	48,585,069	24,541,325	50.5	17,076,280	35.1	5,492,416	11.3	1,475,048	3.0	
	Total	74,829,769	34,791,738	46.5	31,021,959	41.5	7,360,005	9.8	1,656,067	2.2	

Source: Foreign Trade by transportation System, 1997 by SIS

Note: * Transportation by Railways, Post, Pipeline, Electrical energy and Moving vehicle by itself.

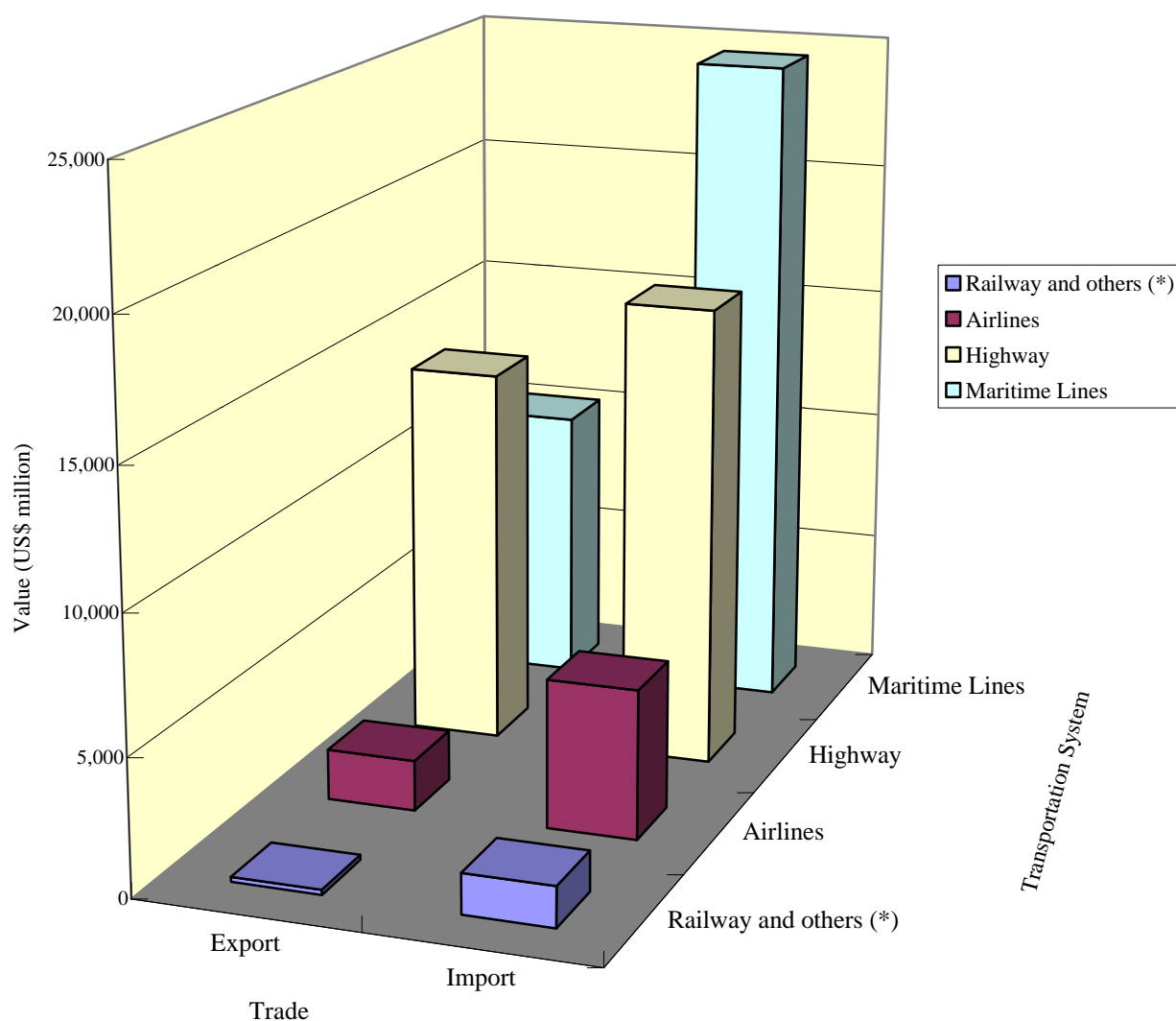


Figure 2.4.18 Share of Trade Value by Transportation System of Turkey in 1997

Chapter 3 International Relations

The gradual opening of the Turkish economy to the outside world since the early 1980s in place of an economic policy based on import substitution has played a great role in the throes of radical economic change. Entering into the EU Customs Union and joining the WTO has given Turkey new momentum in her efforts to liberalize trade. As a member of WTO, Turkey has adopted the rules and procedures governing the multilateral trading system.

This policy has resulted in a drastic change in terms of trade contribution to the Turkish economy. The share of exports in GNP stood at 4.3 % in 1980 but had risen to 13.6% in 1997, while imports rose from 11.6% to 25.3%. This trend is expected to be steadily maintained. SPO projection indicates the share of exports and imports per GNP in 2020 will rise within the range of 12.7-18.9% and 29.5-40.3% respectively. Turkey is located at the crossroads of economically attractive centers. Taking advantage of her geographically unique situation, Turkey will continue to take a multi-dimensional foreign economic policy.

3.1 EU

- (1) Following Turkey's application for association with the European Economic Community in 1959, the Ankara Agreement of 1963 and the Additional Protocol of 1970 were two important documents, which identified modalities and calendars ensuring the future customs union and confirmed the ultimate aim of full membership.

The customs union enforced on 1 January 1996 was an outcome of these calendars. It initially covers all industrial products, which corresponded to 93% in value of the trade between Turkey and the EU in 1995. Traditional agricultural products will be included in the Customs Union following Turkey's adaptation to the Common Agricultural Policy of the EU. The two parties ensure identical treatment to their imports from third countries, since Turkey and the EU constitute the same customs territory in the trade of industrial products.

- (2) The close ties with the EU, especially in terms of foreign trade relations, was accelerated by the entry into force of the Customs Union agreement. Exports to the EU in 1998 increased 1.56 times over 1994, while imports showed a 2.21- fold increase. The EU will continue to be Turkey's biggest foreign trading partner and the foreign trade volume with the EU will maintain a share of around 50% of the total foreign trade volume of the country. (see Table 3.1.1)
- (3) Manufactures as a percentage of Turkish exports have been steadily gaining in importance and now stand at nearly 90%, more than half of which are the traditional sectors of textiles and clothing. Even though half of Turkish exports to the EU are still made up of those products, Turkish industry is becoming more competitive in more sophisticated sectors such as electronic equipment and automobiles. These trends confirm that the present huge surplus of imports to exports with the EU will decrease in the future.

- (4) Foreign direct investment, most of which is from the EU (a share of 67.5% in the total foreign investment stock), has been fairly low (some US\$ 950 million a year, less than 0.4% of GDP). However, the adoption of liberal and flexible foreign investment policies in the form of the changes in the Foreign Investment Legislation will make the investment climate more efficient and suitable for potential investors in the long run.

3.2 East European Countries

- (1) Share of exports to Eastern Europe stood at 4.9% in 1997, while imports were 2.5%. Along the alignment with the preferential customs regime of the EU, Turkey took the necessary steps to forward the preferential agreements with the priority countries like Eastern Europe. Bilateral Free Trade Agreements entered into force in 1998 with Romania, Hungary and Czech and Slovak Republics, as well as with Bulgaria in 1999. The agreement with Slovenia will enter into force after the ratification process is completed, while negotiation still continues with Poland. The measures will necessarily lead to an expansion of the future bilateral trade volume with these countries.
- (2) Pan-European transport corridors, one of which will be connected to Turkey through the East European region, cum Pan-European transport area plans will be, after their realization in future, another way of strengthening ties with the region accompanied by the increase of cargo and passenger transport.

3.3 CIS Countries

- (1) Since the end of the Cold War, especially after Turkey's entrance into the EU Customs Union, CIS countries have substantially increased their share in Turkey's foreign trade, its volume having doubled over the last five years (see Table 3.1.3). This trend will be accelerated; the share of foreign trade volume will continue to be more than 10% of the country's total volume.
- (2) Russia, whose notable prominence is followed by Ukraine in the Region, was the second most important trade partner in terms of exports (7.8% of the total), and ranked sixth in imports (4.5% of the total) in 1997. However, the trade and economic relations declined in 1998 due to the Russian economic crisis. But Russia and Ukraine will continue to be important because they are providers of raw materials and semi-industrial products such as iron-steel products, fertilizers and chemical products used as inputs by the Turkish producers. In fact, the trade volume between Turkey and Russia reached US\$ 3.5 billion in spite of its slowdown from the previous year, as the trade volume with Ukraine accounted for more than US\$ 1.2 billion (see Table 3.1.2)
- (3) Caucasian and Central Asian Republics (hereinafter referred to as the Republics), have become important partners for Turkish foreign trade. Agreements on 'Trade

and Economic Cooperation', 'Reciprocal Promotion and Protection of Investments' and 'Avoidance of Double Taxation' constitute the legal basis of economic relations between the parties. As a result of these cooperative attempts, commercial relations have been tremendously increasing; Turkey's exports to these republics reached US\$ 831 million, 90% increase from 1994. On the other hand, Turkey's imports from the Republics during the given period have increased by more than double, reaching US\$ 449 million. (see Table 3.1.3)

- (4) Owing to the smooth progress of multi-lateral initiatives such as the Black Sea Economic Cooperation (BSEC) and the Economic Cooperation Organization (ECO), as stated in section 3.5, the economic circumstances for CIS countries to evolve into free market economies will become more vital. In this respect, the two tremendous pipeline projects between Turkey and the Region are of the utmost importance. One is the Baku-Ceyhan Crude Oil Pipeline Project which is planned to transfer 45-60 million tons of Caspian basin oil per year, and the other is the Turkmenistan-Turkey-Europe Natural Gas Pipeline Project which is planned to transfer 30-35 billion cubic meters of natural gas per year.

3.4 Other Neighboring Countries

- (1) Without mentioning countries such as Egypt, Tunisia and Morocco (where the Free Trade Agreement (FTA) has yet to enter into force) or Israel (where FTA has been entered into force), Turkey will continue to foster economic relations with the Middle East and North African Countries.
- (2) With regard to economic and/or trade relations with Iraq, which used to have a value of more than US\$ 2 billion in the late 1980s, it may be safely assumed that the former level before the sanctions will be restored at some point in the future.

3.5 Multilateral Cooperation Initiatives

Besides traditional and amicable international relations with the Islamic countries, represented by the Organization of Islamic Conference (OIC) which has now 56 member countries, new multilateral cooperation initiatives are under way. Those multilateral initiatives such as the Black Sea Economic Cooperation (BSEC) and the Economic Cooperation Organization (ECO) were newly established or expanded since the end of the Cold War and have been developed as economically complementary relations with the EU.

3.5.1 The Black Sea Economic Cooperation (BSEC)

The Organization was established in 1992 with 11 founding member countries, namely; Turkey, Albania, Azerbaijan, Bulgaria, Armenia, Georgia, Greece, Moldova, Rumania, the Russia Federation and the Ukraine.

The BSEC Region has expanded on an area of over 19 million square kilometers, and has a rather significant place in world trade with its population approaching 350

million. The trade volume of the BSEC Region has approached US\$ 400 billion.

The BSEC has established the Trade and Development Bank, the Center of which is located at Thessaloniki in Greece, and launched cooperation in various areas, including the Black Sea Region Transport Network Plan and the Submarine Fiber-optic Cable System Projects. The participating States adopted in May 1999 a Charter which will transform the BSEC into an 'Organization' in the short term and approved a Declaration of Intent which envisages the formation of a free trade area in the long term.

The foreign trade relations between Turkey and the BSEC Region have advanced by rapid strides. Even though trade volume in 1998 slightly declined, the volume itself was double that of 1994. (see Table 3.1.3).

3.5.2 The Economic Cooperation Organization (ECO)

The ECO, which was originally organized as a trilateral entity among Turkey, Iran and Pakistan in 1985, was expanded into a major regional organization of 10 Member States in 1992. With the addition of 7 new members, namely; Afghanistan, Azerbaijan, Kazakhstan, Kyrgyz, Tajikistan, Turkmenistan and Uzbekistan, the ECO became an organization encompassing an area of 7 million square kilometers, inhabited by nearly 350 million people. It serves, thus transformed into a wide forum of cooperation, as an instrument for development of economic, social and technical collaboration among the member states.

Trade is an important element of regional cooperation and is receiving due priority as an ECO activity. In the field of energy, which represents another high priority for most of the ECO Member Governments, important bilateral and regional arrangements envisaging networks of gas and oil-pipelines and inter-connection of power grids are being pursued. Notable among them is a gas pipeline project from Turkmenistan to Europe via Iran and Turkey.

Turkey has been maintaining substantial level of trade with ECO countries since 1995, marking over total US\$ 2 billion per year (see Table 3.1.3).

Table 3.1.1 ANNUAL EXPORTS & IMPORTS BY COUNTRY

(In Millions of Dollars)

		1994		1995		1996		1997		1998		RATE
		M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	98/94
A. OECD COUNTRIES	EXPORT	10,758	59.42	13,289	61.42	14,427	62.12	15,583	59.34	16,910	62.91	1.57
	IMPORT	15,331	65.88	23,700	66.37	31,092	71.27	34,815	71.70	33,473	72.89	2.18
	TOTAL	26,089	63.05	36,989	64.50	45,518	68.09	50,398	67.36	50,383	69.20	1.93
1.EU COUNTRIES	EXPORT	8,635	47.69	11,071	51.17	11,549	49.72	12,248	46.64	13,437	49.99	1.56
	IMPORT	10,915	46.91	16,861	47.22	23,138	53.04	24,870	51.22	24,091	52.46	2.21
	TOTAL	19,551	47.25	27,931	48.71	34,687	51.89	37,118	49.61	37,528	51.55	1.92
2.EFTA COUNTRIES	EXPORT	277	1.53	293	1.36	336	1.45	414	1.58	356	1.32	1.28
	IMPORT	563	2.42	892	2.50	1,112	2.55	1,287	2.65	1,168	2.54	2.08
	TOTAL	840	2.03	1,185	2.07	1,448	2.17	1,702	2.27	1,524	2.09	1.82
3.OTHER OECD COUNTRIES	EXPORT	1,846	10.19	1,925	8.90	2,542	10.94	1,921	7.32	3,117	11.59	1.69
	IMPORT	3,853	16.56	5,947	16.65	6,842	15.68	8,658	17.83	8,214	17.89	2.13
	TOTAL	5,699	13.77	7,872	13.73	9,384	14.04	10,579	14.14	11,331	15.56	1.99
B.NON-OECD COUNTRIES	EXPORT	7,348	40.58	8,347	38.58	8,798	37.88	10,678	40.66	9,972	37.10	1.36
	IMPORT	7,939	34.12	12,009	33.63	12,535	28.73	13,744	28.30	12,448	27.11	1.57
	TOTAL	15,287	36.95	20,356	35.50	21,333	31.91	24,422	32.64	22,420	30.80	1.47
1.EUROPE + CIS COUNTRIES	EXPORT	2,437	13.46	3,480	16.09	3,646	15.70	4,684	17.84	3,972	14.77	1.63
	IMPORT	2,602	11.18	4,450	12.46	4,102	9.40	4,646	9.57	4,670	10.17	1.79
	TOTAL	5,039	12.18	7,930	13.83	7,748	11.59	9,330	12.47	8,642	11.87	1.71
2.AFRICAN COUNTRIES	EXPORT	843	4.65	1,064	4.92	1,159	4.99	1,234	4.70	1,817	6.76	2.16
	IMPORT	860	3.70	1,385	3.88	1,993	4.57	2,197	4.53	1,760	3.83	2.05
	TOTAL	1,703	4.12	2,449	4.27	3,152	4.72	3,431	4.59	3,577	4.91	2.10
3.AMERICAN COUNTRIES	EXPORT	117	0.65	136	0.63	140	0.60	205	0.78	234	0.87	2.00
	IMPORT	323	1.39	622	1.74	644	1.48	764	1.57	725	1.58	2.24
	TOTAL	440	1.06	758	1.32	784	1.17	969	1.29	958	1.32	2.18
4.MIDDLE EAST COUNTRIES	EXPORT	2,108	11.64	2,120	9.80	2,245	9.67	2,770	10.55	2,337	8.69	1.11
	IMPORT	2,530	10.87	2,687	7.52	3,243	7.43	3,228	6.65	2,214	4.82	0.88
	TOTAL	4,639	11.21	4,807	8.38	5,488	8.21	5,998	8.02	4,551	6.25	0.98
5.OTHER ASIAN COUNTRIES	EXPORT	1,446	7.99	1,070	4.95	1,143	4.92	1,169	4.45	635	2.36	0.44
	IMPORT	1,290	5.55	2,547	7.13	2,227	5.10	2,547	5.24	2,625	5.72	2.03
	TOTAL	2,737	6.61	3,618	6.31	3,370	5.04	3,716	4.97	3,260	4.48	1.19
6.OTHER COUNTRIES	EXPORT	396	2.19	476	2.20	465	2.00	617	2.35	979	3.64	2.47
	IMPORT	333	1.43	318	0.89	325	0.75	362	0.74	454	0.99	1.36
	TOTAL	729	1.76	795	1.39	790	1.18	978	1.31	1,433	1.97	1.96
TOTAL EXPORT		18,106	100	21,636	100	23,225	100	26,261	100	26,881	100	1.48
TOTAL IMPORT		23,270	100	35,709	100	43,627	100	48,559	100	45,921	100	1.97
TOTAL		41,376	100	57,345	100	66,851	100	74,820	100	72,803	100	1.76

SOURCE : SPO.SIS

Table 3.1.2 ANNUAL EXPORTS & IMPORTS BY SELECTED COUNTRY (1)

(In Millions of Dollars)

		1994		1995		1996		1997		1998		RATE
		M.USD	% SHARE	M.USD	% SHARE	M.USD	% SHARE	M.USD	% SHARE	M.USD	% SHARE	
GERMANY	EXPORT	3,934	21.73	5,034	23.26	5,187	22.33	5,254	20.00	5,448	20.27	98/94
	IMPORT	3,646	15.67	5,548	15.54	7,814	17.91	8,021	16.52	7,311	15.92	1.38
	TOTAL	7,580	18.32	10,581	18.45	13,000	19.45	13,275	17.74	12,759	17.52	2.01
USA	EXPORT	1,520	8.40	1,513	6.99	1,639	7.06	2,032	7.74	2,229	8.29	1.47
	IMPORT	2,426	10.43	3,724	10.43	3,516	8.06	4,330	8.92	4,043	8.80	1.67
	TOTAL	3,946	9.54	5,237	9.13	5,155	7.71	6,362	8.50	6,272	8.61	1.59
RUSSIA	EXPORT	820	4.53	1,232	5.69	1,512	6.51	2,057	7.83	1,347	5.01	1.64
	IMPORT	1,046	4.50	2,082	5.83	1,921	4.40	2,174	4.48	2,153	4.69	2.06
	TOTAL	1,866	4.51	3,315	5.78	3,433	5.13	4,231	5.65	3,500	4.81	1.88
UNITED KINGDOM	EXPORT	889	4.91	1,135	5.24	1,261	5.43	1,511	5.75	1,710	6.36	1.92
	IMPORT	1,170	5.03	1,830	5.12	2,510	5.75	2,763	5.69	2,681	5.84	2.29
	TOTAL	2,059	4.98	2,964	5.17	3,771	5.64	4,274	5.71	4,392	6.03	2.13
ITALY	EXPORT	1,034	5.71	1,456	6.73	1,446	6.23	1,387	5.28	1,555	5.79	1.50
	IMPORT	2,009	8.63	3,193	8.94	4,286	9.82	4,463	9.19	4,249	9.25	2.12
	TOTAL	3,042	7.35	4,649	8.11	5,732	8.57	5,850	7.82	5,804	7.97	1.91
FRANCE	EXPORT	851	4.70	1,033	4.77	1,053	4.53	1,163	4.43	1,300	4.84	1.53
	IMPORT	1,458	6.27	1,996	5.59	2,772	6.35	2,967	6.11	3,033	6.61	2.08
	TOTAL	2,309	5.58	3,028	5.28	3,825	5.72	4,130	5.52	4,333	5.95	1.88
NETHERLANDS	EXPORT	621	3.43	736	3.40	770	3.31	779	2.97	886	3.29	1.43
	IMPORT	740	3.18	1,084	3.04	1,449	3.32	1,485	3.06	1,446	3.15	1.95
	TOTAL	1,361	3.29	1,821	3.17	2,218	3.32	2,264	3.03	2,332	3.20	1.71
BELGIUM LUXEMBOURG	EXPORT	371	2.05	451	2.09	493	2.12	564	2.15	666	2.48	1.79
	IMPORT	532	2.28	912	2.55	1,129	2.59	1,217	2.51	1,202	2.62	2.26
	TOTAL	903	2.18	1,363	2.38	1,621	2.43	1,780	2.38	1,868	2.57	2.07
JAPAN	EXPORT	187	1.03	180	0.83	168	0.72	144	0.55	112	0.42	0.60
	IMPORT	968	4.16	1,400	3.92	1,422	3.26	2,010	4.14	2,045	4.45	2.11
	TOTAL	1,154	2.79	1,580	2.76	1,590	2.38	2,154	2.88	2,157	2.96	1.87
ROMANIA	EXPORT	175	0.97	302	1.39	314	1.35	359	1.37	468	1.74	2.67
	IMPORT	229	0.98	368	1.03	441	1.01	394	0.81	344	0.75	1.50
	TOTAL	404	0.98	669	1.17	755	1.13	753	1.01	812	1.11	2.01
UKRAINE	EXPORT	76	0.42	199	0.92	268	1.15	337	1.28	274	1.02	3.59
	IMPORT	531	2.28	856	2.40	762	1.75	918	1.89	989	2.15	1.86
	TOTAL	607	1.47	1,055	1.84	1,029	1.54	1,255	1.68	1,263	1.73	2.08
TOTAL EXPORT		18,106	100	21,636	100	23,225	100	26,261	100	26,881	100	1.48
TOTAL IMPORT		23,270	100	35,709	100	43,627	100	48,559	100	45,921	100	1.97
TOTAL		41,376	100	57,345	100	66,851	100	74,820	100	72,803	100	1.76

SOURCE : SPO.SIS

Table 3.1.2 ANNUAL EXPORTS & IMPORTS BY SELECTED COUNTRY (2)

		1994		1995		1996		1997		1998		RATE
		M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	
SAUDI ARABIA	EXPORT	609	3.37	467	2.16	431	1.85	535	2.04	473	1.76	98/94
	IMPORT	1,229	5.28	1,229	3.44	1,229	2.82	1,229	2.53	1,229	2.68	0.78
	TOTAL	1,838	4.44	1,696	2.96	1,660	2.48	1,764	2.36	1,702	2.34	1.00
EGYPT	EXPORT	195	1.07	245	1.13	316	1.36	305	1.16	473	1.76	2.43
	IMPORT	124	0.53	211	0.59	272	0.62	399	0.82	393	0.86	3.16
	TOTAL	319	0.77	456	0.79	589	0.88	703	0.94	866	1.19	2.72
IRAQ	EXPORT	141	0.78	124	0.35	182	0.42	-	-	-	-	-
	IMPORT	-	-	-	-	-	-	-	-	-	-	-
	TOTAL	141	0.34	124	0.22	182	0.27	-	-	-	-	-
IRAN	EXPORT	250	1.38	268	1.24	298	1.28	307	1.17	-	-	-
	IMPORT	692	2.98	689	1.93	806	1.85	646	1.33	-	-	-
	TOTAL	942	2.28	958	1.67	1,104	1.65	953	1.27	-	-	-

Table 3.1.3 ANNUAL EXPORTS & IMPORTS BY SELECTED COUNTRY GROUP

(In Millions of Dollars)

		1994		1995		1996		1997		1998		RATE
		M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	M USD	% SHARE	
1.BLACKSEA ECONOMIC COOPERATION (BSEC)	EXPORT	1,637	9.04	2,417	11.17	2,905	12.51	3,782	14.40	3,230	12.01	1.97
	IMPORT	2,167	9.31	3,998	11.20	3,867	8.86	4,468	9.20	4,329	9.43	2.00
	TOTAL	3,804	9.19	6,415	11.19	6,772	10.13	8,250	11.03	7,558	10.38	1.99
2.ECONOMIC COOPERATION ORGANIZATION (ECO)	EXPORT	752	4.15	905	4.18	1,129	4.86	1,287	4.90	1,120	4.17	1.49
	IMPORT	922	3.96	1,137	3.18	1,197	2.74	1,107	2.28	946	2.06	1.03
	TOTAL	1,674	4.05	2,042	3.56	2,326	3.48	2,394	3.20	2,066	2.84	1.23
3.COMMONWEALTH OF INDEPENDENT STATES (CIS)	EXPORT	1,412	7.80	2,057	9.51	2,665	11.48	3,512	13.37	2,659	9.89	1.88
	IMPORT	1,822	7.83	3,315	9.28	3,074	7.05	3,615	7.44	3,722	8.10	2.04
	TOTAL	3,234	7.82	5,372	9.37	5,740	8.59	7,127	9.53	6,380	8.76	1.97
4.TURKISH REPUBLICS	EXPORT	430	2.37	543	2.51	747	3.22	908	3.46	831	3.09	1.94
	IMPORT	190	0.82	287	0.80	304	0.70	399	0.82	449	0.98	2.37
	TOTAL	619	1.50	830	1.45	1,051	1.57	1,307	1.75	1,280	1.76	2.07
5.ISLAMIC CONFERENCE ORGANIZATION	EXPORT	3,556	19.64	3,872	17.90	4,136	17.81	4,646	17.69	4,516	16.80	1.27
	IMPORT	3,567	15.33	4,617	12.93	5,558	12.74	5,785	11.91	4,481	9.76	1.26
	TOTAL	7,123	17.22	8,490	14.80	9,694	14.50	10,431	13.94	8,998	12.36	1.26
TOTAL EXPORT		18,106	100	21,636	100	23,225	100	26,261	100	26,881	100	1.48
TOTAL IMPORT		23,270	100	35,709	100	43,627	100	48,559	100	45,921	100	1.97
TOTAL		41,376	100	57,345	100	66,851	100	74,820	100	72,803	100	1.76

SOURCE : SPO.SIS

Chapter 4 National and Regional Development Related to Port Development

4.1 Five Year Development Plan

4.1.1 Regional Development Policy

In Turkey, a nationwide long-term development plan covering national land, industries, energies, transportation and so on has yet been formulated. Instead, as a national development plan, Five-year Development Plans have been put into operation consecutively, the seventh of which is now undergoing. Under the 7th Five-year Development Plan, which covers the years from 1996 to 2000, 'Establishing Regional Balances' is aimed as one of the basic structural reform projects. In addition, other projects include 'The development of Human Resources', 'Agriculture, Industrialization and Integration with the World', 'Structural Reform Projects Designed to Increase Efficiency in the Economy' and 'Preservation and Improvement of the Environment'.

(1) Objectives of Regional Development

According to the 7th Development Plan, the main objective of regional development is 'to achieve economically, socially, culturally and politically coherent development that would contribute to the strengthening of national unity.'

To this end, various measures were to be taken as follows;

- For the relatively less developed regions, mainly the Eastern and Southeastern Anatolia Regions, regional development projects would be planned with due consideration to local resources and potentials. Especially, the GAP project would be implemented as scheduled.
- To encourage investment and to increase the productivity in the Development Priority Regions, state aids would be granted to the private sector.
- In relatively less developed regions, the transportation infrastructure would be given special attention to have these regions integrate with more developed markets.
- The organized industrial zones as well as the small scale industrial estates in the less developed regions, either in the stage of construction or blueprint would be completed in the Plan period.
- Border trade and free trade zones would be promoted so that export capabilities of the less developed regions to the foreign markets would be improved.

(2) The achievements in the Plan period

- 1) As for some regional development projects such as Southeastern Anatolia Region (GAP) Project and Eastern Black Sea Region (DOKAP) Project, the progress is mentioned in section 4.4.
- 2) In terms of the Organized Industrial Zones and Small Scale Industrial Estates, performances until 1995 and 1998 are shown in Tables 4.1.1 and 4.1.2 respectively.

Table 4.1.1 Progress in Organized Industrial Zones(OIZ)

	1965-95	96-98	Total	2005(Planned)
Number of OIZ	36	7	43	80
Industrial Area(ha)	8,582	1,578	10,160	20,000
Number of Factories	2,077	1,783	3,860	8,000
Employment(people)	207,700	178,300	386,000	800,000

Source: Ministry of Industry and Trade

Table 4.1.2 Progress in Small Scale Industrial Estates (SSIE)

	1965-95	96-98	Total	2005(Planned)
SSIE (Number)	273	21	294	400
No. of Workshops	66,335	4,268	70,603	100,000
Employment(People)	398,010	25,990	424,000	600,000

Source: Ministry of Industry and Trade

Regional distribution of OIZ and SSIE are shown in Table 4.1.3 and Table 4.1.4 respectively.

Table 4.1.3 Regional Distribution of OIZ

Regions	Completed Within 1965-98			Investment Program in 1999			Employment(Current)	
	No. of OIZ	Area(ha)	Ratio(%)*	No. of OIZ	Area(ha)	Ratio(%)*	People	Ratio(%)
Mediterranean	5	1,046	10	15	2,942	7	25,300	7
East Anatolia	3	500	5	13	2,938	7	19,300	5
Aegean	10	2,827	28	28	7,075	16	91,100	24
Southeast Anatolia	4	1,346	13	9	4,142	10	39,800	10
Central Anatolia	6	2,261	22	27	11,045	26	98,800	26
Black Sea	6	670	7	26	3,409	8	23,700	6
Marmara	6	1,510	15	34	11,024	26	88,000	23
Turkey	43	10,160	100	152	42,575	100	386,000	100

Source: Ministry of Industry and Trade

* Ratio indicates % of the regional OIZ area to the total area

Table 4.1.4 Regional Distribution of SSIE

Regions	Completed Within 1965-98			Investment Program in 1999			Employment(Current)	
	No. of SSIE Workshops	Ratio(%)	*No. of SSIE Workshops	Ratio(%)	*People	Ratio(%)		
Mediterranean	31	10,235	14	29	5,798	15	61,400	14
East Anatolia	28	5,689	8	49	6,146	16	34,200	8
Aegean	49	11,238	16	30	7,496	19	67,500	16
Southeast Anatolia	18	5,514	8	19	4,537	12	33,100	8
Central Anatolia	70	16,123	23	24	3,267	8	96,800	23
Black Sea	54	11,295	16	38	6,253	16	67,800	16
Marmara	44	10,509	15	27	5,613	14	63,200	15
Turkey	294	70,603	100	216	39,110	100	424,000	100

Source: Ministry of Industry and Trade

* Ratio indicates % of the number of workshops in the region to the total number

- 3) As of the end of 1998, the trade volume of 12 operational free zones reached US\$ 7,718 million showing an increase of 40% as compared to 1997.(See Table 4.1.5) The breakdown of trade volume by countries as of 1998 lists EU 25%, other OECD countries 10%, other European countries 0.5%, CIS countries 6%, Islamic countries 3.5%, other countries 5% as well as Turkey 51%, which consisted of the domestic market to the free zones 15% and 36% vice versa. The trade volume of US\$ 3,920 million between the domestic market and the zones accounted for 5% of the total Turkish trade volume in 1998.

Four more zones became newly operational in 1999 in addition to the existing ones. The Turkish Government intentions is reportedly to ensure that all the Turkish free zones will be equipped with modern technology in line with world standards to be fully competitive with other free zones.

Table 4.1.5 Annual Trade Volume of the Free Trade Zones

	(unit: thousand US\$)				
	1994	1995	1996	1997	1998
Mersin	927,740	1,400,038	1,650,132	1,792,600	1,697,068
Antalya	88,955	175,960	141,174	180,592	168,084
Aegean	453,030	704,059	912,886	1,429,659	1,446,380
Istanbul-Ataturk Airport	444,915	437,938	510,333	866,232	1,778,380
Trabzon	44,112	148,764	119,318	96,196	57,482
Istanbul-Leather & Industry		92,871	295,861	1,127,785	2,354,483
Eastern Anatolia			3,083	1,001	476
Mardin			1,433	13,808	13,698
Izmir-Menemen					178,578
Samsun					1,958
Rize					1,726
Istanbul Thrace					19,769
Total	1,958,752	2,959,629	3,634,221	5,507,874	7,717,765

Source: Ministry of Industry and Trade

4.2 Sector-wise Development Policies

According to the latest five-year development plan, basic sector-wise development policies are summarized as follows.

4.2.1 Agriculture Development

The basic targets are provision of adequate and balanced nutrition of the growing population and ensuring an increase in output, and exports by emphasizing those products in which a comparative advantage exists. In addition, as one of the targets an increase and stability will be provided in producers incomes.

In view of the fact that agricultural land has reached the marginal limits, it is quite evident that increasing the production will only be possible by increasing productivity.

For this reason irrigable land will be irrigated by making use of modern irrigation systems, which are compatible with the environmental conditions, with a view to extend areas to be irrigated, especially in the Konya Plain and Central Anatolia.

Given this situation, to increase productivity and quality of production is only possible by extending the irrigated areas, by the widespread utilization of high quality seeds and purebred animals by the farmers. Moreover productivity and quality increase will be ensured by the prerequisites such as carrying out soil analyses, sufficient utilization of fertilizer, the proper choice of equipment, combating against disease and pest, extension and research results made available for farmers. Furthermore, stress will be placed upon training of farmers and technical personnel.

4.2.2 Industries Development

An industrial structure will be composed, mainly by the private sector within the framework of integration with the world market and with EU, equipped with the prerequisites of being outward oriented, being highly competitive and export oriented, capable of utilizing raw material and human resources in the most rational way.

The main target of the mining sector is to gain largest value added from mining resources and to meet raw material and energy requirements safely and economically.

As far as industrialization is concerned, the basic aims are to improve productivity, quality and standardization, the spread of flexible production system and utilization of modern technologies; the integration of small and large industries, and take on a production structure with a higher value added.

4.2.3 Energy Development

Basic principle in energy sector is to meet the energy demand of increasing population and developing economy continuously and with the lowest cost possible.

In the frame work of the expectations of economic growth and population increase aimed at in the plan period, it is estimated that total energy demand shall increase by an average of 8.6% annually and shall reach 87.5 million tons of oil equivalent in the year 2000.

The rate of primary energy production is less than the increase in demand, therefore, the share of import resources within consumption shall continue to increase.

Studies of long term electricity demand based on the alternative growth scenario indicate that demand shall reach 126.8 billion Kwh in the year 2000 and 295.5 billion Kwh in the year 2010. Importance shall be attached to electricity energy investments to meet the increasing demand on time.

By taking in to account the diminishing natural resources, and expected increase in costs and increase in demand, it is necessary to establish a reliable and low cost energy supply system in the long term. Thus, development of indigenous energy resources and their share in sources shall be initiated, diversification shall be made in terms of fuel type and country origin.

Mining investments aimed at production of energy resources shall be given emphasis, and importance shall be attached to the spreading of renewable energy sources utilization and transfer and adoption of nuclear technology.

Energy intensities in industry and in all sections of social life shall be reduced and energy efficiency and conservation program shall be realized since indigenous energy resources are insufficient and expensive in terms of quantity and quality. Also import energy source require foreign exchange and excessive use of energy creates environmental problems.

4.2.4 Tourism Development

The primary objectives of tourism sector are the development of competitive and productive tourism industry, meeting the expectations of local people and tourists from tourism, enriching natural and cultural values and providing for their continuity.

Emphasis shall be placed on the required arrangement and technical measures to integrate tourism superstructure with a sufficient infrastructure; necessary arrangement shall be made with a view to rapid implementation of ATAK project.

A dynamic and strategic Tourism Sector Master Plan (TUSAP) will be put into practice to provide sound development of tourism sector in the long term.

4.3 Transport Infrastructure Development

4.3.1 Road

Important highway projects which have been completed as are still in progress are described below.

(1) Black Sea Coast Highway

1) The East Black Sea Coast Highway (Between Samsun-Ordu-Giresun-Trabzon-Hopa-Sarp)

The whole of the East Black Sea Coast Highway have been projected as separated road whose total length is 550km. Separated road project has been done in accordance with the present highway passages. With the exception of the highway between Balaman-Persembek, the new route has been determined. The project standard is (2x2) outside the city, and (2x3) at the city passages where the reconstruction passage is available.

2) West Black Sea Coast Highway (Between Samsun-Sinop-Inebolu-Bartin)

The whole of the West Black Sea Coast Highway is 521km and the project works of Samsun-Bafra which is 69km have been completed .The project works of the 452km are being continued by adjudication. The whole West Black Sea Coast Highway is projected as separated roads.

(2) Ankara –Samsun Highway

The length of Ankara –Samsun highway is 417km in totality. The separated road project works between Kirikkale-Çerikli (36km),and Merzifon-Kavak (56km) are being continued with adjudication.

Separated road project works on the rest of this road have been completed.

(3) Bartın-Çaycuma-Devrek-Yenicaga Highway

The whole highway is 130km in totality and it is projected as a separated road.

(4) Antalya-Alanya-Gazipasa-Anamur-Mersin Highway

The highway between Antalya –Alanya, which is 140km,was projected as a separated highway in the past years. The project works between Alanya-Gazipasa (5th regional border) which is 82km,is being projected as separated highway by adjudication. Project works have been done between the Regional Border and Anamur, which is 50km with a photogrametric method as first class highway. It is a separated highway between Erdemli-Mersin.

(5) Bozyuk Bilecik- Mekece- Adapazari Highway(133km)

The project works of this highway between Bozüyük-Bilecik-Mekece, which is 85km, have

been completed (10km of Bozuyuk ring road included). The project works between Mekece-Adapazari ,which is 48km are being continued by adjudication. The project works will be completed this year.

The important highways that have to be constructed in the following years are listed below.

1) Sivrihisar- Eskisehir-Bursa highway(125 km)

120 km of this highway has not been completed as a separated highway yet, but there is a plan to do so.

2) Sivrihisar- Afyon- Usak- Izmir highway(445 km)

325 km of this highway has not been completed as a separated highway yet, there is a plan to do so.

3) Afyon- Antalya highway(288 km)

200 km of this highway has not been completed as separated highway yet, there is a plan to do so.

4.3.2 Railway

New lines to be constructed:

Fast train and combined transportation, which reinvigorate the railroads, must be supported, and in parallel with the policies adopted in the international arena, the fast train lines and international connections stated below must be given priority for investment.

<u>Lines with Priority</u>	<u>Length (km)</u>	<u>Cost (millions of US\$)</u>
• Istanbulu Tube Railroad		
• Ballıh-Yozgat-Yıldızeli	306	764
• Kars-Tbilisi	132	265
• Polatl -Afyon	208	703
• Ankara-Konya	290	660
• Bandırma-Bursa-Ayazma-O.Eli	182	993
• Ankara-Istanbul Speed Line	260	4.750
• Nizip-Birecik- .Urfa (GAP Lines)	137	390
• Isparta (Burdur)-Antalya	150	453
• Adapazarı -Ereğli	141	894
• Trabzon-Erzincan-Palu-Diyarbakır	630	3.262
• Van Lake Northern Pass	230	227

4.3.3 Pipelines

Intense discussions are being held on the Caspian-Mediterranean Crude Oil Pipeline Project, which is being conducted by the BOTAS and which will provide for transporting the oil of countries in the Caspian Basin, such as Azerbaidjan and Kazakhstan, to the world markets from a terminal in the Mediterranean (Ceyhan). According to this project, Kazakh crude oil amounting to 20 million tons/year will be brought to Baku, where it will unite with 25 million tons/year of Azeri crude oil, and a total of 45 million tons/year of crude oil will be carried to Ceyhan. Within this framework, the “Feasibility and Environmental Investigation Studies” of the Baku–Ceyhan Crude Oil Pipeline have been granted to a German firm, with credit obtained from the World Bank. The firm completed this study within the first half of 1998, and submitted the final report to BOTAS.

In addition, the Ceyhan–Samsun Crude Oil Pipeline Project has been developed by BOTAS, with the aim of carrying the crude oil to be bought by the Republic of Ukraine from the Middle East without using the Straits and the Sea of Marmara, from the Ceyhan Maritime Terminal on the Mediterranean, to the Port of Samsun on the Black Sea.

The aim is to spread the use of natural gas throughout the country and increase the number natural gas pipelines. Within this framework, work is still underway to extend the Bursa – Çan Natural Gas Carrying Pipeline, which became operational in 1996, to Çanakkale, and to construct a natural gas carrying pipeline from Karacabey to Izmir to supply natural gas to the Aegean region. Work is also underway on the 1200 km long Russian Federation – the Black Sea – Turkey Natural Gas Pipeline, which will start in Izobilna in the Russian Federation, enter the Black Sea at Tuopse and reach land at Samsun, and then move on to Ankara to transport the additional 16 billion m³ of natural gas to be purchased from the Russian Federation to Turkey. Revision studies are being made on the “Decree Having the Force of Law on the Usage of Natural Gas”, Number 397.

To meet the rapidly increasing gas demand of Turkey, the Iran – Turkey Natural Gas Pipeline, Turkmenistan – Turkey – Europe Natural Gas Pipeline, and the Iraq – Turkey international natural gas projects, being conducted by BOTAS, must be supported on an international platform.

4.4 Regional Development

4.4.1 GAP Project

(1) Background of the Project

The Southeastern Anatolian Region, the total area of which is approximately 77 thousand square kilometers (9.8% of the total area of the country), comprises 9 provinces; namely, Adiyaman, Diyarbakir, Gaziantep, Mardin, Siirt, Sanliurfa, Batman, Sirnak, Kilis. The Region has a population of 6.1 million (also 9.7% of the total population), and shares 5.2% of the Regional Gross Domestic Product (GRDP) as to compare to the national GDP in 1997. It is one of the least developed regions of the country with per capita GDP of US\$ 1619 in the same year, which indicates around 55% of the national average.

To cope with this situation, the Southeastern Anatolia Region (abbreviated as GAP) Project was initiated as the largest regional development project since the latter part of the 1980s. Primary objectives of this extensive project are: 1) mobilization of regional resources, 2) reduction in regional disparities, 3) increase in productivity, 4) creation of new employment opportunity, 5) raising income levels, 6) development of urban centers, and thus ensuring economic growth and social stability in the region.

Upon the completion of the Project, 28% of the total water potential of the country would be brought under control through the Euphrates and Tigris basins which jointly have a flow of more than 50 billion cubic meters of water annually. 1.7 million hectares of land would be irrigated and 27 billion kwh electricity would be generated. The numbers of dams and hydroelectric power plants to be built are 22 and 19 respectively. The area to be irrigated accounts for 19% of the whole area that could be economically irrigated in Turkey (8.5 million hectares) and the annual electricity generation corresponds to 22% of the country's economically viable hydro-power potential (118 billion kwh). The Project covers not only dams, hydroelectric power plants and irrigation facilities schemes but also agricultural infrastructure, transport, education, health, housing and tourism sectors.

Phasing-in of irrigation and the relative growth in agricultural output have led to the emergence of promising indicators in terms of industrial entrepreneurship in the Region. GAP foresees the development of the Region as an 'export base for agricultural and agro-industrial products'. In this context, establishment of Organized Industrial Zones and Small Scale Industrial Estates has been encouraged.

(2) Present Situation of the GAP Project

The total investment requirement for GAP is TL 7,224 trillion, which is equivalent to US\$ 32 billion. By the end of 1998, total spending for the Project amounted to TL 3,094 billion (equivalent to US\$ 13.7 billion) which gives a realization rate of 42.8%. This total spending includes foreign loans amounting to US\$ 2.1 billion used for various projects such as construction of dams and power plants, drinking water supply, health, agriculture, research and extension.

Sector-wise achievement rate is shown in Table 4.4.1.

Table 4.4.1 GAP Project Cost and Realization by Sector

(Unit: billion TL at 1998 Fixed Prices)

Sectors	Total Cost (Needed)	Cumulative Investment	Realization (%)
		Made until the End of 1998	
Agriculture	2,186,582	260,512	11.9
Energy	2,323,059	1,720,774	74.1
Mining	167,690	163,556	97.5
Manufacturing	322,824	130,467	40.4
Transport & Communication	1,599,313	476,525	29.8
Tourism	12,141	2,952	24.3
Housing	69,883	23,932	34.2
Education	143,979	89,072	61.9
Health	47,661	45,935	96.4
Other Public Services	351,320	180,370	51.3
TOTAL	7,224,452	3,094,095	42.8

Source: GAP Regional Development Administration

According to the GAP Master Plan, in 1985 the year the Master Plan was phased in as a base, per capita GRDP was 47% of the country's per capita GDP. The Master Plan projected an annual increase of 7.7% in GRDP, while projected annual increases in individual sectors were given as agriculture 4.9%, industry 10% and services 9%. Along with the change in the economic structure of the region, the share of agriculture would drop from 40% in 1985 to 23% in 2005, while that of industry would rise from 16% to 24% and services from 44% to 53%. Per capita GRDP would increase, at 1985 prices, approximately 4.5 times in 2005.

4.4.2 Other Major Regional Development Projects

(1) Eastern Anatolia Development Project

Although Eastern Anatolia Region occupies the second largest portion (19%) among the seven geographical regions of the Country, it trails other regions in terms of population and GDP per capita. According to the statistical data in 1997, the share of population stands at 8.9%, while GDP per capita in the Region is 1,347 US dollars (approximately 45% of the national average) which indicates the share of regional GDP is only 4.0%.

To cope with the less developed situation in the Region, a development project named the Eastern Anatolia Development Project was launched for the Region with the preparation of a master plan study. The study is being conducted by a consortium of the five universities located in the Region to identify the social and economic trends, growth potentials and possible alternatives for the Region's development. The study area covers 16 provinces, two of which are in the Black Sea Region in addition to 14 provinces in the Region.

The main objectives of the Project will be strengthening the private sectors in the Region among others together with those as follows:

- To determine the policies and implications that deal with the lowest socio-economic development level of the Region.
- To verify the priorities among all sectors in respect to the Region.

- To achieve the regional development through coordination with public and local administrations and private institutions as well.

(2) Eastern Black Sea Regional Development Project

The Eastern Black Sea Region, abbreviated as DOKAP, is another less developed region in the country without a coherent regional development plan. The Region, which consists of seven provinces, Artvin, Giresun, Gumushane, Ordu, Rize, Trabzon and Bayburt, has a land area of 39 thousand square km, and its population was 2.9 million in 1997. Per capita GDP in the DOKAP region was only 66% of the national average in 1996.

To guide the spatial and the socio-economic development of the Region for accelerated national growth, a master plan of a new multi-sector regional development project was initiated in cooperation with the Japanese Government through the Japan International Cooperation Agency (JICA). According to the Progress Report of the study, which is under way and will be finalized in the middle of 2000, three objectives for the DOKAP regional development are defined as follows:

- To strengthen the economic structure, responding to emerging opportunities, in order to increase employment opportunities, raise income levels, and contribute to capital accumulation within the Region;
- To promote regional integration or social cohesiveness through minimizing intra-regional disparities and out-migration; and
- To restore and sustain resource and environmental capacity as a basis for diversifying socio-economic activities.

(3) Zonguldak-Bartın-Karabük Regional Development Project

In recent years, the Region composed of three provinces, namely Zonguldak, Bartın and Karabük, is said to have entered a period of drastic change in terms of economic and social aspects of development in due course of the general evolution taking place in Turkey in the 1990's. Parallel to the priority given to the region in the context of privatization practices, the Zonguldak-Bartın-Karabük Regional Development Plan was designed to identify required infrastructure investments, map out the sectoral and spatial development destinations and suggest new employment fields in the Region. Especially, the state-owned enterprises, namely TKK (Turkish Hard Coal Company), Kardemir (Karabük Iron & Steel Company) and ERDEMİR were focused on in the study from the view point of assessing the possible effects of privatization on the local economy and identifying possible alternatives for the economic vitalization of the Region. A master plan study on the Project was conducted by a consortium of French and Turkish firms and completed in 1997. Pre-feasibility and feasibility study reports covering ten sectors such as agriculture, forestry, industry, mining, public works, education, land use plans, tourism, environment, institutional organization were prepared. Proposed investment in the Project amounts to US\$ 1.3 billion but the decision on implementation of the Project has not yet been reached.

4.5 Evaluation of Achievement

4.5.1 On Transport Infrastructure Development

- (1) Inland transport development in Turkey has to be carried out taking into consideration the road freight transportation share, more than 93% of the total volume in 1996. Road freight transportation should be shifted to railway line, shipping line and pipe line.
- (2) Heavy Traffic Congestion at the Bosphorus Bridges and Istanbul Region
Road traffic in Turkey is generally smooth thank to its well developed road network, except for the Istanbul Region and particularly the Bosphorus Bridges. The two Bosphorus Bridges connected between east end of Thrace and west end of Anatolia where are major industrial regions in this country from the early days until now, has been congested with its annual average daily traffic(AADT) volume 183 thousand cars per day in first Bosphorus Bridge and 139 thousand cars per day in the second Bosphorus Bridge in 1996. The construction of the Bosphorus Railroad Tube Tunnel is expected for breaking off the congestion around that area.
- (3) Surrounding the major city regions such as Izmir and Mersin
The traffic surrounding Izmir and Mersin is predicted to be congested in near future caused by increase of cars and trucks transported cargo mainly from/to the hinterland of those cities. Izmir and its hinterland has big potential of manufacturing industries and Mersin is located close to Adana which is the city of growing with progress in GAP. Therefore, a sufficient transport network is expected to develop in appropriate to the occasion.
- (4) From a viewpoint of port activities, major routes such as from Istanbul to Mersin via Ankara, from Izmir to Samsun via Ankara, from Antarya to Izmir and Ankara via Afyon, from Filyos to Ankara, from Mersin to GAP region via Adana and from Trabuzon to GAP region have to be developed in order to evacuate the cargoes from ports to each hinterland smoothly.
- (5) The roads to the famous tourist spots from Antalya, which have many piers for cruising vessels, to Istanbul via Izmir or Ankara are expected to be developed for tourism. Well conditioned roads are needed to attract tourists on board the foreign cruising vessels.

4.5.2 On Regional Development

- (1) World economic globalization brings with it the increasing suction power of international values and rules. Turkey, as a member of the world economy, is establishing various structural reforms to respond to the globalization.
One of the foremost policies for the globalization is to realize regional balanced development and to reduce regional disparities. The policy will be pursued through the years to come.
- (2) The Developed Regions such as Marmara, Aegean, Central Anatolia, Mediterranean will continue to be the driving forces for vitalization of the Turkish economy as a whole.
- (3) The GAP Project is near the final stage of the whole plan. The effects of investment to the Project, even though they are not seen yet explicitly in GRDP or GDP per capita in the Southeast Anatolia Region (see Table 4.5.1), would become tremendously huge with the further progress of the implementation and maturity of the Project. The socio-economic impact of the Project would not be confined to the Region but would pervade over the neighboring regions such as Mediterranean, East Anatolia and Black Sea.
- (4) In the other less developed regions and sub-regions, some development projects are in progress as well. Various supporting measures are also being extended for Small Scale Industry Estates, Organized Industrial Zones and some Rural Development Projects. Further developments of these regions entirely depend on the actual implementation of those projects.

Table 4.5.1 GROSS DOMESTIC PRODUCT BY REGION

(According to Regions)		(At 1987 Prices in Millions of TL)												
REGIONS		1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	Growth rate(*1)	
MEDITERRANEAN		8,937,414	9,059,445	9,509,749	10,342,630	10,032,041	10,666,801	11,685,236	11,176,264	11,962,245	12,516,654	13,645,567	4.3%	
Share in total		12.0%	11.9%	12.4%	12.4%	11.9%	11.9%	12.1%	12.2%	12.2%	11.9%	12.1%		
EAST ANATOLIA		3,054,349	3,120,143	3,052,584	3,322,029	3,229,687	3,374,391	3,499,538	3,480,575	3,414,301	3,502,968	3,695,227	1.9%	
Share in total		4.1%	4.1%	4.0%	4.0%	3.8%	3.8%	3.6%	3.8%	3.5%	3.3%	3.3%		
AEGEAN		12,391,697	12,822,643	12,700,451	13,771,052	13,674,372	14,631,134	15,985,882	15,443,186	16,792,098	17,936,284	18,868,124	4.3%	
Share in total		16.6%	16.8%	16.6%	16.5%	16.2%	16.4%	16.6%	16.9%	17.2%	17.1%	16.8%		
SOUTH-EAST ANATOLIA		3,905,910	4,245,426	3,986,868	4,513,963	4,827,953	5,001,911	5,353,236	4,934,308	5,123,286	5,443,406	5,992,076	4.4%	
Share in total		5.2%	5.6%	5.2%	5.4%	5.7%	5.6%	5.5%	5.4%	5.2%	5.2%	5.3%		
CENTRAL ANATOLIA		12,635,749	12,839,139	11,982,822	13,531,115	13,954,169	14,483,802	15,487,764	14,850,570	15,676,757	16,417,096	17,283,747	3.2%	
Share in total		16.9%	16.8%	15.7%	16.2%	16.5%	16.2%	16.0%	16.3%	16.0%	15.7%	15.3%		
BLACK SEA		7,449,852	7,515,114	7,743,723	8,128,835	8,156,577	8,742,594	8,896,011	8,601,680	8,952,445	9,774,244	10,184,398	3.2%	
Share in total		10.0%	9.8%	10.1%	9.7%	9.7%	9.8%	9.2%	9.4%	9.1%	9.3%	9.0%		
MARMARA		26,346,958	26,704,382	27,522,113	29,968,840	30,478,035	32,500,111	35,682,706	32,534,143	35,966,673	39,154,509	42,962,071	5.0%	
Share in total		35.3%	35.0%	36.0%	35.9%	36.1%	36.4%	36.9%	35.6%	36.7%	37.4%	38.1%		
TURKEY		74,721,929	76,308,292	76,498,310	83,578,464	84,352,834	89,400,744	96,590,373	91,320,726	97,887,805	104,745,161	112,631,210	4.2%	
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		

Note. *1 : Average annual growth rate (1987-1997)

SOURCE: SIS

Chapter 5 Sea Transport

5.1 World Sea Transport

5.1.1 Overview of Maritime Transport

The East Asian crisis created serious problems for global trade in 1998. The dimensions of the crisis exceeded the region and achieved a global character developing countries were especially harmed by this crisis. According to the Yearly Report of the World Trade Organization (WTO), world trade was only able to grow by 4% in 1998, while it stood at almost 10% in 1997.

The imports of the USA, the world's largest importer, grew 4% in 1998, while prices of importation fell by 6% and the increase in quantity was realized at more than 10%.

There has been a 2% rise in the imports of the EU, and this additional demand for imports has helped to decreased the negative effects of the crisis.

The 2.5% recession in the Japanese economy in 1998 further exacerbated the East Asian Crisis. The lessening in production and demand in the Japanese economy caused a 19% decrease in the first nine months of 1998. This situation adversely affected the exports of East Asian countries.

World seaborne trade volume by major commodities such as Crude oil, Oil products, Iron ore, Coal, Grain and Other cargo for the last 13 years is shown in Table 5.1.1. The trend of seaborne trade volume is shown in Figure 5.1.1. Among these cargoes, Other cargo accounts for 2,050million tons in 1998 with growth of 3.4% from 1990-1998, followed by Crude oil (1,550million tons, 3.4%), Coal (465million tons3.9%) and so on. The share of each commodity in the total transport volume in 1998 is shown below.

Commodities	Share (%)
Crude Oil	30.6
Oil Products	7.8
Iron Ore	8.3
Coal	9.2
Grain	3.7
Other Cargo	40.4

Table 5.1.1 World Seaborn Trade Volume by Commodities
(Unit: million tons)

Years	Crud Oil	Oil Products	Iron Ore	Coal	Grain	Other Cargo*	Total	Change (%)
1985	871	288	321	272	181	1,360	3,293	0.0
1986	958	305	311	276	165	1,370	3,385	2.8
1987	970	313	319	283	186	1,390	3,461	2.2
1988	1,042	325	348	304	196	1,460	3,675	6.2
1989	1,120	340	362	321	192	1,525	3,860	5.0
1990	1,190	336	347	342	192	1,570	3,977	3.0
1991	1,247	326	358	369	200	1,610	4,110	3.3
1992	1,313	335	334	371	208	1,660	4,221	2.7
1993	1,356	358	354	367	194	1,710	4,339	2.8
1994	1,403	368	383	383	184	1,785	4,506	3.8
1995	1,415	381	402	423	196	1,870	4,687	4.0
1996	1,466	404	391	435	193	1,970	4,859	3.7
1997	1,534	410	430	460	203	2,070	5,107	5.1
1998	1,550	395	420	465	190	2,050	5,070	-0.7
Annual Average Growth Rate(%), 1990-1998								
	3.4	2.0	2.4	3.9	-0.1	3.4	3.1	-

Source: Fearnleys Review, Various Issues

Notr: * "Other cargo" estimates are based on world trade growth as indicated by official sources and fleet d

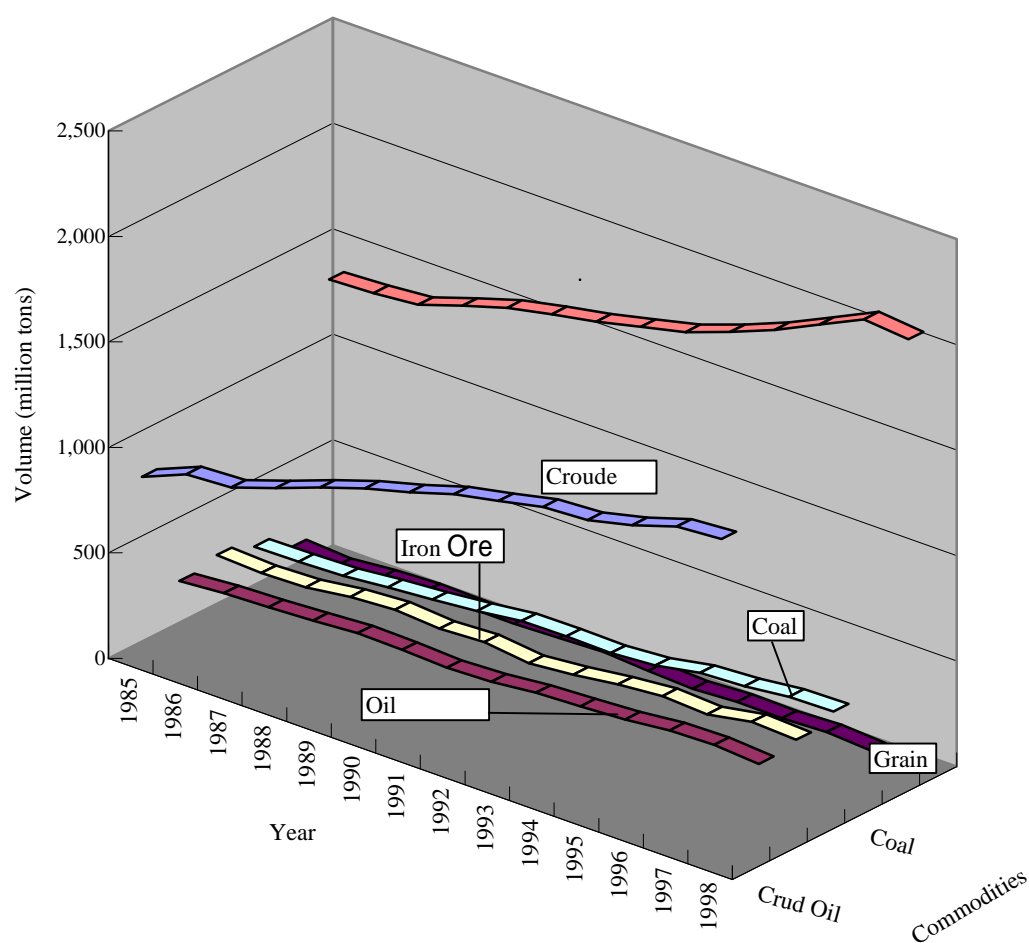


Figure 5.1.1 Trend of Seaborn Trade Volume by Commodities

5.1.2 Crude Oil Transport in the World

Transport matrix of Crude oil in 1997 is shown in Table 5.1.2. The major flows are from Middle East to N/W Europe and Mediterranean with volumes of 96.2 million tons and 72.5 million tons.

Table 5.1.2 Trade Matrix of Crude Oil in 1997

(Unit: million tons)								
From:	To:	N/W Europe	Mediterranean	North America	South America	Japan	Others	Total
								1997
Middle East		96.2	72.5	96.8	15.8	187.5	313.9	782.7
Near East		1.2	18.1	0.1			0.5	19.9
North Africa		5.9	68.7	7.7	4.6	1.2	5	93.1
West Africa		10.7	29.9	82.5	13.3	0.3	30	166.7
Caribbean		9.2	6.9	181.7	18	3	10	228.8
South East Asia				6.5	0.1	33	28.5	68.1
Others		44.2	43.9	52.4	15.2	1.8	18.6	176.1
Total 1997		167.4	240.0	427.7	67.0	226.8	406.5	1535.4
Total 1996		157.1	229.1	402.1	70.4	220.8	386.8	1466.3

Source: World Bulk Trade 1998, Fearnleys

5.1.3 Dry Bulk Transport of World

(1) Iron Ore

Table 5.1.3 shows the trade matrix of Iron ore in the World in 1997. The major flow is from S. America Atl. to Mediterranean with a volume of 10.7 million tons. Total volume of Iron ore in Mediterranean is 20.6million tons.

Table 5.1.3 Trade Matrix of Iron Ore in 1997

(Unit: thousand tons)									
From:	To:	U/K Continent	Mediterranean	Other Europe	USA	Japan	Other Far East	Others	Total
									1997
Scandinavia		12,705	392	576	235		2,258	2,893	19,059
Other Europe		1,284	70	73	68	1		11	1,507
West Africa		6,838	3,526	498			112	918	11,892
Other Africa		4,412	1,351	2,999	12	4,862	6,413	711	20,760
Noth America		16,149	1,596	354	6,633	1,005	3,432	630	29,799
S.America Atl.		44,343	10,655	10,317	7,386	30,079	27,726	19,953	150,459
S.America Pac.		477		68	493	3,681	5,330	425	10,474
Asia		1,308	1,062	490		20,933	10,091	2,893	36,777
Australia/N.Z.		20,578	1,904	1,243	742	66,069	57,969	963	149,468
Total 1997		108,094	20,556	16,618	15,569	126,630	113,331	29,397	430,195
Total 1996		95,292	19,327	22,117	15,071	119,206	95,659	24,661	391,332

Source: World Bulk Trade 1998, Fearnleys

(2) Coal

Trade matrix of Coal in 1997 is shown in Table 5.1.4. Coal from N. America, Australia and South Africa to Mediterranean accounted for 19.1million tons of the total 26.9million tons, or a share of 71.7%. Total volume in 1997 increased at a by growth rate of 7.1% as compared to the previous year.

Table 5.1.4 Trade Matrix of Coal in 1997

(Unit: thousand tons)

From:	To:	U/K Continent	Mediterra- nean	Other Europe	South America	Japan	Other Far East	Others	Total 1997	Total 1996
N. America		20,558	10,207	11,481	11,394	25,866	12,361	3,959	95,826	104,158
Australia		13,223	4,362	4,000	5,865	72,641	43,344	13,531	156,966	140,499
S. Africa		19,289	4,556	13,247	1,684	5,055	11,126	8,829	63,786	61,512
S. America Car.		10,592	2,406	7,942	605	402	41	7,006	28,994	28,449
China		719	593	210		12,441	16,069	407	30,439	29,024
FSU		320	4,538	765		4,595	1,441		11,659	10,235
Oth. E.Europe		7,564	130	9,460	189			463	17,806	12,781
West Europe		1,413	19	868			1	36	2,337	1,585
Others		9,661	33	3,062	1,351	13,074	20,668	4,613	52,462	46,910
Total 1997		83,339	26,844	51,035	21,088	134,074	105,051	38,844	460,275	
Total 1996		71,667	25,063	50,472	20,696	128,096	100,242	38,917		435,153

Source: World Bulk Trade 1998, Fearnleys

(3) Grain

Table 5.1.5 shows trade matrix of Grain in the World. In this table, grain from Mediterranean was 12.1million tons in 1997, was distributed to USA(5.4million tons), Canada(1.0million tons), South America(3.3million tons) and so on.

Table 5.1.5 Trade Matrix of Grain in 1997

(Unit: thousand tons)

From:	To:	USA	Canada	South America	Australia	Others	Total 1997	Total 1996
UK/Continent		6,910	737	4,927	14	25	12,613	11,797
Meditarranean		5,411	1,030	3,344	794	1,565	12,144	9,522
East Europe		838	95	553	62	1,262	2,810	4,634
Other Europe		983	270	557	48	431	2,289	2,228
Africa		10,627	3,800	3,605	2,202	7,481	27,715	22,415
Americas		18,663	4,327	6,838	436	1,595	31,859	35,374
Near East		3,583	25	958	268	994	5,828	5,281
Indian Ocean		5,725	4,887	2,731	9,829	5,744	28,916	18,845
Japan		25,186	2,185	1,722	2,066	637	31,796	30,966
Other Far East		22,443	5,037	4,871	6,845	7,126	46,322	50,621
Not Specified		90	65		319	89	563	950
Total 1997		100,369	22,458	30,106	22,883	26,949	202,855	
Total 1996		115,420	18,213	19,802	18,743	20,455		192,633

Source: World Bulk Trade 1998, Fearnleys

5.1.4 Container Throughput of Surrounding East Mediterranean/Black Sea Region

(1) Maritime Route

Container maritime route is classified as Europe-Far East, Mediterranean-Far East, Europe-Middle East/East Africa and InterEuropean etc. Largest capacity of vessel is applied to Europe-Far East, therefore feeder service is necessary from hub ports. InterEuropean service includes this and local maritime service.

1) Europe-Far East Route

Cargo volume of west bound was larger than east bound as follows:

	<u>1994</u>	<u>1995</u>	<u>1996</u>
West bound('000TEUs)	1,878	2,111	1,676
East bound('000TEUs)	953	1,001	1,244

Generating volumes by Japan and HongKong in 1996 on East Bound are 320,000TEUs and 644,000TEUs respectively(see Table 5.1.6).

Table 5.1.6 Europe/Far East Container Cargo Volume in1996

Country	Volume (TEUs)	Country	Volume (TEUs)
Japan	320,000	Korea	98,000
HongKong/China	644,000	Taiwan	140,000
Philippines	26,000	Singapore	59,000
Malaysia	96,000	Thailand	114,000
Indonesia	132,000	Vietnam	47,000
Total			1,676,000

Source: International Maritime Transport Handbook (in Japanese)

Major commodities are as follows:

west bound	electric goods/ motorcycle/ auto parts/ machinery/ tires/ synthetic fiber
east bound	machinery/malt/daily products/ chemicals/ beverages/ reefer cargo/ plastic/ paper products/ waste paper/ synthetic-resin

2) East Mediterranean and Black Sea-Far East Route

From east bound cargo statistics, less than 50,000TEUs of containers were transported in 1994-1996 as follows:

	<u>1994</u>	<u>1995</u>	<u>1996</u>
West bound (TEUs)	27,352	40,185	47,710

Major commodities are as follows:

west bound	machinery/chemicals/CKD/iron & Steel/canned goods/tires/Miscellaneous
east bound	leaf tobacco/ asbestos/food products/ marble/ manganese /chromium

3) West Mediterranean-Far East Route

Cargo volume of west bound was also larger than east bound up to 1995, but in 1996 the balance changed as follows:

	<u>1994</u>	<u>1995</u>	<u>1996</u>
West bound ('000TEUs)	301	355	208
East bound ('000TEUs)	185	208	212

Generating volumes by Japan and Italy in 1996 are 42,000TEUs on westbound and 136,000TEUs on eastbound respectively(see Table 5.1.7).

Table 5.1.7 West Mediterranean/Asia Container Cargo Volume in1996

Country	Volume(TEUs)	Country	Volume(TEUs)
Japan	42,000	Italy	136,000
Other Far East	166,000	France	38,000
		Spain	38,000
West Bound Total	208,000	East Bound Total	212,000

Source: International Maritime Transport Handbook (in Japanese)

Major commodities are as follows:

west bound	electric goods/ motorcycle/ auto parts/ machinery/ textiles/ reefer cargoes
east bound	machinery/reefer cargo/wine & spirits/ tire/ marble/ reefer cargo/ granite /chemicals

(2) Container Volume surrounding East Mediterranean/Black Sea Region

Container port demand by nation in East Mediterranean/Black Sea Region is shown in Table 5.1.8. Total container volume in this region increased to 5.8 million TEUs in 1997 with a growth rate of 14.1% between 1990-1997. Container volume of Turkey reached 1.2million TEUs in 1997 with a growth rate of 19% in the same period.

Container demand by major port from 1985-1997 is shown in Table 5.1.9.

Table 5.1.8 East Mediterranean/Black Sea-Container Port Demand by Nation 1985/97

(Unit: thousand TEUs)

Country	1985	1990	1991	1992	1993	1994	1995	1996	1997*
Greece	208.0	480.0	548.8	648.3	696.2	735.4	819.1	833.2	923.2
Turkey	114.5	355.9	396.4	456.6	577.2	602.6	745.2	969.7	1,202.0
<i>OECD Countries</i>	322.5	835.9	945.2	1,104.9	1,273.4	1,338.0	1,564.3	1,802.9	2,125.2
Bulgaria	35.0	28.3	32.7	19.5	15.0	39.9	45.6	51.1	51.5
Romania	37.5	28.5	46.3	50.2	33.0	41.3	68.6	86.3	95.0
<i>USSR-Black Sea</i>	84.1	141.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ukraine	0.0	0.0	102.6	74.1	69.5	41.0	39.4	61.1	61.0
<i>Ex-Centrally Planned</i>	156.6	198.6	181.6	143.8	117.5	122.2	153.6	198.5	207.5
Cyprus	197.3	384.3	323.5	351.9	414.1	372.2	373.2	564.0	442.9
Syria	84.7	67.3	82.8	92.6	100.0	135.0	132.2	153.1	160.0
Lebanon	26.6	0.0	131.2	194.1	210.0	229.9	254.3	280.0	290.0
Israel-W	295.6	459.3	493.9	598.9	665.0	736.1	871.7	919.8	987.9
Egypt-Med.	158.0	350.1	575.7	644.8	921.5	934.6	1,043.4	1,468.2	1,571.0
<i>Other Countries</i>	762.2	1,261.0	1,607.1	1,882.3	2,310.6	2,407.8	2,674.8	3,385.1	3,451.8
Total	1,241.3	2,295.5	2,733.9	3,131.0	3,701.5	3,868.0	4,392.7	5,386.5	5,784.5
Percentage									
OECD Countries	26.0	36.4	34.6	35.3	34.4	34.6	35.6	33.5	36.7
Ex-Centrally Planned	12.6	8.7	6.6	4.6	3.2	3.2	3.5	3.7	3.6
Other Countries	61.4	54.9	58.8	60.1	62.4	62.2	60.9	62.8	59.7
<i>(Turkey)</i>	<i>9.2</i>	<i>15.5</i>	<i>14.5</i>	<i>14.6</i>	<i>15.6</i>	<i>15.6</i>	<i>17.0</i>	<i>18.0</i>	<i>20.8</i>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ocean Shipping Consultants Ltd.

Note: * = preliminary

Table 5.1.9 East Mediterranean/Black Sea Containerized Demand by Major Port 1985/97

(Unit: thousand TEUs)

Port	1985	1990	1991	1992	1993	1994	1995	1996	1997*
Tessaloniki	11.1	53.8	85.9	133.6	166.2	173.7	211.2	237.2	234.2
Piraeus	196.9	426.2	462.7	511.5	525.0	555.5	600.1	586.0	675.0
Bourgas					9.2	15.3	19.1	21.5	20.0
Varna	35.0	28.3	32.7	19.5	5.8	24.6	26.5	29.6	31.5
Constantza	37.5	28.5	46.3	50.2	33.0	41.3	68.6	86.3	95.0
Haydarpasa	23.2	111.7	143.0	177.6	232.4	179.7	256.6	329.1	316.8
Kumport								15.5	115.0
Gemport					5.1	14.3	15.2	36.1	48.0
Gebze							14.2	44.0	60.0
<i>(Istanbul region)</i>	23.2	111.7	143.0	177.6	237.5	194.0	286.0	424.7	539.8
Izmir	12.5	122.5	143.1	162.5	212.9	268.9	302.2	345.9	372.4
Mersin	68.3	107.5	102.8	105.8	116.8	131.5	147.6	181.5	272.4
Limassol	122.4	273.8	228.6	218.3	220.8	266.2	265.7	398.6	257.9
Larnaca	74.9	110.5	94.9	133.6	193.3	106.0	107.5	165.4	185.0
Lattakia	84.7	67.3	82.8	92.6	100.0	135.0	132.2	153.1	160.0
Beirut	26.6		131.2	194.1	210.0	229.9	254.3	280.0	290.0
Ashdod	120.0	173.8	175.6	213.9	250.0	305.0	346.3	369.0	398.5
Haifa	152.1	285.5	318.3	385.0	415.0	431.1	525.4	550.8	589.4
Damietta		97.6	251.7	323.8	492.8	520.2	570.4	585.9	596.0
Alexandria	130.0	197.7	263.9	204.1	257.8	284.4	233.0	520.0	530.0
Port Said	28.0	54.8	60.1	116.9	170.9	130.0	240.0	362.3	445.0
Total	1,123.2	2,251.2	2,766.6	3,220.6	3,854.5	4,006.6	4,622.1	5,722.5	6,231.9

Source: Ocean Shipping Consultants Ltd.

Note: * = preliminary

5.2 International Shipping of Turkey

5.2.1 International Maritime Cargoes of Turkey

International maritime cargoes of Turkey include the transit cargoes, belonging to other countries, that are loaded and unloaded in the ports of Turkey, in addition to the goods of export and import being loaded in the ports of Turkey and /or being unloaded at these ports.

Trend of international sea borne cargo volume in Turkey is shown in Table 5.2.1 and Figure 5.2.1. Total cargo volume dropped to 74.7million tons in 1994 but then increased strongly for five years reaching 104.1 million tons in 1998. Export, import, and total cargo volume growth rates are 1.6%, 10% and 7.3% in the last decade, respectively.

Table 5.2.1 International Cargo Volume in Turkish Ports for the last 10 years

Year	Export		Import		Total
	000tons	Share(%)	000tons	Share(%)	000tons
1988	19,708	37.5	32,810	62.5	52,518
1989	21,531	39.0	33,670	61.0	55,201
1990	15,239	25.8	43,878	74.2	59,117
1991	20,343	29.0	49,892	71.0	70,235
1992	21,915	30.3	50,504	69.7	72,419
1993	18,102	21.8	64,875	78.2	82,978
1994	22,113	29.6	52,631	70.4	74,744
1995	20,175	24.0	64,007	76.0	84,181
1996	18,846	20.6	72,834	79.4	91,680
1997	37,010	32.9	75,364	67.1	112,373
1998	24,773	23.8	79,303	76.2	104,076
Annual average growth rate between 1988-1998					
	2.3%		9.2%		7.1%

Source: Undersecretariat of Maritime Affairs and SIS

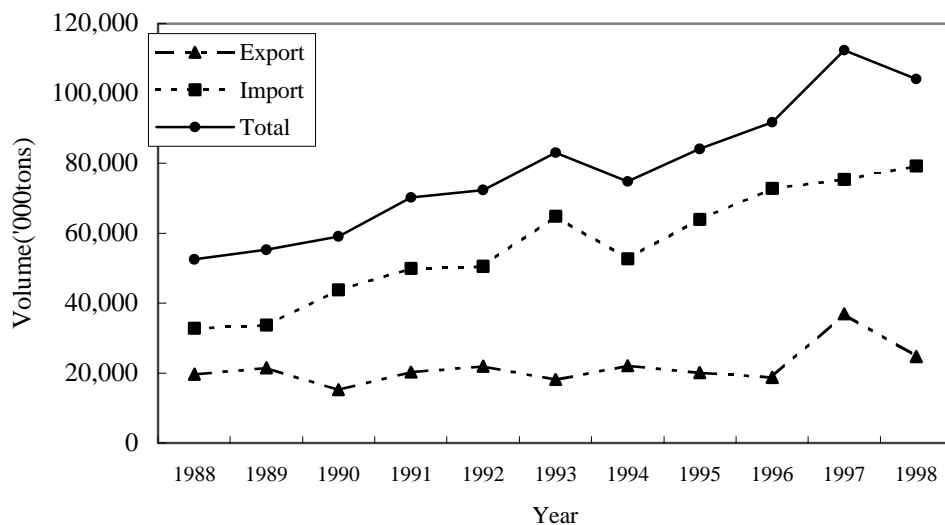


Figure 5.2.1 Trend of International Maritime Cargoes of Turkey

5.2.2 International Maritime Cargo from/to Region

Major trading partners of Turkey by the region are European Countries, Asian Countries, and American Countries. As to the share of regional volume to total volume, European Countries accounted for 50.1%, Asian Countries 24.8% and American Countries 13.5% in 1997(see Table 5.2.2)

Table 5.2.2 Export and Import Volume by Region in 1993-1997

		(Unit: thousand tons)									
Area		1997		1996		1995		1994		1993	
		Volume	Share(%)	Volume	Share(%)	Volume	Share(%)	Volume	Share(%)	Volume	Share(%)
Turkey Total	Export	21,011	100	19,677	100	22,068	100	24,072	100	17,264	100
	Import	72,646	100	67,879	100	63,882	100	54,628	100	62,781	100
	Total	93,656	100	87,556	100	85,950	100	78,699	100	80,045	100
<i>European countries total</i>	Export	10,518	50.1	10,051	51.1	10,445	47.3	9,147	38.0	7,454	43.2
	Import	26,600	36.6	23,982	35.3	22,047	34.5	16,247	29.7	23,206	37.0
	Total	37,118	39.6	34,033	38.9	32,492	37.8	25,393	32.3	30,660	38.3
EU countries	Export	7,906	37.6	8,112	41.2	8,503	38.5	7,297	30.3	5,371	31.1
	Import	11,286	15.5	11,037	16.3	9,535	14.9	8,114	14.9	10,309	16.4
	Total	19,192	20.5	19,149	21.9	18,038	21.0	15,410	19.6	15,680	19.6
Other Europ. Countries	Export	1,314	6.3	1,134	5.8	1,498	6.8	1,281	5.3	1,023	5.9
	Import	3,007	4.1	3,281	4.8	2,874	4.5	2,083	3.8	2,985	4.8
	Total	4,321	4.6	4,415	5.0	4,372	5.1	3,364	4.3	4,008	5.0
CIS countries	Export	1,298	6.2	805	4.1	444	2.0	569	2.4	1,059	6.1
	Import	12,307	16.9	9,663	14.2	9,638	15.1	6,051	11.1	9,912	15.8
	Total	13,605	14.5	10,469	12.0	10,082	11.7	6,619	8.4	10,971	13.7
African countries	Export	1,704	8.1	1,889	9.6	2,084	9.4	2,642	11.0	1,183	6.9
	Import	13,708	18.9	13,486	19.9	10,155	15.9	6,863	12.6	5,079	8.1
	Total	15,411	16.5	15,375	17.6	12,238	14.2	9,505	12.1	6,262	7.8
American countries	Export	2,173	10.3	1,440	7.3	1,558	7.1	2,151	8.9	943	5.5
	Import	10,470	14.4	9,378	13.8	8,534	13.4	6,852	12.5	8,507	13.6
	Total	12,643	13.5	10,818	12.4	10,093	11.7	9,003	11.4	9,450	11.8
<i>Asian countries</i>	Export	6,542	31.1	6,229	31.7	7,924	35.9	10,098	42.0	7,629	44.2
	Import	16,721	23.0	18,748	27.6	20,398	31.9	21,323	39.0	23,672	37.7
	Total	23,263	24.8	24,977	28.5	28,321	33.0	31,421	39.9	31,301	39.1
Middle East countries	Export	3,397	16.2	3,104	15.8	4,546	20.6	4,746	19.7	2,672	15.5
	Import	14,587	20.1	16,988	25.0	18,398	28.8	19,964	36.5	21,529	34.3
	Total	17,984	19.2	20,093	22.9	22,944	26.7	24,710	31.4	24,202	30.2
Other Asian countries	Export	3,144	15.0	3,125	15.9	3,378	15.3	5,352	22.2	4,956	28.7
	Import	2,134	2.9	1,759	2.6	1,999	3.1	1,359	2.5	2,143	3.4
	Total	5,278	5.6	4,884	5.6	5,377	6.3	6,711	8.5	7,099	8.9
Oceania countries	Export	59	0.3	46	0.2	36	0.2	31	0.1	16	0.1
	Import	2,836	3.9	2,123	3.1	2,650	4.1	3,307	6.1	2,315	3.7
	Total	2,895	3.1	2,169	2.5	2,686	3.1	3,338	4.2	2,332	2.9
Others(Free Zone etc.)	Export	16	0.1	22	0.1	21	0.1	3	0.0	38	0.2
	Import	2,310	3.2	162	0.2	99	0.2	36	0.1	2	0.0
	Total	2,326	2.5	184	0.2	120	0.1	38	0.0	41	0.1

Source: "Foreign Trade by Transport System, 1997" by State Institute of Statistics Prime Ministry Republic of Turkey(SIS)

International cargo volume by region is referred to in Table 5.2.3, Table 5.2.4 Figure 5.2.2 and Figure 5.2.3.

Table 5.2.3 Export Volume by Region in 1997-1993

(Unit: thousand tons)

Area	1993	1994	1995	1996	1997
Turkey Total	17,264	24,072	22,068	19,677	21,011
European countries total	7,454	9,147	10,445	10,051	10,518
African countries	1,183	2,642	2,084	1,889	1,704
American countries	943	2,151	1,558	1,440	2,173
Asian countries	7,629	10,098	7,924	6,229	6,542
Oceania countries	16	31	36	46	59
Others(Free Zone etc.)	38	3	21	22	16

Source: "Foreign Trade by Transport System, 1997" by State Institute of Statistics Prime Ministry Republic of Turkey(SIS)

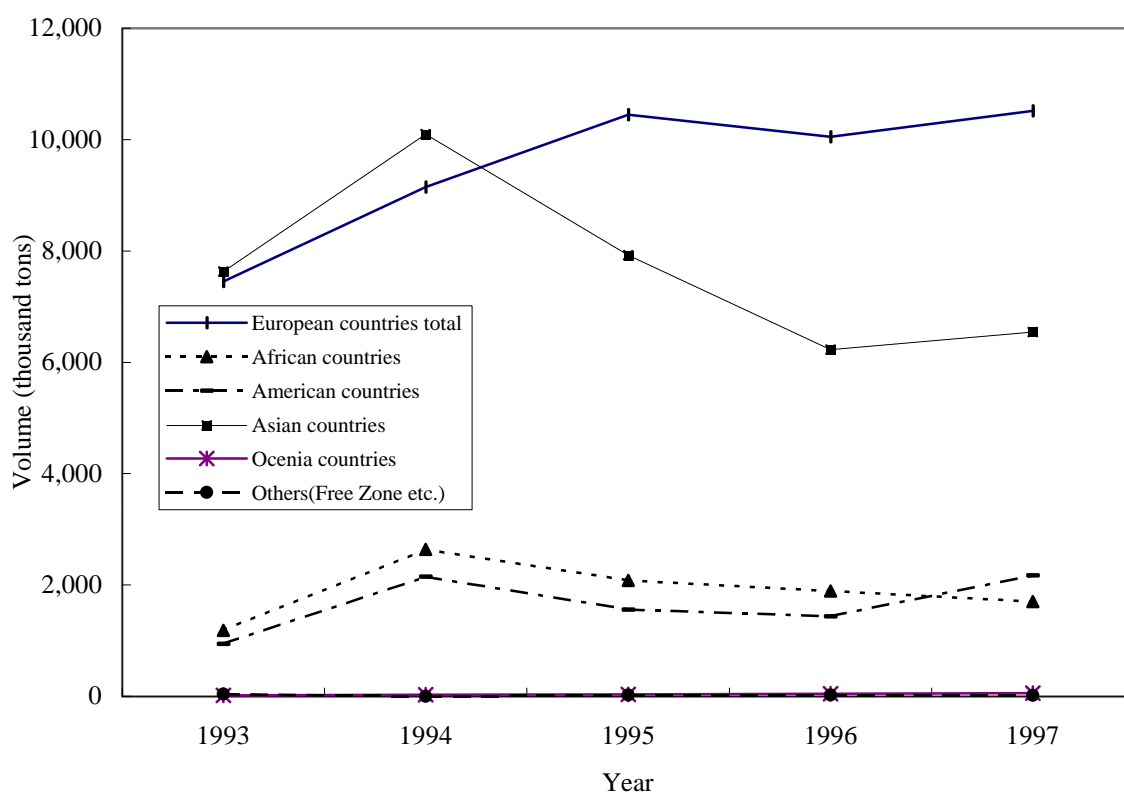


Figure 5.2.2 Trend of Export Volume by Region

Table 5.2.4 Import Volume by Region in 1997-1993

(Unit: thousand tons)

Area	1997	1996	1995	1994	1993
Turkey Total	72,646	67,879	63,882	54,628	62,781
European countries total	26,600	23,982	22,047	16,247	23,206
African countries	13,708	13,486	10,155	6,863	5,079
American countries	10,470	9,378	8,534	6,852	8,507
Asian countries	16,721	18,748	20,398	21,323	23,672
Oceania countries	2,836	2,123	2,650	3,307	2,315
Others(Free Zone etc.)	2,310	162	99	36	2

Source: "Foreign Trade by Transport System, 1997" by State Institute of Statistics Prime Ministry Republic of Turkey(SIS)

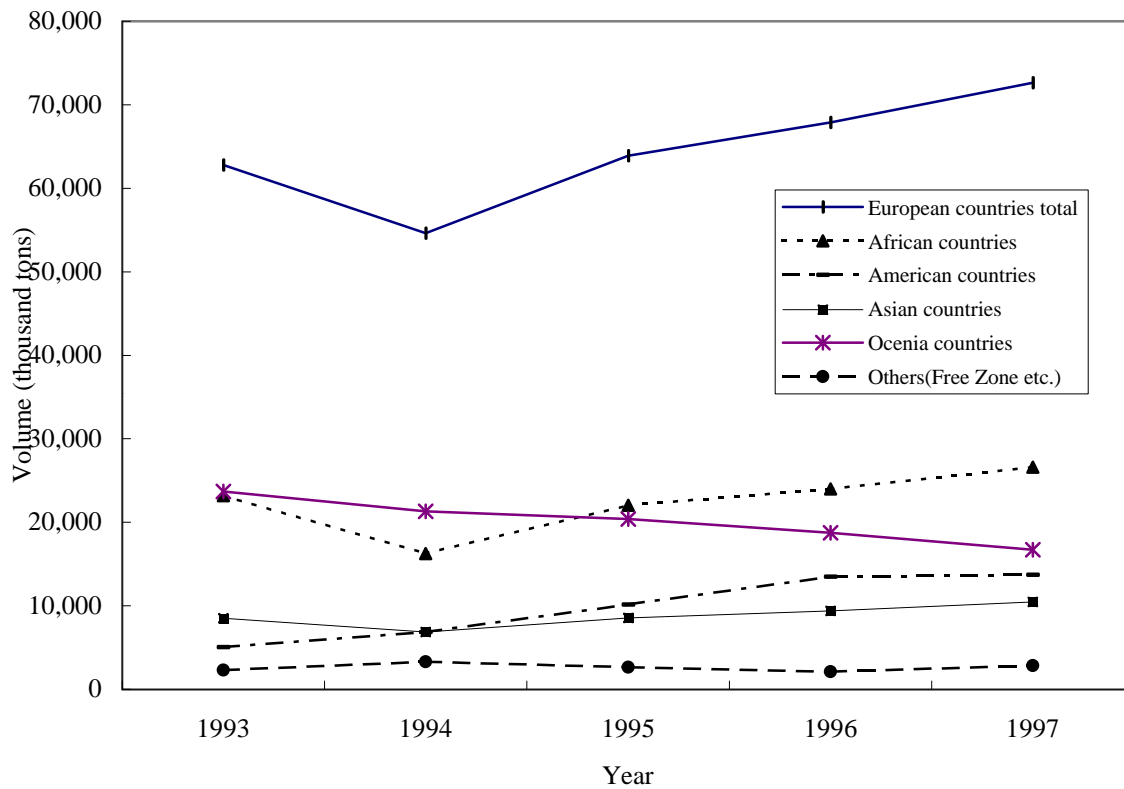


Figure 5.2.3 Trend of Import Volume by Region

5.2.3 International Cargo by Commodity

(1) Bulk Cargo

International cargo volume of export/import by major commodity group is shown in Table 5.2.5. The volume of industrial products was 33.1million tons in 1998 with a growth rate of -0.3% from the previous year, followed by, Crude oil (20.7million tons), Coal(11.1million tons, 13.6%), Ore(10.3million tons, 16.4%), Petroleum products(9.3million tons, 29.3%)and Grain (6.4million tons, 32.6%) and so on.

Table 5.2.5 International Cargo Volume by Commodity

Commodities	(Unit: thousand tons)					
	Export		Import		Total	
	1997	1998	1997	1998	1997	1998
Grain	876	3,181	3,935	3,195	4,810	6,376
Ores	3,550	3,862	5,267	6,402	8,817	10,263
Coal	13	29	9,774	11,093	9,787	11,122
Crude Oil *	16,307	313	21,545	20,357	37,852	20,670
Petroleum Prod.	2,148	4,181	5,073	5,159	7,221	9,340
LNG	27	47	3,784	5,452	3,811	5,499
Other Liquids	1,080	234	1,190	1,697	2,270	1,931
Industrial Prod.	12,109	11,789	21,068	21,290	33,177	33,080
Agricultural Prod.	166	196	756	1,084	922	1,280
Other Cargoes	716	928	2,118	2,420	2,835	3,347
Timber	17	13	853	1,154	870	1,168
TOTAL	37,010	24,773	75,364	79,303	112,373	104,076

Source: Undersecretariat of Maritime Affairs

Note: * BOTAS Transportations is included in 1997 Numbers.

Rate of international cargo volume of commodity group by transport system in 1997 is shown in Table 5.2.6. In exports, 90% of iron and steel was transported by maritime line, while 9.3% was transported by highway. In import, 94% of mineral fuel and related products was transported by maritime lines, 2.2% by highway, 0.2% by airline and 3.5% by railway and others.

**Table 5.2.6 Rate of Exports and Imports Quantity by Major Commodity Categories
and Transportation System in 1997**

Order No.	Commodities	Transport system			
		Maritime Lines	Highway	Airlines	Railway and others ⁽¹⁾
		(%)	(%)	(%)	(%)
Export					
Turkey Total		72.9	26.2	0.4	0.6
1 72	Iron and Steel	90.0	9.3	0.0	0.6
2 25	Salt, Sulfur, Earth's and Stone, Plastering materials, lime and Cement	82.5	16.5	0.1	0.8
3 27	Mineral fuels, Mineral oil and products of their distillation; Bituminous substance; Mineral waxes	95.4	4.4	0.0	0.2
4 7	Edible vegetables and certain roots and turbers	31.9	67.6	0.2	0.3
5 26	Ores, Slag and Ash	63.3	35.9	0.8	0.0
6 11	Products of the milling industry; Malt; Starches; Inulin; Wheat gluten	47.0	52.8	0.1	0.1
7 8	Edible fruit and nuts; Peel of citrus fruits or remon	50.2	49.6	0.2	0.0
8 73	Articles of iron or steel	74.9	24.7	0.2	0.1
9 28	Inorganic chemicals; Organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	84.5	14.9	0.0	0.6
10 69	Ceramic products	76.5	22.8	0.1	0.6
11 10	Cereals	97.7	2.1	0.0	0.3
12 20	Preparations of vegetables, fruits, nuts, or others parts of plants	79.9	19.9	0.1	0.1
13 70	Lac; Gums, Resins and other vegetables saps and extracts	49.3	50.2	0.2	0.3
14 15	Animal or vegetable fats and oils and their cleavage products; Prepared edible fats; animal or vesitable waxes	36.0	63.0	0.6	0.5
15 34	Soap and waxes; Candles; Dental waxes	49.6	50.0	0.1	0.2
16 19	Preparations of cereals, flour, starch or milk; pastrycooks' products	59.7	40.0	0.3	0.0
17 68	Articles of stone, plaster, cement, asbestos, mica or similar materials	68.2	31.2	0.4	0.2
18 17	Sugars and sugars confectionery	36.3	63.6	0.1	0.0
19 85	Electrical machinery and equipment and parts thereof, Sound recorders and reproducers	49.5	48.7	1.8	0.1
20 39	Plastics and articles thereof	53.2	45.0	1.0	0.7
Import					
Turkey Total		89.9	7.6	0.4	2.1
	Mineral fuels, Mineral oil and products of their distillation; Bituminous substance; Mineral waxes	94.1	2.2	0.2	3.5
1 72	Iron and Steel	92.6	7.2	0.0	0.1
3 10	Cereals	94.2	4.8	1.0	0.0
4 26	Ores, Slag and Ash	92.6	7.4	0.0	0.0
5 31	Fertilizers	93.7	4.7	0.7	0.9
6 25	Salt, Sulfur, Earths and Stone, Plastering materials, lime and Cement	86.5	11.7	1.7	0.1
7 28	Inorganic chemicals; Organic or inorganic compounds of precious metals, of rare-earth metals, of radioactive elements or of isotopes	82.8	15.5	0.4	1.2
8 29	Organic chemicals	86.9	10.0	1.4	1.8
9 39	Plastics and articles thereof	64.7	34.3	0.7	0.3
10 44	Wood and articles of wood, wood carcoal	84.3	15.1	0.2	0.3
11 15	Animal or vegetable fats and oils and their cleavage products; Prepared edible fats; animal or vesitable waxes	96.3	3.6	0.0	0.1
12 12	Oil seeds and oleaginous frounts; miscellaneous grains, seeds and fruit; industrial or medical plants; straw and fodder	85.4	8.4	2.7	3.6
13 48	Paper and paperboard	78.7	19.9	0.7	0.7
14 84	Articles of plastic, of metal, of base metal, of other materials, of machinery and mechanical appliances and parts thereof	37.9	58.7	2.4	1.0
15 87	Vehicles others than railway or tramway rolling-stock, and parts and accessories thereof	60.3	32.9	1.4	5.4
16 23	Residues and water from food industries; prepared animal fodder	90.9	7.9	0.9	0.4
17 52	Cotton, cotton yarn and cotton fabrics	57.3	42.1	0.3	0.3
18 73	Articles of iron or steel	75.1	22.7	1.8	0.4
19 47	Pulp of wood or of other fibrous cellulosic material, waste and scrap of paper or paperboard	85.3	14.6	0.1	0.0
20 38	Miscellaneous chemical products	62.5	34.8	1.0	1.7
21	Others	62.3	35.0	1.6	1.1

Source: Foreign Trade by Transport System 1997, SIS

(2) Container

Table 5.2.7 shows the number of containers handled in TCDD ports between 1994 and 1998. Total container volume reached 972,000 TEUs in 1998. In addition, a container volume of 376,000 TEUs was handled in private ports in 1998. Annual average growth rate was 13.4% between 1994 and 1998.

Table 5.2.7 Container Volume handled at TCDD Ports in 1994-1998

(Unit:Box/TEUs)											
Port	Year	LOADING				UNLOADING				TOTAL	
		20'		40'		20'		40'		Box	TEU
		Full	Empty	Full	Empty	Full	Empty	Full	Empty		
Haydarpa° a	1994	25,162	16,272	17,882	5,393	37,372	5,659	18,821	5,087	132,648	179,831
	1995	30,557	26,169	19,651	11,814	56,485	7,376	34,439	2,087	188,578	256,569
	1996	28,872	42,338	19,840	27,046	65,252	5,668	44,678	1,951	235,645	329,160
	1997	29,812	30,972	22,968	24,650	63,390	6,097	48,336	3,986	230,211	330,151
	1998	29,242	29,176	25,772	23,190	59,753	2,995	49,321	2,432	221,881	322,596
Mersin	1994	23,916	4,315	16,583	2,478	12,068	15,779	8,576	10,051	93,766	131,454
	1995	28,429	4,236	16,784	3,157	15,902	17,006	13,181	7,930	106,595	147,617
	1996	32,894	4,953	22,120	5,773	17,642	17,452	18,867	7,533	127,234	181,527
	1997	33,877	13,633	30,377	14,511	31,739	14,936	34,261	7,979	181,313	268,441
	1998	30,224	10,305	24,770	15,370	27,926	12,450	34,800	5,540	161,385	241,865
Iskenderun	1994	14	5	0	5	13	13	10	0	60	75
	1995	590	18	0	0	58	13	15	0	694	709
	1996	0	0	0	20	1	0	41	0	62	123
	1997	22	3	0	7	14	0	70	0	116	193
	1998	212	0	0	0	224	8	0	0	444	444
Samsun	1994	0	10	0	603	10	0	449	0	1,072	2,124
	1995	0	10	37	453	69	0	470	0	1,039	1,999
	1996	1	57	270	528	5	0	544	84	1,489	2,915
	1997	0	5	142	921	6	0	1,046	0	2,120	4,229
	1998	0	7	36	642	10	0	938	0	1,633	3,249
Izmir	1994	57,576	20,535	32,510	4,903	17,740	32,567	13,603	19,229	198,663	268,908
	1995	60,039	24,074	34,185	10,107	26,929	29,786	19,883	16,490	221,493	302,158
	1996	67,314	21,586	38,539	13,629	32,157	33,247	28,847	14,795	250,114	345,924
	1997	75,129	13,915	47,279	15,843	33,010	38,480	33,421	17,276	274,353	388,172
	1998	76,699	13,963	53,350	11,225	31,079	41,642	35,590	17,453	281,001	398,619
Derince	1994	480	731	61	18	647	626	162	160	2,885	3,286
	1995	983	167	449	121	572	1,193	301	207	3,993	5,071
	1996	5,326	217	717	114	1,593	3,485	355	493	12,300	13,979
	1997	4,049	479	127	76	914	3,457	416	36	9,554	10,209
	1998	1,666	333	112	72	779	1,411	263	2	4,638	5,087
Bandirma	1994	582	947	0	0	349	785	0	0	2,663	2,663
	1995	0	585	0	0	162	369	0	0	1,116	1,116
	1996	47	171	0	0	260	15	0	0	493	493
	1997	0	171	0	0	114	0	0	0	291	297
	1998	0	219	0	0	228	0	0	0	447	447
Total	1994	107,730	42,815	67,036	13,400	68,199	56,429	41,621	34,527	431,757	588,341
	1995	120,598	55,259	71,106	25,652	100,177	55,743	68,259	26,714	523,508	715,239
	1996	134,454	69,322	81,486	47,110	116,910	59,867	93,332	24,856	627,337	874,121
	1997	142,889	59,178	100,893	56,008	129,187	62,970	117,556	29,277	697,958	1,001,692
	1998	138,043	54,003	104,040	50,499	119,999	58,506	120,912	25,427	671,429	972,307

Source: TCDD

5.2.4 Ro-Ro Lines

Table 5.2.8 and Table 5.2.9 show existing Ro-Ro lines in Turkey. Haydarpasa-Trieste Line is the most prosperous line, followed by Samsun-Novorossissk, Cesme-Bar/Br/Anc. Line.

Table 5.2.8 Existing Ro-Ro-Lines in Turkey

RO - RO Lines	Average Tir Capacities	Frequency	Price (\$) (Return)	Duration (Hour)
Haydarpasa-Trieste	130	Everyday	1,750	72
Tekirdag-Trieste		Wednesday-Saturday		
Çesme-Trieste	120	2 Days A Week	1,650	60
Çesme-Bari	35	4 Days A Week	1,400	45
Çesme-Brindisi	70	7 Days A Week	1,400	40
Derince-Costenza	60		875	22
Derince-Ilichevsk	42	(2 Days A Week)	1,150	30
Zonguldak-Skadovsk	33	4 Days A Week	900	22
Zonguldak-Yevpatoria	42	(2 Days A Week)	900	14
Zonguldak-Novorossissk	65	4 Days A Week	1,200	26
Samsun-Novorossissk	60	7 Days A Week	1,400	14
Samsun-Ilichevsk	35		1,300	25
Trabzon-Sochi	15	6 Days A Week	2,500	13
Mersin-Magusa	20	6 Days A Week	1,030	8
Patras-Bari	100	7 Days A Week	980	12
Patras-Ancona	100	7 Days A Week	1,630	18
Varna-Ilichevsk	108	1 Voyage Per 4 Days	850	20
Burgaz-Novorossissk	40	4 Days A Week	1,550	36
Burgaz-Poti	40	2 Days A Week	2,550	48
Vidin-Passau	49	2 Days A Week	-	6
Baku-Türkmenbasi	25	7 Days A Week	1,080	20
Calais-Dover	60	7 Days A Week	610	90

Source: Chamber of Shipping in Istanbul

Table 5.2.9 Ro-Ro Transport in 1998

Lines	(Unit:number)		
	Number of Trancported Vehicle		
	Turkish	Foreign	Total
Haydarpasa-Trieste	38,561	1,741	40,302
Çesme-Trieste	5,256	44	5,300
Çesme-Bar/Br/Anc.	769	249	1,018
Samsun-Novorosiisk	15,540	853	16,393
Samsun-Ilichevsk	72	765	837
Zonguldak-Ukraine	1,979	269	2,248
Zonguldak-Novorossissk	527	88	615
Trabzon-Sochi	2,776	5	2,781
Derince-Ilichevsk	763	429	1,192
Derince-Costenza	1,073	2	1,075
Total	67,316	4,445	71,761

Note: Except these, Zonguldak-Yevpotariya and Tekirdag-Trieste lines

5.3 Domestic Shipping

5.3.1 Domestic Cargo Volume (Cabotage)

According to Maritime Cabotage Law with the Lausanne Treaty in 1923, maritime transport is carried out Turkish ships in her own territorial waters and shores. The maritime cabotage is defined as the cargo loaded from the harbor and seaport of Turkey and unloaded at the harbor and seaport of Turkey. Cabotage cargo volume is 17.2million tons by loading and 21.5million tons by unloading in 1998.(Sea table 5.3.1)

Table 5.3.1 Cabotage Cargo Volume (1989-1998)

(Unit: thousand tons)

Years		Crude Oil &Products	Iron Ore	Coal	Grain	Other Cargo	Total Trade
1989	Load	19,345	1,795	1,585	616	2,676	26,017
	Unload	18,737	1,606	1,467	559	8,432	30,802
1990	Load	14,578	1,405	1,378	796	2,316	20,472
	Unload	14,772	1,310	1,330	959	8,270	26,641
1991	Load	9,599	922	1,100	218	2,239	14,078
	Unload	9,303	905	1,100	177	6,845	18,331
1992	Load	9,740	715	1,224	350	3,075	15,105
	Unload	9,648	805	1,255	265	7,164	19,137
1993	Load	10,891	982	1,100	136	2,865	15,974
	Unload	10,123	689	1,140	198	8,170	20,321
1994	Load	10,392	652	925	53	3,336	15,358
	Unload	10,354	640	929	70	6,644	18,636
1995	Load	10,740	763	611	51	3,263	15,427
	Unload	10,723	787	637	90	6,781	19,018
1996	Load	10,764	841	518	47	3,635	15,806
	Unload	10,881	1,536	628	166	7,146	20,356
1997	Load	13,185	919	434	273	3,816	18,627
	Unload	13,061	957	440	407	8,223	23,088
1998	Load	12,343	900	300	275	3,367	17,186
	Unload	12,265	845	305	267	7,846	21,529

Source: Undersecretary of Maritime Affairs

Note: Difference between loading and unloading cargo volume is due to the method of statistic keeping.

5.3.2 Domestic Passenger and Vehicle Transport

(1) City Passenger and Vehicle Transport

City Line Operations of Turkish Maritime Affairs (TDI) has realized the transportation of 210,000 passengers and 2,165 vehicles by making an average of 1,080 journeys a day among the 47 piers in Istanbul, between 2 piers in Izmit Bay Line and among the 6 piers on Çanakkale Line with its fleet that is composed of 23 car ferries and 52 passenger ships. Eight out of 55 piers in total which belong to TDI City Line Operations are car ferry piers and 47 are passenger ferry piers. Through these piers, a total of 84,073,000 passengers and 5,101,978 vehicles were transported with 386,236 journeys in total in 1997.

As regards the car ferry line between Eskihisar-Topçular 3.4 million vehicles were transported with a total of 69,819 journeys by the end of December 1997.

Transport service by TDI is carried out by Istanbul City Line Operations. Maritime transport services in Istanbul are provided by the Sea Buses which belong to Istanbul Metropolitan Municipality and by the public motor boats which are registered to Istanbul Chamber of Small Sea Transport Vehicles For Passenger Transport in addition to the services which are provided by Turkish Maritime Affairs City Line Operations.

Passenger volume transported by sea buses was 7.4 million on a total of 23 lines (some of these lines are two way lines) in 1997 representing an increase of 10.1% over to the previous year.

TDI provides the city line sea transport services in Izmir Bay through Izmir Operations Directorate, and the passenger and vehicle transport services are provided by a fleet which is composed of 11 ships in total of which 9 are passenger ships and 2 of are car ferries shuttling among Karşıyaka, Pasaport, Alsancak, Konak, Üçkuyular, Bostanlı, Güzelbahçe, and Urla piers.

Izmir Operation Directorate transported 172,000 vehicles and 5,236,000 passengers with a total of 22,483 journeys in 1997.

In Izmir which is one of the three metropolitan cities in Turkey, a strategic application has been adopted before the increasingly congested traffic translates itself a chaos. In order to provide the vehicles which are coming from Çanakkale and heading for South Aegean and Mediterranean coastal areas with a passage without getting caught in the city traffic, passenger and car ferry piers have been constructed in Bostanlı and Üçkuyu at the entrance of the bay and the journeys have been launched.

(2) Intercity and International Passenger and Vehicle Transport

Intercity passenger and vehicle transportation services are carried out by 4 passenger ferries and 8 car ferries which all belong to TDI Maritime Operations. In 1997, 357,114 passengers and 26,102 vehicles were transported with a total of 637 journeys on the

Istanbulu-Trabzon, Istanbulu-Imrali, Istanbulu-Avsa, Istanbulu-Bandirma, Çanakkale-Gokceada and Istanbulu-Izmir intercity lines.

As for the international lines, 31,721 motor vehicles and 168,042 passengers were transported with a total of 418 journeys on the Izmir-Venice, Çesme-Birindisi, and Mersin-Magosa lines.

5.3.3 Current Situation of Turkish Maritime Transport Sector

Turkish Maritime Trade Fleet who has been struggling for development on this vague market went up to the rank of 17 by reaching a total capacity of 10.7 million DWT on January 1, 1997 from its previous position where it ranked 23rd with a capacity of 6.8 million DWT on January 1, 1993.

As of March 1, 1998, Turkish Maritime Trade Fleet is composed of total 1,200 vessels of which 482 were imported and 718 were constructed locally. When the bare-boat vessels are included which have a total capacity of 10 418 546 DWT, a total figure of nearly 12 million DWT is reached. The breakdown of Turkish Maritime Trade Fleet by number and tonnage of the vessels which have a capacity over 150 GT is shown in Table 5.3.2.

Table 5.3.2 Turkish Maritime Trade Fleet

Type of Vessel	Number	DWT
Dry Bulk	470	1,422,242
Break Bulk	181	6,853,788
OBO Vessel	6	659,077
Oil Tanker	99	945,327
Chemical Substance Tanker	40	140,623
Ro – Ro	26	161,048
Container	12	105,080
Other (*)	366	131,361
TOTAL	1,200	10,418,546

Remark: (*) LPG Tanker, Asphalt Tanker, Water Tanker, Ferry, Train Ferry, Refrigerated vessel, Fishery Vessel, Passenger/Passenger Cargo Vessel, Scientific Research Vessel, City Line Passenger Car Ferry, Tug Boat, and Service Vessels.

In Turkey's existing fleet, break bulk vessels rank first with a rate of 65.8% among the various vessel types in terms of DWT, and the dry bulk vessels rank second with a rate of 13.6% and they are followed by oil tankers with a rate of 9.1% and by OBO vessels with a rate of 7.7%. Almost 94% of the fleet is composed of private sector vessels while about 6% is comprised public sector vessels.

Chapter 6 Traffic of Cargo and Passenger in Ports

6.1 Nationwide Cargo Traffic in Ports

6.1.1 General

Concerning the maritime transportation activities in ports, comprehensive and detailed information has been provided by the Undersecretariat of Maritime Affairs. The Study Team has also conducted supplemental survey through the questionnaire to port related organizations as to container traffic on our own terms.

Based on these data, the Study Team has analyzed the present condition on nationwide cargo and passenger traffic in ports as follows.

6.1.2 Nationwide Cargo Traffic in Ports

The historical trend of the nationwide cargo traffic in ports for the past ten years is shown in Table 6.1.1. In 1998, the cargo traffic reached 155 million tons, however it has decreased 7.7% compared with the previous year because of the inactivity of exports.

Import cargo, which has become 79 million tons, has been increasing continuously except for 1994. Export cargo has been increasing irregularly, however the growth of that is relatively small compared with Import's.

In 1998, the share in total of export cargo, of which average annual growth for the past ten years (1989-1998) is 5%, was 15.9%. The share of export cargo has also been increasing irregularly. On the other hand, the share in total of import cargo, of which average annual growth for the past ten years (1989-1998) is 10%, has become 50.9%. The share of import has been increasing continuously except for 1992, 1994 and 1997.

The nationwide container traffic, which has continuously and remarkably increased, has reached 1,347 thousand TEUs, in opposition to the trend of other types of cargo in 1998.

Domestic cargo, of which growth rate had once decreased in 1990, 1991 and 1994, has been increasing slightly in recent years and has become 39 million tons. However, the share in total of domestic cargo, which has been decreasing because of the motorization of domestic cargo traffic, has fallen to 24.8%.

Transit cargo has had a huge influence on the nationwide cargo traffic. In 1991, due to the embargo on Iraq crude oil, nationwide cargo traffic decreased greatly. In 1989, transit crude oil traffic was approx. 71 million tons, which had produced 42% share in total. However, it decreased to 13 million in 1998, of which share in total has fallen to 8.4%.

Table 6.1.1 Nationwide Cargo Traffic in Ports (1989-1998)

	Unit: (tons)										Share(1998)
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	
LOADING											
DOMESTIC	25,991,833	20,472,464	14,077,838	15,105,030	15,373,878	15,357,566	15,427,317	15,806,160	18,627,490	17,185,749	11.0%
EXPORT	15,367,500	15,238,654	20,343,438	21,915,110	18,102,360	22,112,827	20,174,562	18,846,238	37,009,695	24,773,274	15.9%
TRANSIT	76,817,006	41,714,042	1,510	156,664	99,938	43,153	133,425	135,341	11,071,924	13,036,175	8.4%
SUBTOTAL	118,176,339	77,425,165	34,422,786	37,176,804	33,576,176	37,513,546	35,735,304	34,787,739	66,709,109	54,995,198	35.3%
UNLOADING											
DOMESTIC	30,834,522	26,641,339	18,330,929	19,136,796	20,869,786	18,646,496	19,108,136	20,355,997	23,088,422	21,529,461	13.8%
IMPORT	33,669,862	43,878,433	49,891,699	50,245,252	64,875,177	52,630,788	64,006,554	72,834,074	75,363,736	79,302,959	50.9%
TRANSIT	999,117	1,236,159	972,338	873,457	370,944	143,801	181,168	763,489	3,627,510	7,257	0.0%
SUBTOTAL	65,503,501	71,755,931	69,194,966	70,255,505	86,115,907	71,421,085	83,295,858	93,953,560	102,079,668	100,839,677	64.7%
TOTAL											
DOMESTIC	56,826,355	47,113,803	32,408,767	34,241,826	36,243,664	34,004,062	34,535,453	36,162,157	41,715,912	38,715,210	24.8%
INTL	49,037,362	59,117,087	70,235,137	72,160,362	82,977,537	74,743,615	84,181,116	91,680,312	112,373,431	104,076,233	66.8%
TRANSIT	77,816,123	42,950,201	973,848	1,030,121	470,882	186,954	314,593	898,830	14,699,434	13,043,432	8.4%
GRAND TOTAL	183,679,840	149,181,096	103,617,752	107,432,309	119,692,083	108,934,631	119,031,162	128,741,299	168,788,777	155,834,875	100.0%
Container(*1) TEUs	160,794	352,598	396,833	458,110	583,827	620,467	764,797	972,036	1,232,626	1,347,795	

Source: Undersecretariat of Maritime Affairs

Note: *1: Investigated by the Study Team based on the Questionnaire

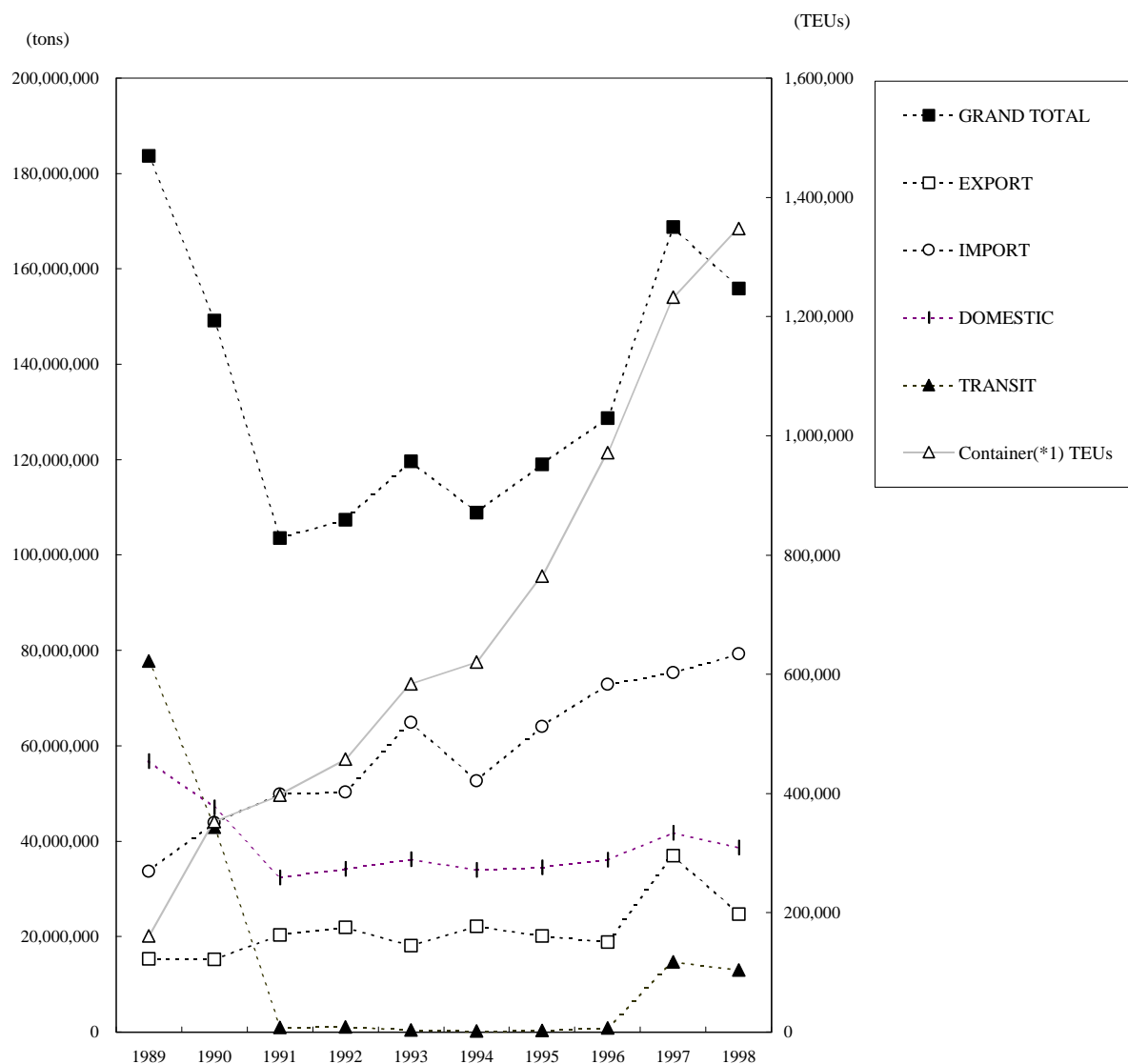


Figure 6.1.1 Nationwide Cargo Traffic in Ports (1989-1998)

Table 6.1.2 Nationwide Cargo Traffic in Ports (1998)

Unit: (tons)

LOAD TYPE		YEAR	LOADING				UNLOADING				TOTAL			
			DOMESTIC	EXPORT	TRANSIT	TOTAL	DOMESTIC	IMPORT	TRANSIT	TOTAL	DOMESTIC	INT'L	TRANSIT	GRAND
DRY BULK														
GRAIN	(TONS)	1998	275,371	3,181,212	-	3,456,583	267,412	3,194,977	-	3,462,389	542,783	6,376,189	-	6,918,972
	Share %		1.6	12.8	-	6.3	1.2	4.0	-	3.4	1.4	6.1	-	4.4
ORE	Average Annual Growth %	(1989-1998)	8.6	17.1	-	10.7	7.9	0.8	-	0.5	8.2	6.1	-	3.7
	(TONS)	1998	900,376	3,861,659	-	4,762,035	844,852	6,401,532	-	7,246,384	1,745,228	10,263,191	0	12,008,419
Share %			5.2	15.6	-	8.7	3.9	8.1	-	7.2	4.5	9.9	0.0	7.7
	Average Annual Growth %	(1989-1998)	7.4	3.4	-	0.3	6.9	10.5	-	6.2	7.1	7.3	-	3.4
COAL	(TONS)	1998	299,837	28,794	-	328,631	305,442	11,093,025	-	11,398,467	605,279	11,121,819	0	11,727,098
	Share %		1.7	0.1	-	0.6	1.4	14.0	-	11.3	1.6	10.7	0.0	7.5
Average Annual Growth %		(1989-1998)	0.2	16.0	-	16.0	16.0	11.8	-	8.4	16.3	11.7	-	5.7
	TOTAL	1998	1,475,584	7,071,665	-	8,547,249	1,417,706	20,689,534	0	22,107,240	2,893,290	27,761,199	0	30,654,489
Share %			8.6	28.5	-	15.5	6.6	26.1	0.0	21.9	7.5	26.7	0.0	19.7
	Average Annual Growth %	(1989-1998)	10.4	7.7	-	1.3	9.9	8.9	-	5.8	10.2	8.5	-	4.3
LIQUID BULK														
CRUDE OIL	(TONS)	1998	2,810,395	313,219	12,897,000	16,020,614	2,862,553	20,357,017	-	23,219,570	5,672,948	20,670,236	12,897,000	39,240,184
	Share %		16.4	1.3	98.9	29.1	13.3	25.7	-	23.0	14.7	19.9	98.9	25.2
Average Annual Growth %		(1989-1998)	15.0	20.2	-	16.7	14.1	13.8	-	3.1	14.5	13.8	-	10.0
	OIL PRODUCTS	1998	9,149,353	4,181,472	-	13,330,825	8,991,511	5,158,538	3,676	14,153,725	18,140,864	9,340,010	3,676	27,484,550
Share %			53.2	16.9	-	24.2	41.8	6.5	50.7	14.0	46.9	9.0	0.0	17.6
	Average Annual Growth %	(1989-1998)	3.1	4.2	-	1.5	2.7	11.7	-	5.2	2.9	7.7	-	1.4
LNG	(TONS)	1998	334,120	46,506	-	380,626	348,067	5,452,461	-	5,800,528	682,187	5,498,967	0	6,181,154
	Share %		1.9	0.2	-	0.7	1.6	6.9	-	5.8	1.8	5.3	0.0	4.0
Average Annual Growth %		(1989-1998)	2.6	35.6	-	2.2	4.2	25.4	-	22.2	3.4	25.4	-	19.3
	OTHER LIQUIDS	1998	49,179	234,073	137,000	420,252	63,256	1,696,520	-	1,759,776	112,435	1,930,593	137,000	2,180,028
Share %			0.3	0.9	1.1	0.8	0.3	2.1	-	1.7	0.3	1.9	1.1	1.4
	Average Annual Growth %	(1989-1998)	2.4	0.2	-	3.9	13.4	1.2	-	2.2	10.1	1.0	-	1.3
TOTAL		1998	12,343,047	4,775,270	13,034,000	30,152,317	12,265,387	32,664,536	3,676	44,933,599	24,608,434	37,439,806	13,037,676	75,085,916
	Share %		71.8	19.3	100.0	54.8	57.0	41.2	50.7	44.6	63.6	36.0	100.0	48.2
Average Annual Growth %		(1989-1998)	4.9	4.6	-	12.4	4.6	13.0	-	4.7	4.7	11.5	-	5.8
	GRNERAL CARGO													
INDUST. PROD.	(TONS)	1998	2,758,463	11,789,377	1,425	14,549,265	2,267,181	21,290,381	3,581	23,561,143	5,025,644	33,079,758	5,006	38,110,408
	Share %		16.1	47.6	0.0	26.5	10.5	26.8	49.3	23.4	13.0	31.8	0.0	24.5
Average Annual Growth %		(1989-1998)	5.0	8.9	-	7.9	0.6	9.7	-	7.8	2.1	9.4	-	7.8
	AGRI. PROD.	1998	-	196,132	750	196,882	1,845	1,084,024	-	1,085,869	1,845	1,280,156	750	1,282,751
Share %			#VALUE!	0.8	0.0	0.4	0.0	1.4	-	1.1	0.0	1.2	0.0	0.8
	Average Annual Growth %	(1989-1998)	-	18.4	-	-18.9	23.5	8.0	-	7.1	33.3	3.5	-	4.1
OTHER	(TONS)	1998	604,840	927,507	-	1,532,347	5,545,727	2,419,986	-	7,965,713	6,150,567	3,347,493	-	9,498,060
	Share %		3.5	3.7	-	2.8	25.8	3.1	-	7.9	15.9	3.2	-	6.1
Average Annual Growth %		(1989-1998)	3.7	7.2	-	6.3	0.9	2.3	-	1.8	1.2	3.9	-	2.7
	TOTAL	1998	3,363,303	12,913,016	2,175	16,278,494	7,814,753	24,794,391	3,581	32,612,725	11,178,056	37,707,407	5,756	48,891,219
Share %			19.6	52.1	0.0	29.6	36.3	31.3	49.3	32.3	28.9	36.2	0.0	31.4
	Average Annual Growth %	(1989-1998)	2.6	4.7	-	4.1	0.8	7.6	-	4.5	0.1	6.5	-	4.3
TIMBERM3=0.7	(TONS)	1998	3,815	13,323	-	17,138	31,615	1,154,498	-	1,186,113	35,430	1,167,821	-	1,203,251
	Share %		0.0	0.1	-	0.0	0.1	1.5	-	1.2	0.1	1.1	-	0.8
Average Annual Growth %		(1989-1998)	10.6	9.7	-	10.7	0.3	14.4	-	11.8	2.1	13.4	-	10.7
	GRAND TOTAL (*1)	1998	17,185,749	24,773,274	13,036,175	54,995,198	21,529,461	79,302,959	7,257	100,839,677	38,715,210	104,076,233	13,043,432	155,834,875
Share %			100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Average Annual Growth %	(1989-1998)	4.5	5.4	-	8.1	3.9	10.0	-	4.9	4.2	8.7	-	1.8

Note: *1: Except for container

Source: Undersecretariat of Maritime Affairs

6.2 International Cargo Traffic in Ports

6.2.1 Export Traffic

(1) Nationwide Aspects

The trend of nationwide export cargo traffic is shown in Table 6.2.1. The traffic of export cargo has been smaller than that of import cargo, while the export cargo has increased irregularly and slightly for the past ten years (1989-1998), the import cargo has rapidly increased in the past ten years.

In 1998, the export cargo traffic reached 24.8 million tons, however this presents 33.1% decrease compared with the previous year. As to the major commodity of export, industrial products accounts for 11.8 million tons (47.6% of total export traffic), oil products accounts for 4.2 million tons (16.9%), ore accounts for 3.9 million tons (15.6%), and grain accounts for 3.2 million tons (12.8%). These four major commodities accounts for 92.9% of total export traffic. Among those major four commodities, industrial products and ore have showed a progress relatively.

(2) Regional Aspects

The regional share of exports by commodity is shown in Table 6.2.2. The share in total export traffic of Marmara region, Aegean region, Mediterranean region and Black Sea region; 21.9%, 35.3%, 37.7% and 5.1% respectively.

1) Marmara Region

Among above-mentioned major four commodities, Marmara region accounts for 24.7% in industrial products, 6.0% in oil products, 33.3% in ore and 14.0% in grain. As to the other commodities, Marmara region shows relatively high shares in other general cargo and crude oil.

2) Aegean Region

Aegean region accounts for 36.2% in industrial products, 49.0% in oil products, 40.3% in ore, 2.2% in grain. Among the other commodities, Aegean region shows relatively high shares in liquid gas and crude oil.

3) Mediterranean Region

Mediterranean region accounts for 30.7% in industrial products, 45.0% in oil products, 20.0% in ore, 82.6% in grain. Among the other commodities, Mediterranean region shows relatively high shares in timber, agricultural products other liquid and liquid gas.

4) Black Sea Region

Black Sea region accounts for 8.4% in industrial products, 0.1% in oil products, 6.4% in ore, 1.1% in grain. Among the other commodities, Black Sea region shows relatively a high share in coal.

Table 6.2.1 Nationwide Cargo Traffic in Ports 1989-1998 (Export)

Unit: (tons)

YEAR	GRAIN	ORE	COAL	CRUDE OIL	OIL PROD.	LNG	OTHER LIQ.	IND. PROD.	AGRI. PROD.	OTHER G.C.	TIMBER	TOTAL(*1)
1989	765,830	2,846,283	29,210	60,000	2,888,941	3,000	229,163	5,459,741	1,227,276	1,824,814	33,242	15,367,500
1990	503,249	2,464,812	28,674	53,000	2,287,665	14,110	164,435	8,221,772	768,860	707,045	25,032	15,238,654
1991	3,892,399	2,340,438	4,000	0	3,296,385	6,325	170,938	9,163,916	564,021	870,641	34,375	20,343,438
1992	5,084,606	2,674,797	32,537	140,000	2,606,805	46,550	188,315	10,162,066	315,047	656,920	7,467	21,915,110
1993	1,425,718	2,200,304	66,847	13,195	3,071,249	116,679	186,123	10,032,268	353,287	622,821	13,869	18,102,360
1994	2,044,451	2,761,498	46,647	150,957	2,733,178	91,769	196,660	13,031,796	334,094	651,726	70,051	22,112,827
1995	1,081,142	3,664,702	14,012	0	2,440,128	68,380	211,071	11,540,428	282,573	812,062	60,064	20,174,562
1996	422,942	3,507,895	63,500	752,000	2,562,250	24,124	160,433	10,239,037	303,046	783,156	27,855	18,846,238
1997	875,680	3,550,229	13,164	16,307,108	2,147,818	27,154	1,080,287	12,108,863	166,353	716,330	16,709	37,009,695
1998	3,181,212	3,861,659	28,794	313,219	4,181,472	46,506	234,073	11,789,377	196,132	927,507	13,323	24,773,274
Share(1998)	12.8%	15.6%	0.1%	1.3%	16.9%	0.2%	0.9%	47.6%	0.8%	3.7%	0.1%	100.0%

Note.*1: Except for Container

Source:Undersecretariat of Maritime Affairs

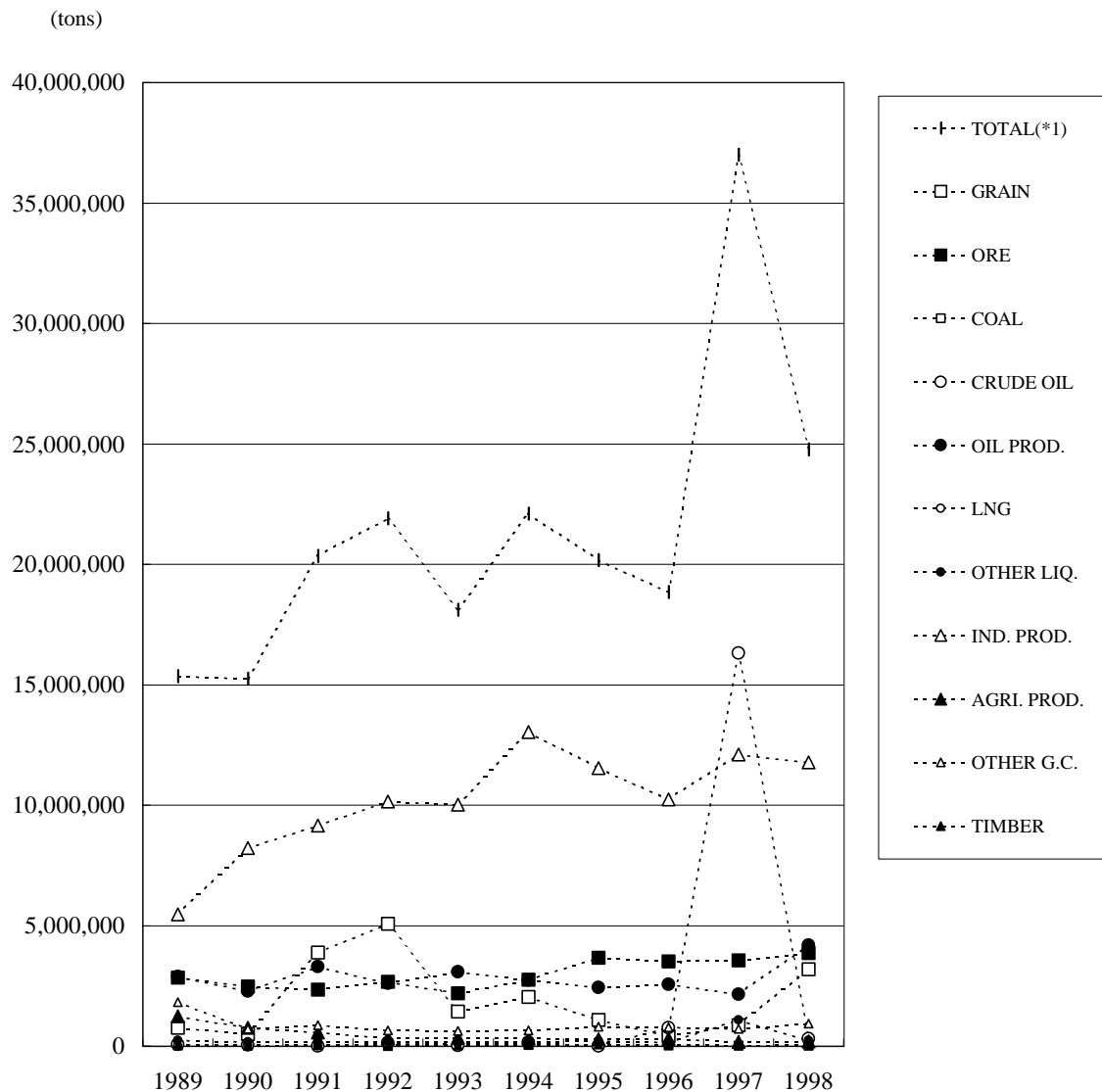


Figure 6.2.1 Nationwide Cargo Traffic in Ports 1989-1998 (Export)

Table 6.2.2 Regional Share of Exports by Commodity (1998)

Unit: %

	MARMARA	AEGEAN	MEDCOAST	BLACKSEA
GRAIN	14.0	2.2	82.6	1.1
MINE ORE	33.3	40.3	20.0	6.4
COAL	28.8	19.1	5.2	46.8
CRUDE OIL	51.8	48.2	0.0	0.0
PETROLIUM PRODUCTS	6.0	49.0	45.0	0.1
LIQUID GAS	7.8	46.1	46.1	0.0
OTHER LIQUID	30.8	16.2	52.7	0.3
INDUSTRIAL PRODUCTS	24.7	36.2	30.7	8.4
AGRICULTURAL PRODUCTS	7.1	20.1	59.0	13.8
OTHER GENERAL CARGO	53.3	12.2	33.3	1.2
TIMBER	3.7	0.0	81.3	15.0
TOTAL	21.9	35.3	37.7	5.1

Source: Undersecretariat of Maritime Affairs

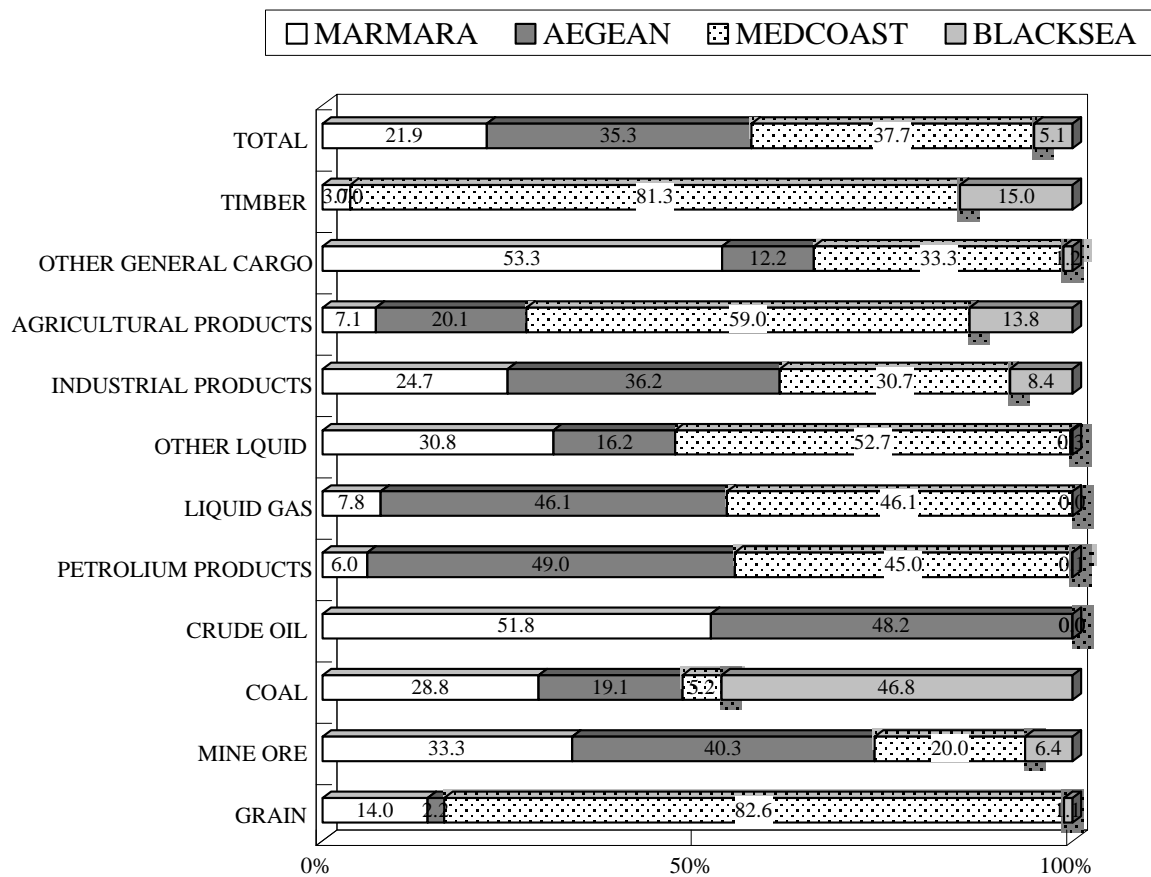


Figure 6.2.2 Regional Share of Exports by Commodity (1998)

6.2.2 Import Traffic

(1) Nationwide Aspects

The trend of nationwide import cargo traffic is shown in Table 6.2.3. In 1998, the import cargo traffic, which is equal to more than three times as import traffic, reached 79.3 million tons, a 5.2% increase over the previous year.

As to the major commodity of import, industrial products account for 21.3 million tons (26.8% of total import traffic), crude oil accounts for 20.4 million tons (25.7%), coal accounts for 11.1 million tons (14.0%). Ore, LNG and oil products accounts for 6.4 million tons (8.1%), 5.4million tons (6.9%), 5.2 million tons (6.5%) respectively. These six major commodities account for 88.0% of the total import traffic. Among those major six commodities, industrial products, coal, ore and LNG have showed a progress relatively.

(2) Regional Aspects

Regional share of imports by commodity is shown in Table 6.2.4. The share in total import traffic of Marmara region, Aegean region, Mediterranean region and Black Sea region; 39.6%, 27.0%, 21.0% and 12.4% respectively.

1) Marmara Region

Among above-mentioned major six commodities, Marmara region accounts for 44.5% in industrial products, 35.7% in crude oil, 27.2% in coal, 16.2% in ore, 70.4% in LNG and 38.0% in oil products. As to the other commodities, Marmara region shows relatively high shares in timber, other general cargo and agricultural products.

2) Aegean Region

Aegean region accounts for 26.0% in industrial products, 49.0% in crude oil, 11.3% in coal, 4.5% in ore, 17.2% in LNG, 31.5% in oil products. Among the other commodities, Aegean region shows relatively a high share in other general cargo.

3) Mediterranean Region

Mediterranean region accounts for 19.8% in industrial products, 15.4% in crude oil, 37.4% in coal, 14.0% in ore, 12.1% in LNG, 28.5% in oil products. Among the other commodities, Mediterranean region shows relatively high shares in other liquid and grain.

4) Black Sea Region

Black Sea region accounts for 9.6% in industrial products, 0.0% in crude oil, 24.1% in coal, 65.3% in ore, 0.3% in LNG, 2.0% in oil products. Among the other commodities, Black Sea region shows relatively high shares in grain and timber.

Table 6.2.3 Nationwide Cargo Traffic in Ports 1989-1998 (Import)

Unit: (tons)

YEAR	GRAIN	ORE	COAL	CRUDE OIL	OIL PROD.	LNG	OTHER LIQ.	IND. PROD.	AGRI. PROD.	OTHER G.C.	TIMBER	TOTAL(*1)
1989	2,969,997	2,606,910	4,067,592	6,379,579	1,901,355	712,016	1,885,181	9,281,629	540,780	2,980,135	344,688	33,669,862
1990	2,725,385	3,476,008	6,367,257	12,097,879	2,173,717	791,991	1,197,970	12,269,730	303,950	1,737,637	736,909	43,878,433
1991	791,048	3,458,645	6,854,971	17,398,400	2,170,173	1,037,123	1,387,445	13,009,238	244,829	2,628,749	911,078	49,891,699
1992	777,496	3,381,787	6,782,339	18,853,303	1,876,525	1,213,034	1,477,641	13,422,530	306,058	1,282,483	872,056	50,245,252
1993	2,102,055	3,189,603	7,797,581	20,942,556	4,297,393	1,450,761	1,272,288	19,428,000	440,486	1,509,337	2,445,117	64,875,177
1994	827,040	2,977,718	6,548,566	21,021,493	3,515,241	1,632,951	925,140	12,887,051	271,235	1,214,258	810,095	52,630,788
1995	2,589,716	3,884,339	7,600,891	21,768,510	3,680,702	2,484,624	1,385,061	18,374,583	423,566	1,152,407	662,155	64,006,554
1996	3,475,934	4,498,908	10,616,563	22,050,778	7,081,233	2,296,373	1,136,052	18,706,023	729,582	1,271,189	971,439	72,834,074
1997	3,934,607	5,266,829	9,774,070	21,545,339	5,072,727	3,784,333	1,189,737	21,068,173	756,119	2,118,476	853,326	75,363,736
1998	3,194,977	6,401,532	11,093,025	20,357,017	5,158,538	5,452,461	1,696,520	21,290,381	1,084,024	2,419,986	1,154,498	79,302,959
Share(1998)	4.0%	8.1%	14.0%	25.7%	6.5%	6.9%	2.1%	26.8%	1.4%	3.1%	1.5%	100.0%

Note.*1: Except for Container

Source:Undersecretariat of Maritime Affairs

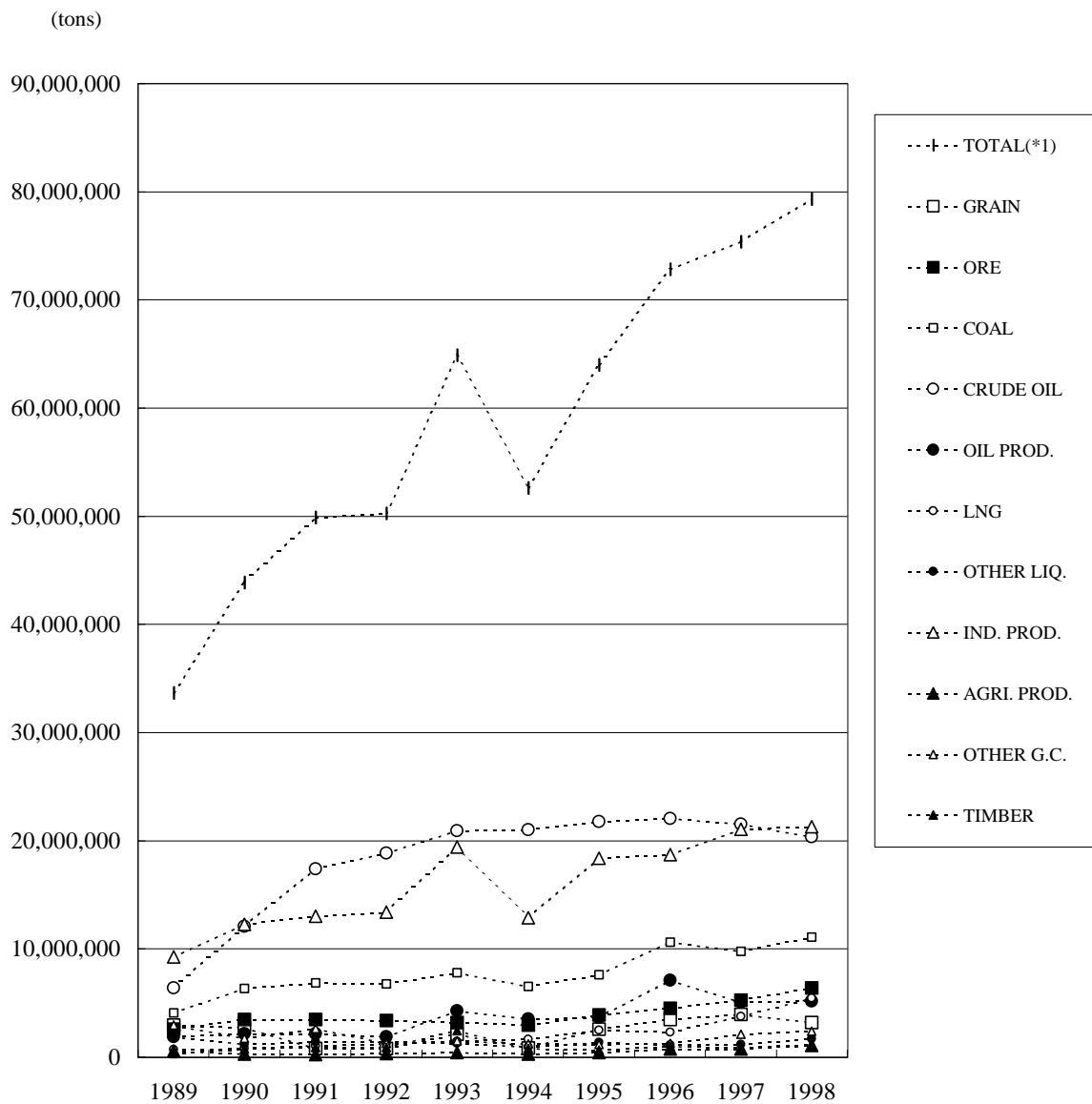


Figure 6.2.3 Nationwide Cargo Traffic in Ports 1989-1998 (Import)

Table 6.2.4 Regional Share of Imports by Commodity (1998)

Unit: %

	MARMARA	AEGEAN	MEDCOAST	BLACKSEA
GRAIN	34.9	21.8	29.7	13.6
MINE ORE	16.2	4.5	14.0	65.3
COAL	27.2	11.3	37.4	24.1
CRUDE OIL	35.7	49.0	15.4	0.0
PETROLIUM PRODUCTS	38.0	31.5	28.5	2.0
LIQUID GAS	70.4	17.2	12.1	0.3
OTHER LIQUID	32.5	16.5	47.1	3.8
INDUSTRIAL PRODUCTS	44.5	26.0	19.8	9.6
AGRICULTURAL PRODUCTS	70.0	18.3	11.5	0.2
OTHER GENERAL CARGO	59.7	31.0	4.2	5.2
TIMBER	72.0	3.9	2.9	21.2
TOTAL	39.6	27.0	21.0	12.4

Source: Undersecretariat of Maritime Affairs

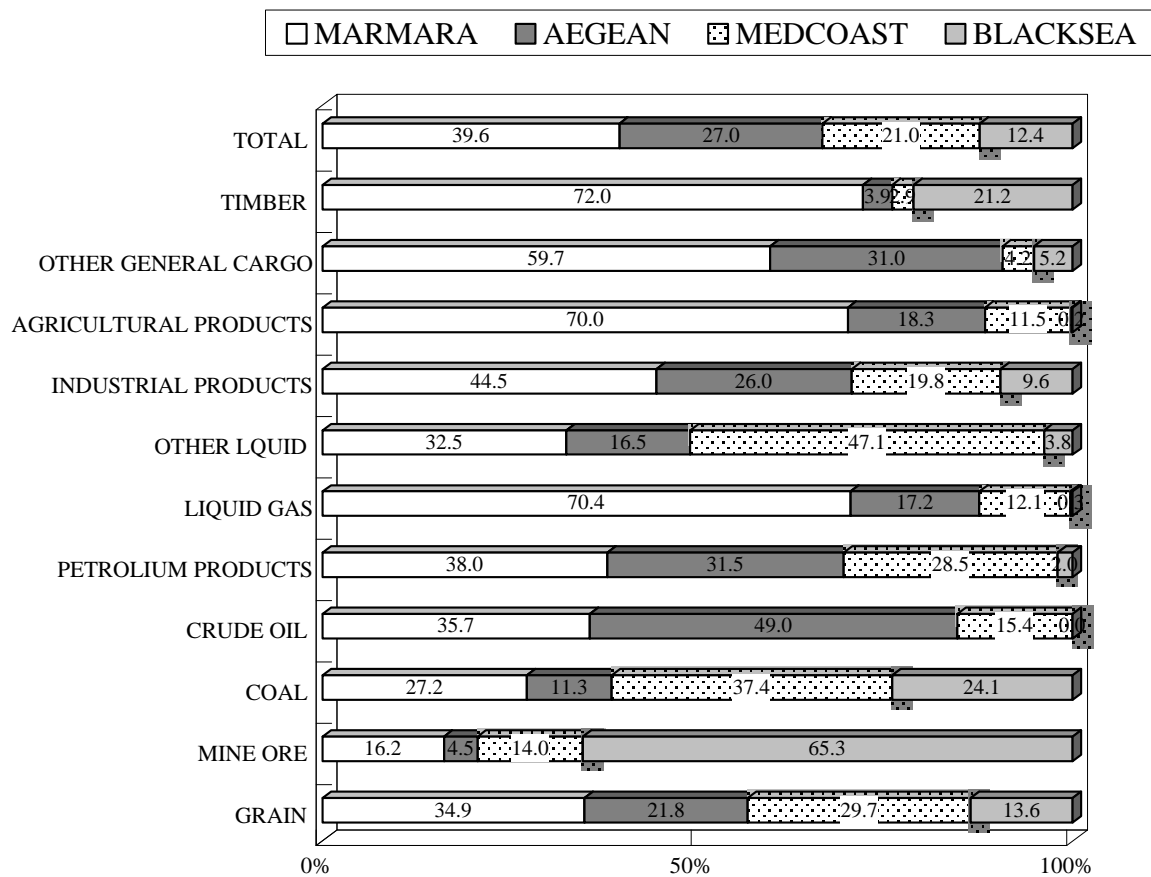


Figure 6.2.4 Regional Share of Imports by Commodity (1998)

6.2.3 Container Traffic

(1) Nationwide Aspects

The historical trend of the nationwide container traffic in ports for the past ten years is shown in Table 6.2.5. In 1998, the traffic, which has continuously and remarkably increased, reached 1,347 thousand TEUs in opposition to the trend of other types of cargo.

The average annual growth for the past ten years (1989-1998) is 26.6%, and traffic has increased more than ten times in that term. In 1998, 373 thousand TEUs (27.7% of total traffic) were handled in the ports, which locates on the Marmara Sea, operated by the private sector. This trend, which started in 1992, is on the increase, especially, in the last three years. On the other hand, container traffic at publicly owned ports, which are mainly operated by TCDD, has failed to grow. The remarkable state of that trend has been seen in Haydarpa a port, while Kum port has reached the fourth largest box-handling port in Turkey.

(2) Regional Aspects

Regional share of container traffic for the past ten years is shown in Table 6.2.6.

1) Marmara region

Three TCDD ports and four privately owned ports, which are handling container, exist in Marmara Region. In 1998, 701 thousand TEUs were handled in these ports. The share of this region in nationwide traffic reached 52.0%, while handling volume at Haydarpa a port has decreased. The regional share has been increasing continuously and exceeding the GDP share of this region. In recent three years, the share of the TCDD ports has fallen from 78.1% to 46.8% in this region.

2) Aegean Region

Izmir port is the only port which mainly handles container cargo in this region. In 1998, 398 thousand TEUs were handled. The share of this region in nationwide traffic has remained 29.6%. The share of this region had increased from 1990 to 1994, however it has decreased from 1994 continuously.

3) Mediterranean Region

Mersin port is the major port which handle container cargo in this region. In 1998, 242 thousand TEUs were handled in this region. The share of this region in nationwide traffic has remained 18.0%. The share of this region has decreased continuously in the recent years.

4) Black Sea Region

Samsun port and Trabzon port are the major ports which handle container cargo in this region. In 1998, 5 thousand TEUs were handled in this region. The share of this region in nationwide traffic has remained 0.4%. Regional share of container traffic has been small from the beginning. This share is also very small against GDP share of this region.

Table 6.2.5 National Container Traffic in Ports (1989-1998)

	Unit: TEUs									
	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
HAYDARPASA	59,869	111,805	146,046	177,601	232,364	179,831	256,569	329,160	330,151	322,596
MERSIN	94,527	113,559	102,733	105,820	116,794	131,454	147,617	181,527	268,441	241,865
ISKENDERUN	5,542	3,542	1,924	888	910	75	709	123	193	444
SAMSUN	856	1,023	2,591	3,791	4,494	2,124	1,999	2,915	4,229	3,249
IZMIR	-	122,503	143,109	162,507	212,949	268,908	302,158	345,924	388,172	398,619
CERINCE	-	-	-	4,840	2,617	3,286	5,071	13,979	10,209	5,087
BANDIRMA	-	-	-	1,117	1,950	2,663	1,116	493	297	447
TRABZON	-	166	430	460	730	438	172	1,532	2,866	2,122
GEM PORT(P)	-	-	-	1,086	7,791	17,067	32,243	34,105	35,205	79,587
SEDEF PORT(P)	-	-	-	-	3,228	14,621	17,143	46,039	40,719	59,400
KUM PORT(P)	-	-	-	-	-	-	-	16,239	149,714	192,800
ARMA PORT(P)	-	-	-	-	-	-	-	-	2,430	41,579
TOTAL	160,794	352,598	396,833	458,110	583,827	620,467	764,797	972,036	1,232,626	1,347,795
Annual Growth		119.3%	12.5%	15.4%	27.4%	6.3%	23.3%	27.1%	26.8%	9.3%
Average Annual Growth (1989-1998)										26.6%

Note. (P): Operated by the Private Sector

Source: JICA Study Team (By the Questionnaire to Related Organization)

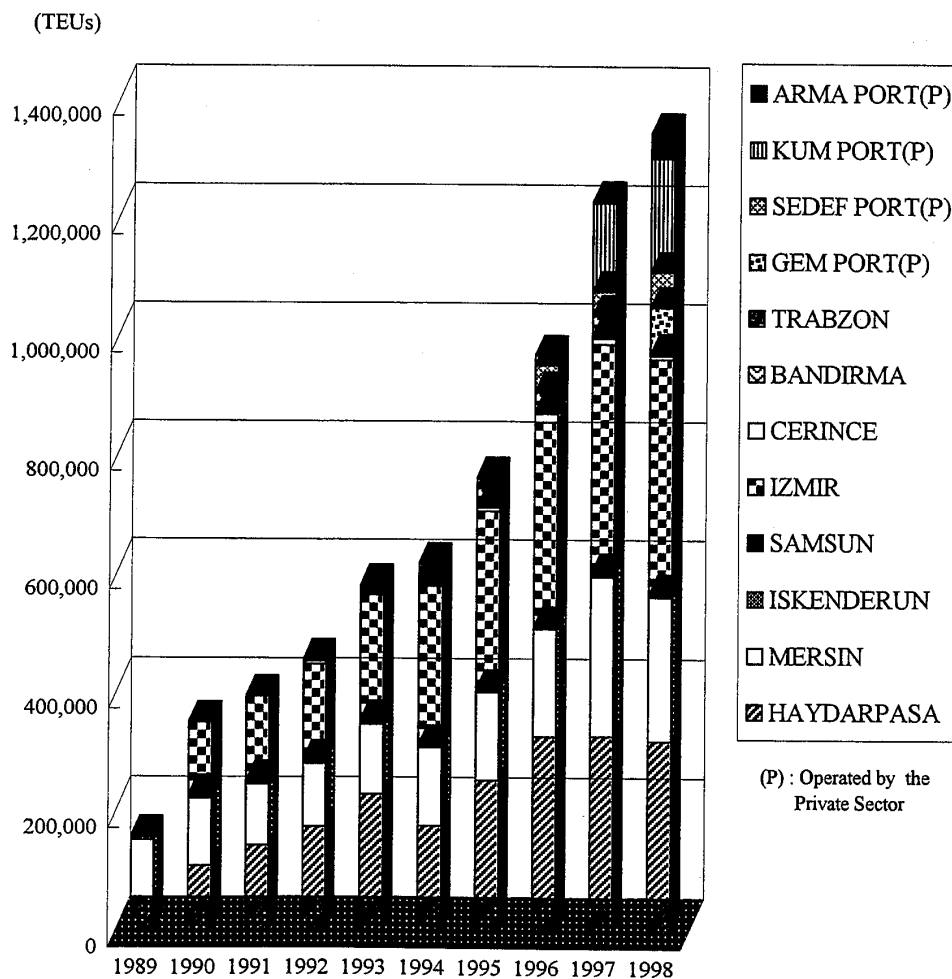


Figure 6.2.5 National Container Traffic in Ports (1989-1998)

Table 6.2.6 Container Traffic in Ports by Region (1989-1998)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Unit:TEUs										
MARMARA										
HAYDARPASA	59,869	111,805	146,046	177,601	232,364	179,831	256,569	329,160	330,151	322,596
DERINCE	-	-	-	4,840	2,617	3,286	5,071	13,979	10,209	5,087
BANDIRMA	-	-	-	1,117	1,950	2,663	1,116	493	297	447
GEM PORT	-	-	-	1,086	7,791	17,067	32,243	34,105	35,205	79,587
SEDEF PORT	-	-	-	-	3,228	14,621	17,143	46,039	40,719	59,400
KUM PORT	-	-	-	-	-	-	-	16,239	149,714	192,800
ARMA PORT	-	-	-	-	-	-	-	-	2,430	41,579
SUBTOTAL	59,869	111,805	146,046	184,644	247,950	217,468	312,142	440,015	568,725	701,496
SHARE	37.2%	31.7%	36.8%	40.3%	42.5%	35.0%	40.8%	45.3%	46.1%	52.0%
AEGEAN										
IZMIR	-	122,503	143,109	162,507	212,949	268,908	302,158	345,924	388,172	398,619
SHARE	0.0%	34.7%	36.1%	35.5%	36.5%	43.3%	39.5%	35.6%	31.5%	29.6%
MEDCOAST										
MERSIN	94,527	113,559	102,733	105,820	116,794	131,454	147,617	181,527	268,441	241,865
ISKENDERUN	5,542	3,542	1,924	888	910	75	709	123	193	444
SUBTOTAL	100,069	117,101	104,657	106,708	117,704	131,529	148,326	181,650	268,634	242,309
SHARE	62.2%	33.2%	26.4%	23.3%	20.2%	21.2%	19.4%	18.7%	21.8%	18.0%
BLACK SEA										
SAMSUN	856	1,023	2,591	3,791	4,494	2,124	1,999	2,915	4,229	3,249
TRABZON	-	166	430	460	730	438	172	1,532	2,866	2,122
SUBTOTAL	856	1,189	3,021	4,251	5,224	2,562	2,171	4,447	7,095	5,371
SHARE	0.5%	0.3%	0.8%	0.9%	0.9%	0.4%	0.3%	0.5%	0.6%	0.4%
TOTAL	160,794	352,598	396,833	458,110	583,827	620,467	764,797	972,036	1,232,626	1,347,795
Annual Growth		119.3%	12.5%	15.4%	27.4%	6.3%	23.3%	27.1%	26.8%	9.3%
Average Annual Growth (1989-1998)										26.6%

Source: JICA Study Team (By the Questionnaire to Related Organization)

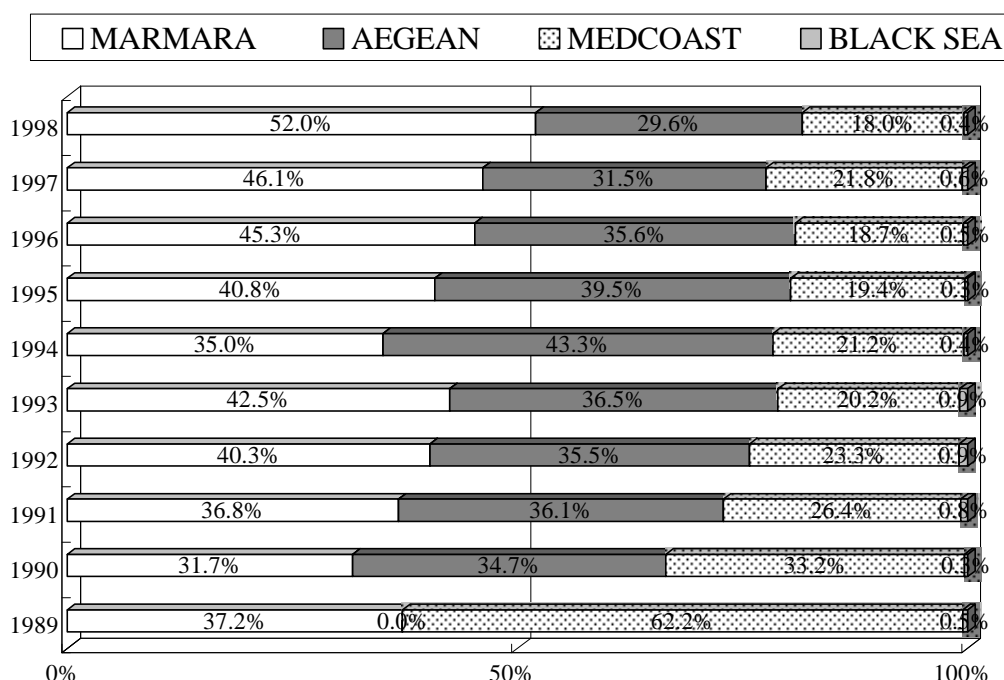


Figure 6.2.6 Regional Share of Container Traffic in Ports (1989-1998)

6.3 Domestic Cargo Traffic in Ports

6.3.1 Nationwide Aspects

The trend of nationwide domestic cargo traffic is shown in Table 6.3.1. In 1998, the domestic cargo traffic reached 38.7 million tons, however it decreased 7.2% compared with the previous year. As to the major commodity of domestic cargo, oil products accounts for 18.1 million tons (46.9% of total domestic traffic), other general cargo accounts for 6.2 million tons (15.9%), crude oil accounts for 5.7 million tons (14.7%), industrial products accounts for 5.0 million tons (13.0%). These four major commodities account for 90.5% of total domestic cargo traffic. Among those major four commodities, oil products and ore have showed a progress relatively.

6.3.2 Regional Aspects

(1) Loading cargo

The regional share of domestics loading cargo by commodity is shown in Table 6.3.2. The share in total loading domestic cargo traffic of Marmara region, Aegean region, Mediterranean region and Black Sea region; 29.5%, 41.3%, 20.6% and 8.6% respectively.

1) Marmara Region

Among above-mentioned major four commodities, Marmara region accounts for 49.4% in oil products, 32.3% in other general cargo, 0.3% in crude oil and 22.3% in industrial products. As to the other commodities, Marmara region shows relatively high shares in LNG and other liquid.

2) Aegean Region

Aegean region accounts for 41.0% in oil products, 10.2% in other general cargo, 51.6% in crude oil, 47.5% in industrial products. Among the other commodities, Aegean region shows relatively a high share in other liquid.

3) Mediterranean Region

Mediterranean region accounts for 9.6% in oil products, 7.6% in other general cargo, 48.1% in crude oil, 13.3% in industrial products. Among the other commodities, Mediterranean region shows relatively a high share in grain.

4) Black Sea Region

Black Sea region accounts for 0.0% in oil products, 49.9% in other general cargo, 0.0% in crude oil, 16.9% in industrial products. Among the other commodities, Black Sea region shows relatively high shares in timber, coal and ore.

Table 6.3.1 Nationwide Cargo Traffic in Ports 1989-1998 (Domestic)

Unit: (tons)

YEAR	GRAIN	ORE	COAL	CRUDE OIL	OIL PROD.	LNG	OTHER LIQ.	IND. PROD.	AGRI. PROD.	OTHER G.C.	TIMBER	TOTAL(*1)
1989	1,174,678	3,401,456	3,016,064	23,312,402	13,972,953	505,267	291,990	4,164,423	70,293	6,873,791	43,038	56,826,355
1990	1,754,489	2,715,232	2,708,048	14,474,678	14,117,135	476,918	281,067	3,396,181	38,917	7,064,838	86,300	47,113,803
1991	395,281	1,826,959	2,199,831	4,925,355	13,365,790	514,423	96,799	2,759,943	45,149	6,211,701	67,536	32,408,767
1992	615,469	1,519,607	2,479,484	4,321,135	14,425,882	575,888	65,049	4,317,510	15,700	5,839,915	66,187	34,241,826
1993	334,593	1,380,068	2,239,887	3,234,127	16,715,123	590,566	174,383	3,940,012	5,078	7,559,369	70,458	36,243,664
1994	122,967	1,291,272	1,864,072	4,208,115	15,901,577	547,320	88,906	4,388,321	12,753	5,544,483	34,276	34,004,062
1995	140,534	1,549,929	1,247,889	3,475,390	17,324,953	580,384	82,087	4,709,107	6,021	5,383,281	35,878	34,535,453
1996	213,783	2,376,936	1,145,467	3,816,877	17,154,693	603,769	69,511	5,018,288	1,085	5,731,232	30,516	36,162,157
1997	679,717	1,876,033	874,392	6,956,297	18,538,526	609,788	141,809	5,455,130	860	6,563,071	20,289	41,715,912
1998	542,783	1,745,228	605,279	5,672,948	18,140,864	682,187	112,435	5,025,644	1,845	6,150,567	35,430	38,715,210
Share(1998)	1.4%	4.5%	1.6%	14.7%	46.9%	1.8%	0.3%	13.0%	0.0%	15.9%	0.1%	100.0%

Note: *1: Except for Container

Source: Undersecretariat of Maritime Affairs

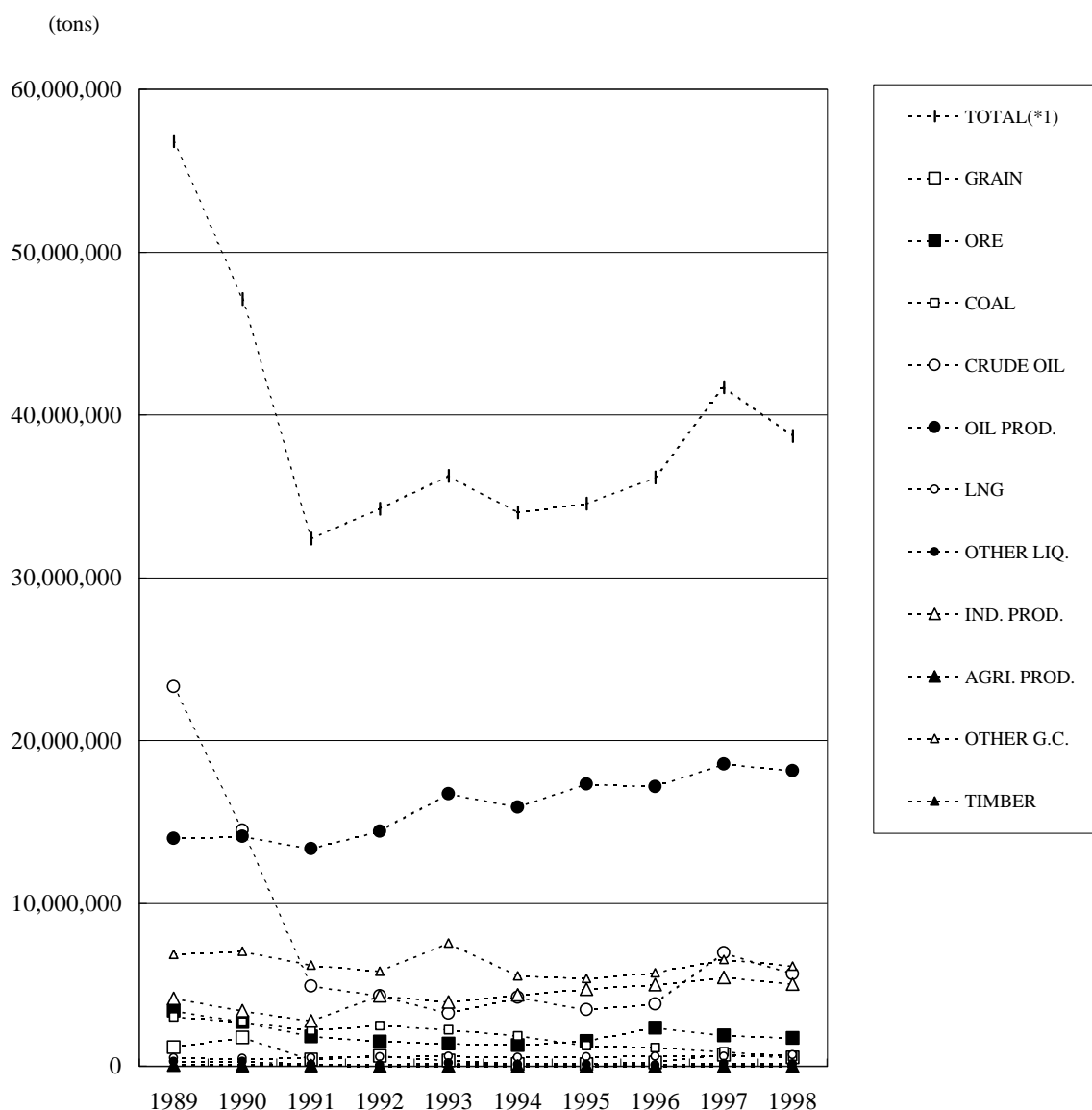


Figure 6.3.1 Nationwide Cargo Traffic in Ports 1989-1998 (Domestic)

Table 6.3.2 Regional Share of Domestic Cargo by Commodity (Loading, 1998)

Unit: %

	MARMARA	AEGEAN	MEDCOAST	BLACKSEA
GRAIN	21.4	14.6	53.9	10.1
MINE ORE	12.5	14.5	3.3	69.7
COAL	0.2	12.2	13.9	73.6
CRUDE OIL	0.3	51.6	48.1	0.0
PETROLIUM PRODUCTS	49.4	41.0	9.6	0.0
LIQUID GAS	89.6	6.4	4.1	0.0
OTHER LIQUID	55.8	39.6	3.0	1.6
INDUSTRIAL PRODUCTS	22.3	47.5	13.3	16.9
OTHER GENERAL CARGO	32.3	10.2	7.6	49.9
TIMBER	25.6	23.1	0.0	51.4
TOTAL	29.5	41.3	20.6	8.6

Source: Undersecretariat of Maritime Affairs

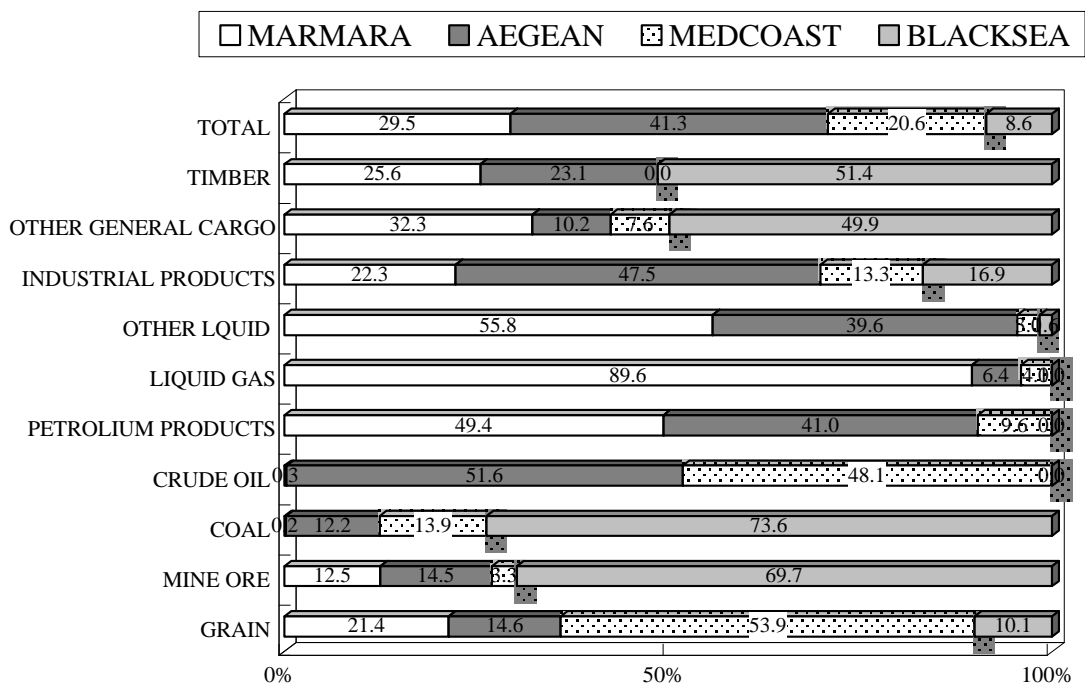


Figure 6.3.2 Regional Share of Domestic Cargo by Commodity (Loading, 1998)

(2) Unloading Cargo

The regional share of domestic unloading cargo by commodity is shown in Table 6.3.3. The share in total unloading domestic cargo traffic of Marmara region, Aegean region, Mediterranean region and Black Sea region show the share; 66.1%, 6.8%, 16.1% and 11.1% respectively.

1) Marmara Region

Marmara region accounts for 63.2% in oil products, 93.2% in other general cargo, 52.7% in crude oil, 57.7% in industrial products. Among the other commodities, Marmara region shows relatively high shares in agricultural products, liquid gas and other liquid.

2) Aegean Region

Aegean region accounts for 1.7% in oil products, 1.8% in other general cargo, 25.8% in crude oil, 13.8% in industrial products. Among the other commodities, Aegean region shows relatively a high share in grain.

3) Mediterranean Region

Mediterranean region accounts for 26.0% in oil products, 0.2% in other general cargo, 21.5% in crude oil, 15.5% in industrial products. Among the other commodities, Mediterranean region shows relatively a high share in other liquid.

4) Black Sea Region

Black Sea region accounts for 9.0% in oil products, 4.8% in other general cargo, 0.0% in crude oil, 13.0% in industrial products. Among the other commodities, Black Sea region shows relatively high shares in timber, coal, ore, grain and agricultural products.

Table 6.3.3 Regional Share of Domestic Cargo by Commodity (Unloading, 1998)
Unit: %

	MARMARA	AEGEAN	MEDCOAST	BLACKSEA
GRAIN	14.2	37.1	3.4	45.2
MINE ORE	22.0	0.5	11.2	66.3
COAL	11.8	12.1	2.1	73.9
CRUDE OIL	52.7	25.8	21.5	0.0
PETROLIUM PRODUCTS	63.2	1.7	26.0	9.0
LIQUID GAS	84.6	0.0	0.2	15.3
OTHER LIQUID	72.6	2.1	25.3	0.0
INDUSTRIAL PRODUCTS	57.7	13.8	15.5	13.0
AGRICULTURAL PRODUCTS	72.4	0.0	0.0	27.6
OTHER GENERAL CARGO	93.2	1.8	0.2	4.8
TIMBER	0.0	2.2	0.0	97.8
TOTAL	66.1	6.8	16.1	11.1

Source: Undersecretariat of Maritime Affairs

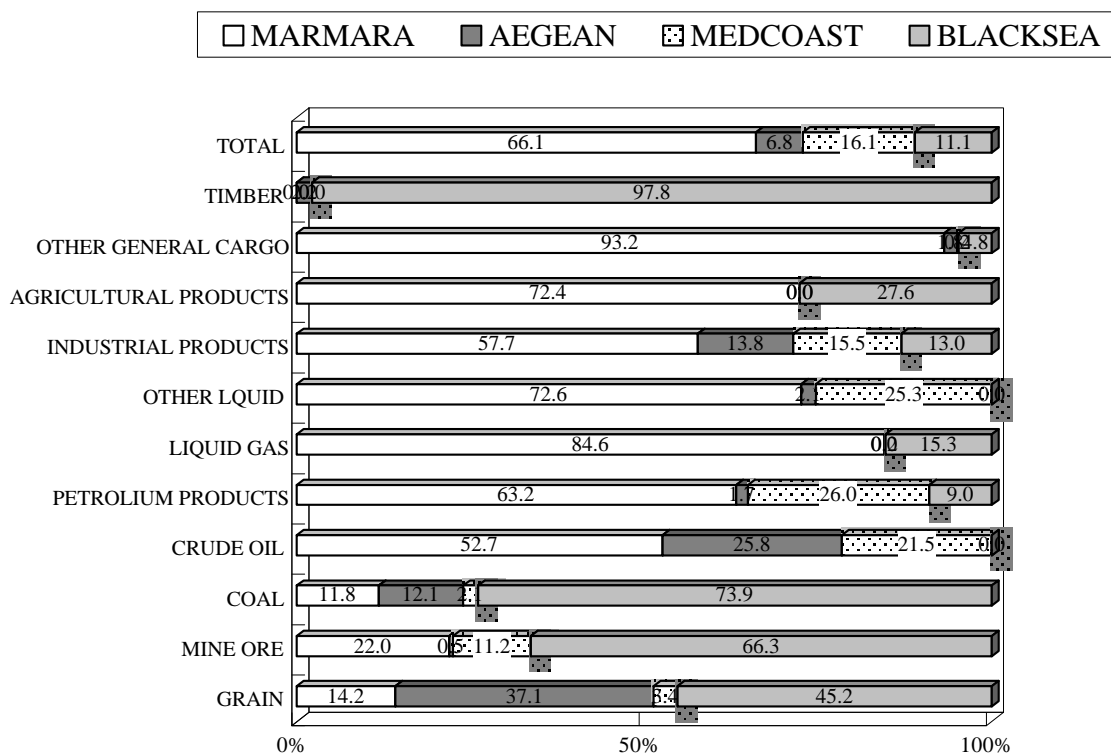


Figure 6.3.3 Regional Share of Domestic Cargo by Commodity (Unloading, 1998)

6.4 Transit Cargo Traffic in Ports

6.4.1 Nationwide Aspects

The trend of transit cargo traffic is shown in Table 6.4.1. In 1998, the transit cargo traffic reached 13.0 million tons, however it decreased 11.3% compared with the previous year. As to the major commodity of the transit cargo, crude oil accounts for 12.9 million tons (98.9% of total transit traffic).

6.4.2 Regional Aspects

The regional share of transits loading cargo by commodity is shown in Table 6.4.2, 6.4.3. As to the loading cargo of crude oil, Mediterranean region accounts for 100% of the total.

Table 6.4.1 Nationwide Cargo Traffic in Ports 1989-1998 (Transit)

Unit: (tons)												
YEAR	GRAIN	ORE	COAL	CRUDE OIL	OIL PROD.	LNG	OTHER LIQ.	IND. PROD.	AGRI. PROD.	OTHER G.C.	TIMBER	TOTAL(*1)
1989	81,433	2,305	1,660	71,189,540	5,442,303	44,501	48,985	428,533	38,098	476,712	62,053	77,816,123
1990	302,898	102,043	0	39,693,000	1,868,266	23,245	11,427	701,246	12,861	218,805	16,415	42,950,201
1991	100	29,103	0	0	18,160	5,916	1,870	778,409	670	134,458	5,162	973,848
1992	14,315	72,278	0	0	113,829	0	8,887	414,655	9,764	395,150	1,243	1,030,121
1993	11,863	6,745	2,427	0	0	0	0	66,492	0	383,355	0	470,882
1994	7,277	1,921	0	0	17,090	0	3,300	44,241	0	111,125	2,000	186,954
1995	22,409	15,296	0	0	81,121	0	154	165,760	705	29,148	0	314,593
1996	52,514	4,165	0	395,000	95,581	1,700	48,340	220,273	49,007	31,550	700	898,830
1997	103,672	12,101	2,950	14,461,500	15,466	41,616	14,000	11,316	0	32,439	4,374	14,699,434
1998	0	0	0	12,897,000	3,676	0	137,000	5,006	750	0	0	13,043,432
Share(1998)	0.0%	0.0%	0.0%	98.9%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	100.0%

Note.*1: Except for Container

Source:Undersecretariat of Maritime Affairs

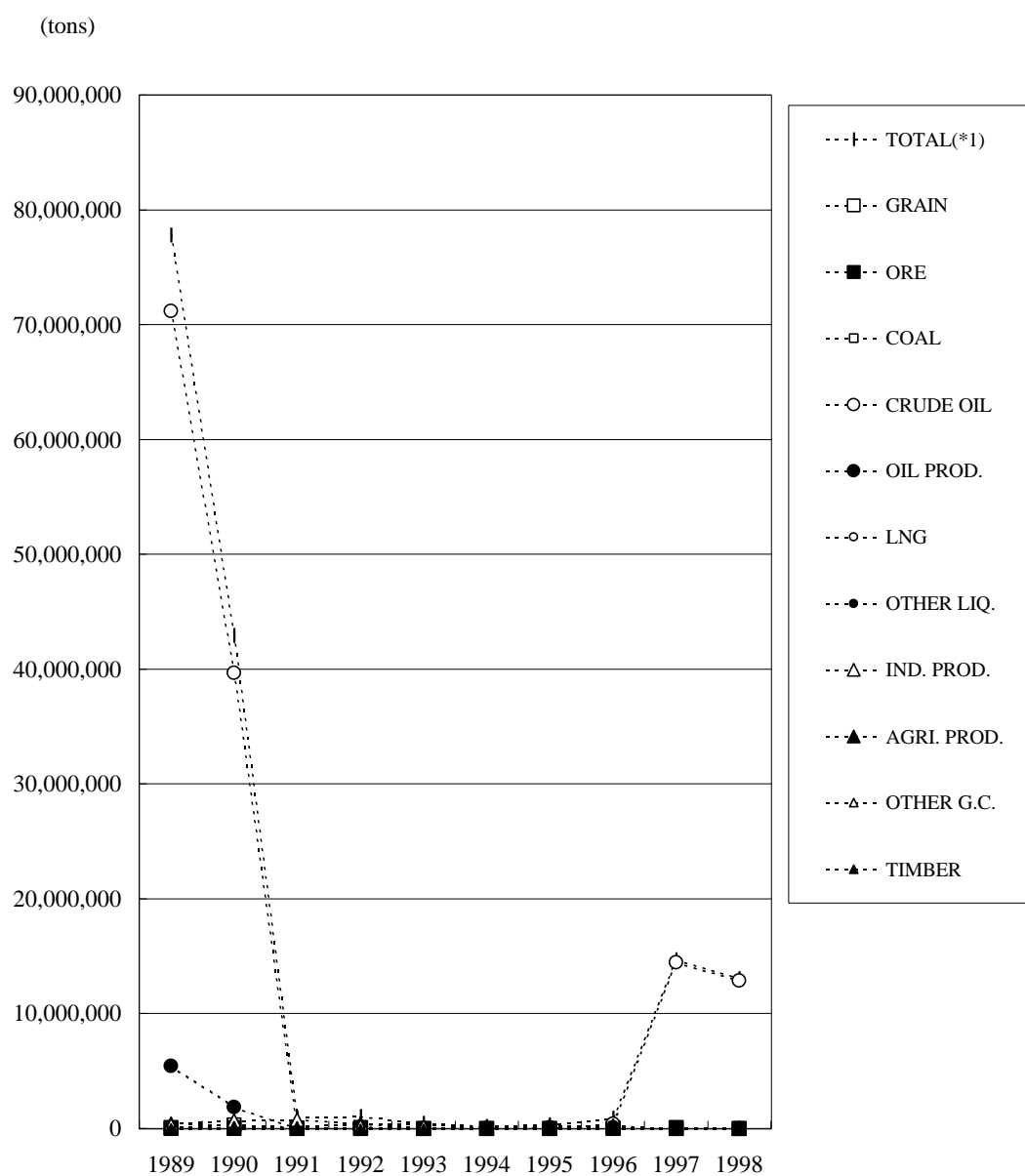


Figure 6.4.1 Nationwide Cargo Traffic in Ports 1989-1998 (Transit)

Table 6.4.2 Regional Share of Transit Cargo by Commodity (Loading, 1998)

Unit: %

	MARMARA	AEGEAN	MEDCOAST	BLACKSEA
CRUDE OIL	0.0	0.0	100.0	0.0
OTHER LIQUID	0.0	0.0	100.0	0.0
INDUSTRIAL PRODUCTS	0.0	0.0	100.0	0.0
AGRICULTURAL PRODUCTS	0.0	0.0	0.0	100.0
TOTAL	0.0	0.0	100.0	0.0

Source: Undersecretariat of Maritime Affairs

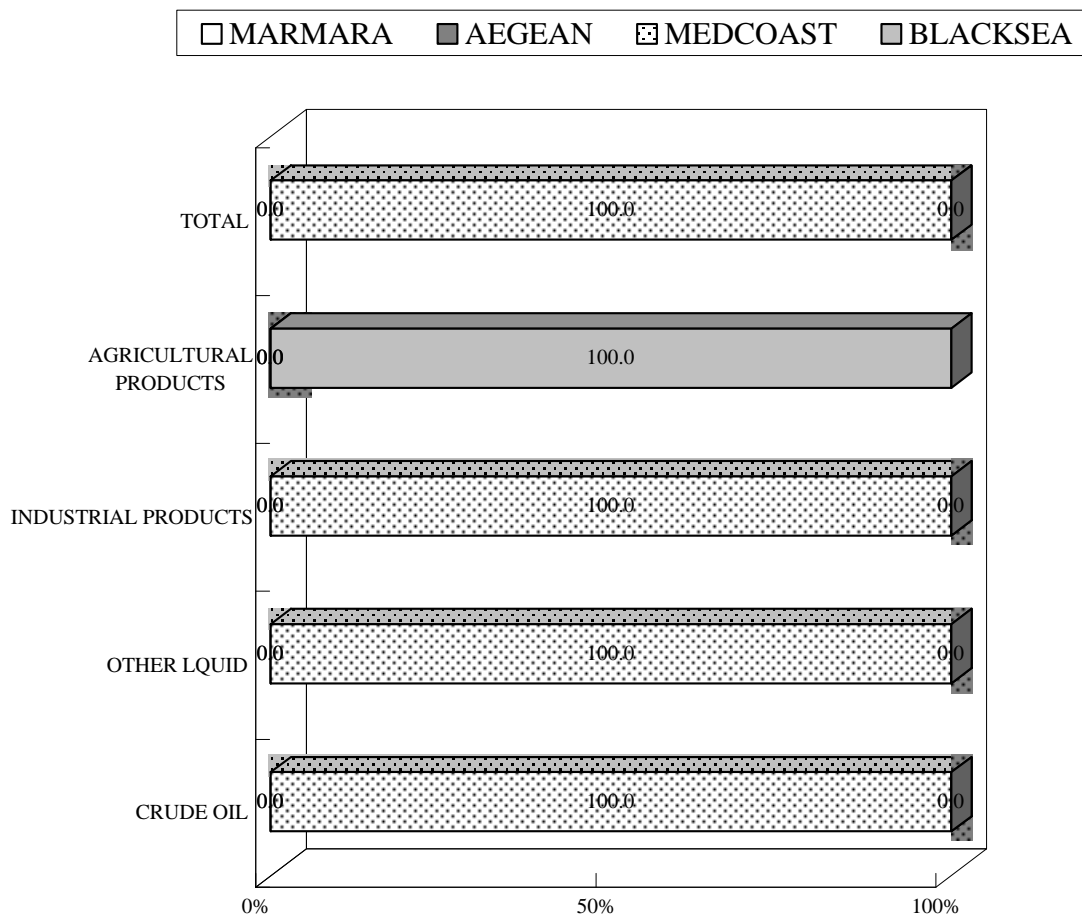


Figure 6.4.2 Regional Share of Transit Cargo by Commodity (Loading, 1998)

Table 6.4.3 Regional Share of Transit Cargo by Commodity (Unloading, 1998)

Unit: %

	MARMARA	AEGEAN	MEDCOAST	BLACKSEA
PETROLIUM PRODUCTS	0.0	42.2	0.0	57.8
INDUSTRIAL PRODUCTS	0.0	0.0	100.0	0.0
TOTAL	0.0	27.0	36.0	37.0

Source: Undersecretariat of Maritime Affairs

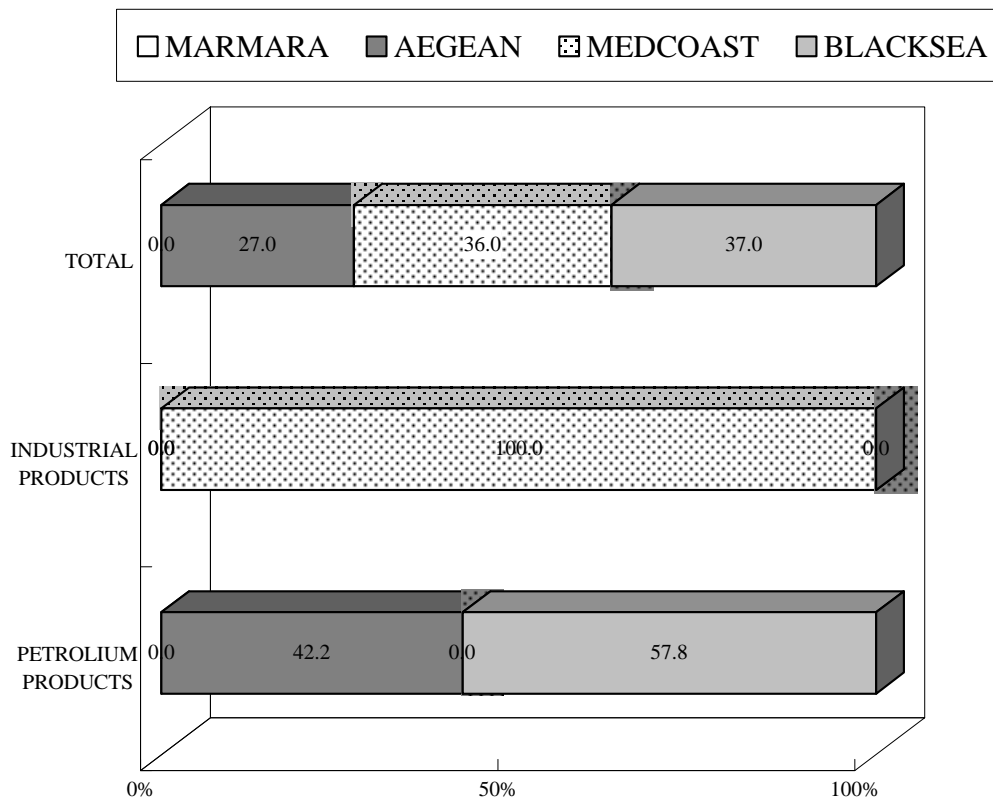


Figure 6.4.3 Regional Share of Transit Cargo by Commodity (Unloading, 1998)

6.5 Nationwide Passenger Traffic in Ports

While the nationwide passenger traffic had reached 5million due to the remarkable growth of transit passenger in 1997, that number fell to 2.4 million in 1998.

The number of international passengers, which has been increasing continuously from 1993 except for 1996 and 1998, reached 1.2 million in 1998. The share in total of international passenger became 47.6% in 1998.

The number of domestic passengers, which has been increasing irregularly and slightly, was 685 thousand in 1998. However, the share in the total number of domestic passengers, which has been decreasing slightly because of motorization, fell to 28.3% in 1998.

Transit passengers have also had a huge influence on the nationwide passenger. In 1997, number of passengers reached 2.3 million, and as a result nationwide passenger traffic more than doubled over the previous year. However, that number has decreased greatly in 1998 because of the decrease in transit passengers.

Table 6.5.1 National Passenger Traffic in Ports (1989-1998)

YEAR	DEPARTURE				ARRIVAL				TOTAL			
	DOMESTIC	INT'L	TRANSIT	TOTAL	DOMESTIC	INT'L	TRANSIT	TOTAL	DOMESTIC	INT'L	TRANSIT	TOTAL
1989	969,443	765,691	65,820	2,566,645	958,570	753,909	61,381	1,773,860	1,928,013	1,519,600	127,201	3,574,814
1990	699,990	656,670	53,092	2,066,422	693,806	646,247	54,597	1,394,650	1,393,796	1,302,917	107,689	2,804,402
1991	530,993	466,833	41,578	1,506,237	530,142	469,726	36,129	1,035,997	1,061,135	936,559	77,707	2,075,401
1992	279,090	400,328	96,565	1,176,311	272,495	374,898	94,356	741,749	551,585	775,226	190,921	1,517,732
1993	302,155	384,333	204,910	1,275,731	279,624	369,276	197,911	846,811	581,779	753,609	402,821	1,738,209
1994	326,937	475,356	238,519	1,516,168	323,435	436,775	244,748	1,004,958	650,372	912,131	483,267	2,045,770
1995	402,977	544,211	383,943	1,875,342	391,473	692,446	286,818	1,370,737	794,450	1,236,657	670,761	2,701,868
1996	424,273	566,585	187,971	1,178,829	416,237	571,535	489,019	1,476,791	840,510	1,138,120	676,990	2,655,620
1997	550,209	722,833	623,963	2,619,838	550,505	865,421	1,712,558	3,128,484	1,100,714	1,588,254	2,336,521	5,025,489
1998	273,898	586,062	404,629	1,264,589	411,890	566,991	176,624	1,155,505	685,788	1,153,053	581,253	2,420,094
Share(1998)	11.3%	24.2%	16.7%	52.3%	17.0%	23.4%	7.30%	47.7%	28.3%	47.6%	24.0%	100.0%

Note. Transit : Passengers staying less than 24 hours

Source: Undersecretariat of Maritime Affairs

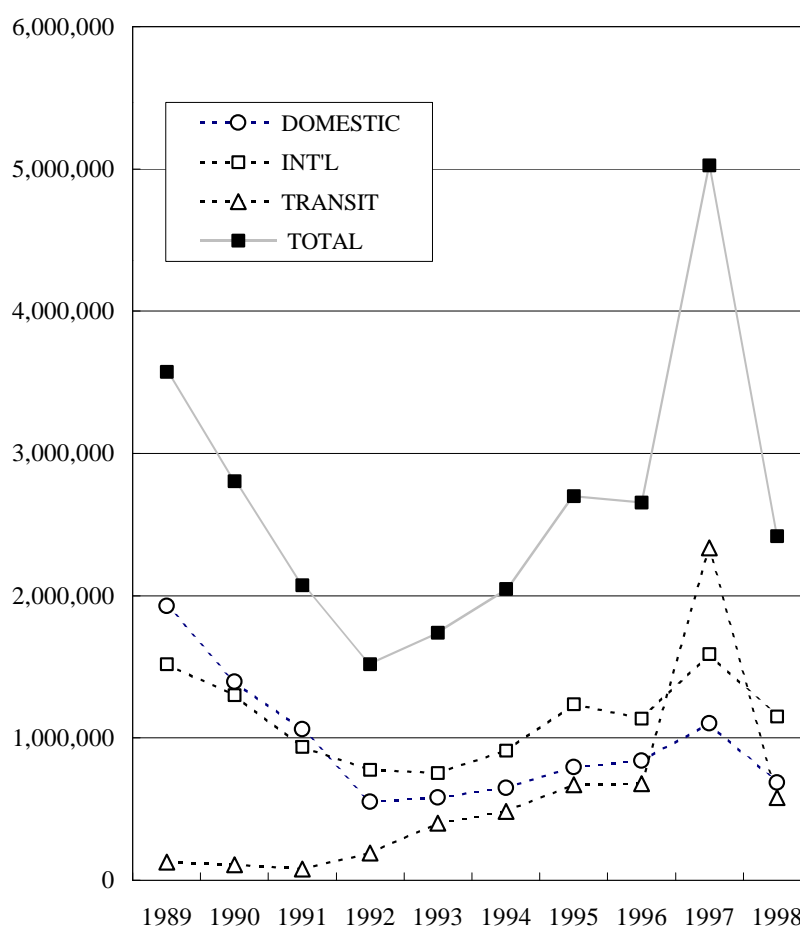


Figure 6.5.1 National Passenger Traffic in Ports (1989-

Chapter 7 Policy on Port Development

7.1 Current Policy on Cargo/ Passenger Transport

7.1.1 general

In order to achieve economical, rapid and safe transport service, harmonious integration among transport modes is required. In addition, priority should be given to the development of transport infrastructure that is environmentally sound.

The Seventh Five-year Development Plan introduced various policies on port development to conduct the above-mentioned objective. However, not all policies have been vigorously pursued. Basic policies on port development mentioned in the Five-year Development Plan are as follows.

7.1.2 Basic Policies

(1) To shift domestic freight transport from highway to railway, maritime and pipeline transport

Generally, railway, maritime and pipeline transport are more economic, less energy consuming and more environmentally compatible than highway transport. The share of highway transport in domestic cargo movement, however, has been increasing constantly in the term of the present Five-year Development Plan

(2) To develop privatization programs appropriate for the characteristics of transportation systems and control mechanisms.

Privatization on the basis of the transfer of the operational right for a period of 30 years to a private sector is being conducted. In this privatization scheme, a tender is announced for the machinery, equipment, devices, tools, instruments and spare parts of these equipment which are available on the date of the transfer. Sea vehicles and land vehicles that are available in various port activities such as piloting, tug boat and sheltering services are also tendered on the basis of sales.

The ports of Antalya, Tekirdag, Sinop, Ordu, Gireson, Rize and Hopa have been privatized already and the port of Trabzon is now undergoing privatization.

(3) To generate investment funds by BOT model

Due to the shortage of official financial resources for investment in infrastructure, Turkey has adopted the Build, Operate and Transfer (BOT) model. Port development that involves such large-scale investment t the BOT model utilizing foreign credit has become inevitable. The Turkish Government and contractors signed two BOT contracts for a multipurpose terminal in Filyos Port and a container terminal in Derince Port in March and April of 1999 respectively. Two more contracts for a container terminal in Iskenderun Port and extension

of container terminal and dredging in Izmir Port are being prepared.

(4) To reduce the adverse effects of transport systems on the environment

To ensure that the present natural heritage can be passed on to the next generation, environmental aspects must be considered when coastal activities are carried out. Environmental Impact Assessment (EIA) Regulation based on the U.S. and EU procedures was amended in 1997. This revised regulation covers a wide range of economic activities including major infrastructure projects and various industrial activities and could be a powerful tool in maintaining and improving the environmental quality of Turkey.

On the other hand, the solid and liquid disposal from vessels is still one of the major environmental problems to be tackled.

(5) To establish a well prepared international transport network

Transport infrastructure to promote the economic development of Turkey and to improve international relations with EU and the countries of the Black Sea Economic Cooperation is needed.

(6) To accelerate the investment program for ports

Adequate investment should be made in port facilities to achieve required capacity and efficiency and remain internationally competitive. The share of public investment for port facilities in the whole budget for transport infrastructure, however, has been maintained at almost the same level during the present Five-year Development Plan.

Fortunately investment by private sectors has been observed in some port development projects since the privatization and BOT model have been introduced.

(7) To carry on the rehabilitation and maintenance-repair services

By their nature, port facilities and equipment are prone to heavy use. Rehabilitation and maintenance-repair services are inevitable to maintain the efficiency of port activities.

(8) To give priority to the construction of port access routes.

In order to ensure effective utilization of existing infrastructures, roads and railways connecting to each facility are vital.

(9) To increase international transit transport by taking advantage of Turkey's geographical location

This country was once the gateway for international cargo of third countries. The volume of international transit cargo, however, decreased rapidly since the end of the 1980's due to the alteration of third country's transport policy and other political issues.

(10) To introduce autonomy or privatization to port management

In order to survive global competition, a more autonomous port management system or privatization is required.

(11) To establish a comprehensive Transport Master Plan

A comprehensive transport master plan including highway, railway, airport, port and pipeline networks and coordinating the effects to utilize these facilities with the highest efficiency is needed. Although there is no comprehensive Transport Master Plan, the Nationwide Port Development Master Plan is being prepared.

7.2 Proposed measures, countermeasures and targets

The Seventh Five-year Development Plan, sector report of this Plan and another study report conducted by the Turkish Government suggested various measures, countermeasures and targets to modernize the Turkish ports and to cope with the existing problems in the fields of port infrastructure improvement, port management and operation. Those measures, countermeasures and targets are as follows.

7.2.1 On Facilities

- (1) New container terminals in Derince Port/ Iskenderun Port to be realized
- (2) International crude oil/ natural gas pipeline investments to be emphasized
- (3) Lack of cargo handling equipment to be rectified in Turkish BSEC area
- (4) Port enlargement to be undertaken in Turkish BSEC area
- (5) New capacity to be created in the long run in Turkish BSEC area
- (6) A new port to be built in the area of Tekirdag
- (7) Waterway to open sea to be deepened in Izumir Port
- (8) A new port to be built in Northern Aegean Region
- (9) Re-examination on the port capacity with due consideration of the GAP project
- (10) International hub-port to be realized in Mersin Port
- (11) Lack of modern infrastructure and equipment to be improved
- (12) Integrally operated container inland-depot to be constructed
- (13) Samsun Container Terminal to be built in long term
- (14) Enlargement of Hopa Port to be realized in long term
- (15) Facilities for wastes collecting/ treatment to be rectified
- (16) Facilities for combating against maritime accident to be maintained

7.2.2 On Port Management and Operation

- (1) More than 1 million units of containers to be handled in the year 2020
- (2) Future projection in cargo/ passenger traffic to be realized
- (3) Responsible organization to be set up in MOT for coordination of transport sub sectors
- (4) Correct and up-to-date statistics to be provided by the above mentioned organization
- (5) Necessary amendment to be done in maritime regulations for environmental protection

- (6) Management condition to be bettered in Turkish BSEC area
- (7) Port area management to be improved
- (8) Slow procedures of customs to be improved(Customs regulation to be simplified)
- (9) Unreasonable price in private wharf to be improved
- (10) Lack of qualified service personnel to be corrected
- (11) Planning methodology on construction of new terminals to be modernized
- (12) Domestic/ foreign financial sources to be diversified
- (13) Private sector investment to be altered from small scale to large scale in long term
- (14) Nationwide Master Plan to be provided
- (15) Unification of port administrative structure to be established
- (16) Contribution of ports to national economy to be clarified
- (17) Computer network to be introduced in Port management and operation
- (18) Effective transport system to support the export and import to be established
- (19) Regulation for prohibiting port area utilization in non-related manner to be established
- (20) Local/ regional emergency plan for environmental pollution combating to be prepared
- (21) Education on maritime transport to be emphasized

7.3 Evaluation on the Achievement of the Seventh Five-year Development Plan

It is sometimes difficult to evaluate the achievement of this kind of national plan precisely because the policies, measures, countermeasures and targets are often so complicated that no tools for measuring the achievement level are available. On the contrary, the targets formulated in digital figures are easily evaluated. But as the present Five-year Development Plan is still during its planned term, just a tentative evaluation on the Plan is possible.

A lot of policies, measures, countermeasures and targets are set in the present Five-year Development Plan to pursue the fundamental objectives of transport administration. Some have shown outstanding/ moderate progress while others remain unimplemented.

The tentative results of evaluation on the achievement of the Seventh Five-year Development Plan are shown in Table 7.3.1. In the table, “A” means that the policy, measure, countermeasure or target has been realized already/ the situation has been improved perfectly. “B” means that the policy, measure, countermeasure or target has been realized to a certain extent/ the situation has been improved to a certain extent. “C” means that the policy has not been realized/ the situation has not been improved. “D” means that the policy has not been realized/ the situation has deteriorated.

Table 7.3.1 Evaluation on Achievement of the 7th Five-year Development Plan

	Policies, measures, countermeasures, targets b) Objectives, Principles and Policies	Present situation	Reasons/ Backgrounds/ Contents
O	Establishment of environmentally compatible transportation infrastructure providing economic, rapid and safe services	B	
P-1	Transportation modal shift from highway to railway, maritime and pipeline	D	Share of highway transport has been increasing.
P-2	Privatization programs/ control mechanism shall be developed	B	Several ports have been privatized
P-3	BOT model to be emphasized	B	A few BOT contracts were realized
P-4	EIA to be emphasized	B	EIA regulation was amended
P-5	Reinforce transportation network (BSEC) Harmonization in transportation policies to be made (in the process of integration with EU)	B	
P-6	Investment for ports to be accelerated	C	Share of public investment for ports is not increasing
P-7	Rehabilitation/ maintenance-repair services to be carried on	C	
P-8	Construction of road connecting existing transportation infrastructures to be emphasized	B	Some projects are on-going
P-9	Highest share in transit transportation to be achieved (geographic location)	D	

	Policies, measures, countermeasures, targets	Present situation	Reasons/ Backgrounds/ Contents
P-10	Enhanced port management to cope with international competition (autonomous structure/ privatization)	C	
P-11	A comprehensive Transportation Master Plan	B	ULIMAP
M-1	New container terminals in Derince/ Iskenderun to be realized	B	Projects on basis of BOT are on-going
M-2	More than 1 million units of container to be handled in the year 2000	A	Almost Achieved (0.9 million units, 1.35 million TEU: 1998)
M-3	International crude oil/ natural gas pipeline investments to be emphasized	B	A few projects are studied and on-going
M-4	Future projection in passenger traffic to be realized (Table 32) Future projection in cargo traffic to be realized (Table 33)	B B	A little bit increase
M-5	c) Legal and Institutional Arrangements Responsible organization coordinating transportation sub-sectors to be set up in MOT	C	
M-6	Correct and up-to-date statistics to be provided by this organization	C	
M-7	Necessary amendments to be done in maritime regulations (environment)	C	

NOTE) P: Policy M: Measure, Countermeasure or Target

Evaluation on Achievement of 7th Five-year Development Plan (Sector Report)

	Policies, measures, countermeasures, targets	Present situation	Reasons/ Backgrounds/ Contents
M-8	6. Ports, Infrastructure, Facilities and • • 6.2 Maritime Sector in Turkey 6.2.2 Regional Assessment (Black Sea) Management condition to be bettered (BSEC)	B	Some ports were privatized
M-9	Equip. insufficiencies to be rectified (BSEC)	C	
M-10	Port enlargement to be undertaken (BSEC)	C	
M-11	New capacity to be created (BSEC)	B	Filyos Port project is prepared by BOD model
M-12	6.2.2 Regional Assessment (Marmara) A new port to be built (Tekirdag area)	C	
M-13	6.2.2 Regional Assessment (Aegean) Waterway to open sea (Izumir)	B	Project is prepared by BOT model
M-14	A new port in Northern Aegean Region	C	
M-15	6.2.2 Regional Assessment (Mediterranean) Re-exam of port capac considering GAP	B	ULIMAP
M-16	International hub port to be realized in Mersin Port	C	
M-17	6.3 General Problems Faced in the Public Ports Port area management to be improved	C	
M-18	Slow procedures of customs to be improved	C	

	Policies, measures, countermeasures, targets	Present situation	Reasons/ Backgrounds/ Contents
M-19	Lack of modern infrastructure and equipment to be rectified	C	
M-20	Unreasonable pricing of private ports to be improved	C	
M-21	Lack of qualified service personnel to be rectified	C	
M-22	6.3.1 Solutions and Suggestions a) Structural Measures Planning/ construction of new terminals (hub/ feeder ports) determined with modern criteria	B	ULIMAP
M-23	Construction of container inland-depot integrally operated	C	
M-24	Utilization of domestic/ foreign financial sources	B	A joint project with foreign company is on-going
M-25	(Long Term) Samsun Container Terminal to be built	C	
M-26	Enlargement of Hopa Port to be realized	C	
M-27	Private sector investment not for amall, single facility but for integrated facilities Nationwide Port Master Plan	C	
M-28	b) Managerial Measures Single roof administration	B	ULIMAP
		C	

	Policies, measures, countermeasures, targets	Present situation	Reasons/ Backgrounds/ Contents
M-29	To clarify the port contribution to national economy	C	
M-30	Computer network to be introduced in port management and operation	B	Being introduced in some ports
M-31	Effective transport system to support export and import industries	?	
M-32	c) Measures Concerned with Regulations Customs Regulations to be simplified	C	
M-33	Regulations prohibiting port facility utilization in non-related manner to port to be established	C	
M-34	d) Environmental Measures Legal, administrative and technical measures for combating the pollution from vessels to be settled	C	
M-35	Facilities for wastes collecting/ treatment to be introduced	C	
M-36	Facilities for combating against maritime accidents to be maintained	C	
M-37	Local/ regional emergency plan against pollution	D	The earthquake devastated the environmental quality in Izmit Bay
M-38	Education on maritime transport to be emphasized	C	

NOTE) P: Policy M: Measure, Countermeasure or Target

Chapter 8 Ports and Coastal Facilities in Turkey

8.1 Definition of the “Port” and “Coastal Facility”

No laws and regulations clearly define what a port is. From the viewpoint of coastal area management, the port or port facility is included in the concept of the “coastal facilities” defined by the Coastal Law. According to the basic understanding of the Law, coastal facilities are classified into two categories. One is the facility of which purpose is utilization by every kind of vessel and boat. The other is not used by vessels. Coastal protection structure is an example of the latter. The former one could be classified into for military use and for other use.

“Coastal facility” hereinafter means coastal facility of which original purpose is utilization by every kind of vessel except military vessels.

8.2 Coastal facilities in Turkey

8.2.1 Number of Coastal facilities

Approximately four hundred coastal facilities are found along the 8,333 km Turkish coastline. The components of these coastal facilities widely vary. There are many coastal facilities with a single component such as a pier or a breakwater. On the contrary, there are many other coastal facilities with a lot of components such as quay walls, piers and breakwaters, forming the shape of an international port. The list of coastal facilities is shown in Appendix (Table A.8.2 .1).

8.2.2 Functions of Coastal Facilities

Functions of these coastal facilities are commercial use including cargo handling and passenger, fishery use and yachting use. As the objective of this Study is formulating the Nationwide Port Development Master Plan, this Study does not deal with the coastal facilities of fishery use and yachting use.

8.2.3 Number of Ports

As mentioned above, there are many kinds of coastal facilities. Some coastal facilities could be called “a port” independently. In another case, a group of coastal facilities could be called “a port” from the viewpoints of their geographical location and of their functions.

The Study Team identified 60 ports including independent ports and group ports. The list of these Turkish ports is shown in Table 8.2.1.

Table 8.2.1 Turkish Ports

	Name of Port and Group Port		Respective Port/ Port Facility	Port/ Port Facility Managing Body
(Mediterranean)				
1	Iskenderun TCDD	(1)	Iskenderun Port	TCDD
2	Iskenderun	(1)	Karayollari Asphalt Pier	Karayollar Asphalt Inc.
		(2)	Yazici Pier	Yazic Iron and Steel Factory
		(3)	O Ekinici Port	O Ekinçiler Iron and Steel Factory
		(4)	Petrol Ofisi Buoys	Petrol Ofici Inc.
		(5)	Sariseki Phosphate Pier	Sariseki Fert
		(6)	Isdemir Port	Isdemir Iron and Steel Factory
		(7)	Cekisan buoys	Cekisan Storage Inc.
		(8)	Sasa Buoys	Sasa Petroleum Facilities
3	Botas	(1)	Botas Dortyol Peir	Botas Inc.
		(2)	Aygaz Buoy System	Aygaz Inc.
		(3)	Delta Petroleum Buoy System	Delta Inc.
		(4)	BP Gas Buoy Systems	BP Gas Inc.
		(5)	Milangaz Buoy Systems	Milangaz Inc.
		(6)	Toros Fertilizer Factory Pier	Toros Fertilizer Inc.
		(7)	Botas Pier	Botas Inc.
4	Mersin	(1)	Mersin Port	TCDD
5	Tasucu	(1)	Tasucu Seka Port	Seka Akdeniz Operations
		(2)	Tasucu Municipality Port	Tasucu Municipality
6	Anamur	(1)	Anamur Municipality Pier	Anamur Municipality
7	Alanya	(1)	Alanya Pier	TDI Inc.
8	Antalya	(1)	Antalya Port	Ortadogu Antalya Port Operation
9	Finike	(1)	Finike Municipality Pier	Finke Municipality
(Aegean)				
10	Fethiye	(1)	Fethiye Municipality Pier	Fethiye Municipality
		(2)	Seka Pier	Seka Dalaman Directorate
11	Marmaris	(1)	Marmaris Municipality Berth	TDI Inc.
12	Bodrum	(1)	Bodrum Municipality Berth	Bodrum Foodstuff Tourism Inc.
		(2)	Kemerkoy TEK Pier	Kemerkoy Electoric Production Inc.
13	Gulluk	(1)	Gulluk Pier	TDI Inc.
14	Kusadasi	(1)	Kusadasi Port	TDI Inc.
15	Cesme	(1)	Cesme TDI Pier	TDI Inc.
16	Izmir	(1)	Alsancak Port	TCDD
17	Aliaga	(1)	Tupras Pier and Berths	Izmir Refinery Directorate
		(2)	Petkin Port	Petkin Petrochemical Inc.
		(3)	Petro Ofisi Pier	Petro Ofici Inc.
		(4)	Ege Iron-Steel Inc. Pier	Ege Iron-Steel Inc.
		(5)	Nemtas Pier	Nemrut Port Operation

	Name of Port and Group Port		Respective Port/ Port Facility	Port/ Port Facility Managing Body
17	Aliaga	(6) (7) (8) (9) (10)	Limas Pier Cukurova Pier Habas Pier Total Oil Pier Camalti Pier	Limas Port Operation Inc. Cukurova Port Operation Inc. Habas Nemrut Total Oil Inc. Camalti Pier
18	Dikili	(1)	Dikili Pier	TDI Inc.
19	Ayvalik	(1) (2) (3)	Ayvalik Ferry Pier Municipality Pier Ayvalik Customs Pier	Ayvalik Municipality Ayvalik Municipality Ayvalik Municipality
20	Bozcaada	(1)	Bozcaada Port	Bozcaada Municipality
21	Gokceada Kuzu	(1)	Gokceada TDI Port	TDI Inc.
(Marmara)				
22	Canakkale	(1) (2) (3) (4) (5) (6)	Akcansa Pier Canakkale City Pier Kabatepe Pier Geyikli Wine Pier Geyikli Wood Pier Yukyeri Pier	Akcansa Cement Inc. TDI Inc. TDI Inc. Canakkale Municipality TDI Inc. TDI Inc.
23	Lapseki	(1) (2)	Lapseki City Pier Cardak Pier	TDI Inc. Cardak Municipality
24	Gelibolu	(1)	Gelibolu City Pier	Gelibolu Municipality
25	Karabiga	(1)	Karabiga Port	Karabiga Municipality
26	Bandirma	(1) (2)	Bandirma Port Befas Pier	TCDD Bandirma Fertilizer Factory Inc.
27	Mudanya	(1) (2)	Mudanya Bel-Sehir Pier Petro Ofisi Pier	Mudanya Municipality Petro Ofisi Inc.
28	Gemlik	(1) (2) (3) (4) (5) (6) (7) (8) (9)	Gemlik Municipality Port BP Pier Gemport Gemlik Fertilizer Factory Ber Borusan Pier M.K.S. Pier Kursunlu Pier Kucukkumla Pier Buyukkumla Village Pier	Gemlik Municipality BP Petroleum Inc. Gemport Inc. Gemlik Fertilizer Factory Boru Transport Inc. Marmara Integrated Chemistry Kursunlu Municipality Kucukkumla Municipality Buyukkumla Village
29	Yalova	(1) (2)	Fiber Pier Aksa	Yalova Yarn and Fiber Industry Aksa Acrylic Chemical Industry
30	Izmit	(1) (2)	Colakoglu Istanbul Iron-Steel Inc.co. Pier	Colakoglu Metallurgy Inc Istanbul Iron and Steel Industry

	Name of Port and Group Port		Respective Port/ Port Facility	Port/ Port Facility Managing Body
30	Izmit	(3)	Total	Total Oil Inc.
		(4)	Sedef	Sedef Shipping Industry
		(5)	Alemdar	Alemder Diliskelesi Port Operation
		(6)	Solventas	Solventas Technical Storage
		(7)	Aslan Cement	Lafarge Aslan Cement Inc.
		(8)	Altinel	Altinel Melamin Industry
		(9)	Poliport	Poliport Chemical Industry
		(10)	Nuh Cement	Nuh Cement Industry
		(11)	Kirlangic Inc.Co. Pier	Kirlangic Inc.Co. Pier
		(12)	Rota Cement	Rota Shipping Inc.
		(13)	Aygaz	Aygaz Yarimca Facilities
		(14)	Petline	Petline Transport and warehouse
		(15)	Transturk	Transturk Chemical Inc.
		(16)	Melas	Adapazan Suger Factory Inc.
		(17)	Igsas	Istanbul Fertilizer Industry Inc.
		(18)	Diler	Ok Shipping Trade Inc.
		(19)	Gubretas	Gubretas Fertilizer Factory
		(20)	Yarimuca Municipality Pier	Yarimuca Municipality
		(21)	Petkin	Petkin Petrochemical Inc.
		(22)	Tupras	Turkish Petrochemical Refineries
		(23)	Karayollari	Karayollari Asphalt Facilities
		(24)	Cholorin Alkaline	Cholorin Alkaline Industrial Products
		(25)	Shell	Shell Turkey
		(26)	Derince	TCDD
		(27)	Limas	UM Shipping Industry Inc.
		(28)	Petro Ofisi	Petro Ofisi Inc.
		(29)	Seka	Izmit Cellulose and Paper Industry
31	Darica	(1)	TDI Pier	TDI Inc.
		(2)	Aslan Cement	Aslan Cement Inc.
32	Haydarpasa	(1)	Haydarpasa Port	TCDD
33	Istanbul Salipazar	(1)	Salipazari Berth	TDI Inc.
34	Istanbul Zeyport	(1)	Zeyport	Zeytinburnu Port Operation
35	Ambarli	(1)	Kumport	S.S. Ist. Rati Yakasi Sand Production
		(2)	Akcansa	Akcansa Cement Trade Inc.
		(3)	Mardas	Mardas Marmara Shipping Inc.
		(4)	Armaport	Armatrorler Port Operation Ind.
		(5)	Anadolu	Anadolu Cement Inc.
		(6)	Soyak Port	Soyak Port Angurya Ciftligi Mevkii
		(7)	Total	Total Oil Inc.
36	Silivri	(1)	Silivri Municipality Pier	Silivri Municipality
37	Tekirdag	(1)	Akport	Tekirdag Akport Port Operation
		(2)	Martas Marmara Port Faciliti	Martas Marmara Port Facilities Inc.
		(3)	TMO Pier	TMO

	Name of Port and Group Port		Respective Port/ Port Facility	Port/ Port Facility Managing Body
37	Tekirdag	(4) (5) (6) (7) (8)	Saraphane Pier Murefle Pier Sarkoy Pier M. Ereglisi Botas LNG Term M Ereglisi Karayollari Pier	Tekirdag Wine and Beverage Murefle Municipality Sarkoy Municipality Botas Pipeline Petroleum Transport General Directorate of Highways
(Black Sea)				
38	Sile	(1)	Sile Port	Sile Municipality
39	Kefken	(1)	Kefken Island Pier	TKE Tahlisiye Division Directorate
40	Eregli	(1) (2) (3)	Erdemir Port(Uzunkum) Barinak Berth Amac Shipping Berth/Pier	Eregli Iron and Steel Factory Inc. Ministry of Finance Amac Shipping Petroleum Products
41	Zonguldak	(1)	Zonguldak Port	Turkish Hard Coal Institution
42	Bartın	(1)	Bartın Port	Bartın Municipality
43	Amasura	(1)	Amarusa Port	Amarusa Municipality
44	Cide	(1)	Kurucasile Port	Kurucasile Municipality
45	Inebolu	(1)	Inebolu Port	Inebolu Municipality
46	Ayancik	(1)	Ayancik Municipality Pier	Ayancik Municipality
47	Sinop	(1)	Sinop Pier	Cakiroglu Sinop Port Operation
48	Gerze	(1)	Gerze Pier	Gerze Municipality
49	Samsun	(1) (2)	Sumsun Port Samsun Nitrogen Pier	TCDD Samsun Fertilizer Industry Inc.
50	Unye	(1)	Unye Port	Unye Municipality
51	Fatsa	(1)	Fatsa Municipality Berth/ Pie	Fatsa Municipality
52	Ordu	(1)	Ordu Pier	Cakiroglu Ordu Port Operation
53	Giresun	(1)	Giresun Port	Cakiroglu Giresun Port Operation
54	Vakfikebir	(1)	Vakfikebir Pier	Vakfikebir Municipality
55	Akcaabat	(1)	Akcaabat Pier	Akcaabat Municipality
56	Trabzon	(1)	Trabzon Port	TDI Inc.
57	Rize	(1)	Rize Port	Riport Rize Port Operation
58	Cayeli	(1)	Unye Cement Cayeli Port	Unye Cement
59	Pazar	(1)	Pazar Pier	
60	Hopa	(1)	Hopa Port	Park Shipping Hopa Port Operation

8.3 Port facilities

8.3.1 Outline of Nationwide Port Facilities

Outlines provided here are based on information obtained by the Prime Ministry Undersecretariat of Maritime Affairs, and detailed data collected from large-scale ports in each coastal region of the Mediterranean Sea, the Aegean Sea, the Marmara Sea and the Black Sea.

As this master plan (ULIMAP) focuses on cargo and passenger traffic, fisherman's shelters and marinas are not treated here.

The above-mentioned large scale ports include TCDD operating ports of all and a part of TDI operating ports, privatized ports of TDI, the industrial ports of the state owned companies, municipal ports and ports being operated by the private sector.

The number of nationwide ports related to cargo handling and passenger is 149 based on the data of the Prime Ministry Undersecretariat of Maritime Affairs. This data also contains rough information of port facilities such as berth lengths, depths and so on. The 150 ports include the seven TCDD operating ports, 20 ports of TDI operating ports and the privatized ports of TDI, and 122 other ports (which are the industrial ports of state owned companies operating, municipal ports and private sector ports).

The total berth length of 149 nationwide ports is 70,099m, while the maximum depth is -29m. Industrial ports have greater depths than other ports. The total berth length of seven TCDD operating ports is 16,007m, while the maximum depth of -15m is found at Derince port. The total berth length of 20 ports on TDI and its relations that are mentioned above is 12,125m, and maximum depth is -12m. The total berth length of 122 other ports is 41,967m, while the maximum depth of -29m is found at Izmit Tupras Port of the private sector. A summary of the nationwide port facilities is shown in Table 8.3.1. Berth lengths and depths of each port are shown in Table A8.3.1 in Appendix for Chapter 8.

8.3.2 Facilities and Cargo Handling Equipment

The port facilities and cargo handling equipment for container, such as container berth, container yard, gantry crane and container forklift, are provided at Mersin port, Izmir port, Derince port and Haydarpasa port among the seven TCDD ports. Although Derince port does not currently have a gantry crane, two gantry cranes of 40 ton capacity are going to be introduced.

There are four container berths (980m in length and -14m maximum depth) at Mersin port. The container yard area is 266,130sq.m, the two CFS are 10,955sq.m. The port is equipped with three container cranes, seven transtainers, eight reach stackers and seven container forklifts.

At Izmir port, container vessels can berth simultaneously at five berths (1,050m in length

and -13m maximum depth). The container yard area is 211,017sq.m, the CFS is 18,005sq.m. The port is equipped with five container cranes, nine transtainers, 19 reach stackers and 28 container forklifts.

There is only one container berth at Derince port of 200m length and -14m depth. At present, the port is not furnished with a container yard, but a contract (by BOT) to build a 200,000sq.m yard was concluded in April of 1999. The port is equipped with one general purpose crane, four reach stackers and two container forklifts.

At Haydarpasa port, container vessels can berth simultaneously at four berths (650m length and -12m maximum depth). The container yard area is 179,040sq.m, the CFS is 3,600sq.m. Container inland terminal extends across an area of 55,000sq.m and is 5km away from the port. The port is equipped with four container cranes, nine transtainers, 15 reach stackers and 21 container forklifts.

A summary of the above mentioned port facilities and container handling equipment is shown in Table 8.3.2. The detailed data of each port, including the facilities and cargo handling equipment of general cargo, grain bulk and ferry, is shown from Table A8.3.2 to A8.3.9 in Appendix for Chapter 8.

Table 8.3.1 Summary of the Nationwide Port Facilities in Turkey

(Unit: m)

Port	Numbers	Berth		Average length per port
		Length	Max. depth	
TCDD ports	7	16,007	-15	2,287
TDI ports and the privatized ports of TDI	20	12,125	-12	606
Other ports (operated by the state own companies, municipalities and private sectors)	122	41,967	-29	344
Total	149	70,099	-29	470

Note: Fisherman shelters, yacht harbors and army ports are excluded from the above mentioned ports.

Source: Maritime Affairs

Table 8.3.2 Container facilities and Cargo Handling Equipment of TCDD Ports

Port	Container berth			Container Yard (sq.m)	CFS (sq.m)	Container handling equipment			
	Numbers	Length (m)	Max. depth (m)			G.C.	Trans.	Reach Stack.	Con. fork.
Mersin	4	980	-14	266,130	10,955	3	7	8	7
Izmir	5	1,050	-13	211,017	18,005	5	9	19	28
Derince	1	200	-14	On-going construction		1 (General shore)	0	4	2
Haydarpasa	4	650	-12	179,040 55,000 Inland	3,600	4	9	15	21
Total	14	2,880		711,187	32,560	12	25	46	58

Source: TCDD

8.4 Capacities

8.4.1 Capacity of Existing and Planned Facilities

The productivity of cargo handling equipment, the size and number of vessels that can be accommodated at the same time and the storage capacity of yard are the principal factors which determine the cargo handling capacity of a port. When these three factors are in balance, a port can be said to be rational.

If these three factors are poorly balanced, the capacity of the port will be determined by the lowest of the three factors. And these capacities are calculated by using parameter such as the berth length/numbers, depth, equipment capacity/numbers, yard area, cargo dwelling time and so on. The effect of wind and wave would also be considered in ports with severe natural condition.

Furthermore the cargo handling activity of some existing ports might be limited by a breakdown of equipment, silutation of channel/basin and lack of storage area.

In this master plan, the examination of existing capacities is carried out based on the existing documents, interviews and site surveys. The capacity of a representative Turkish port such as a TCDD port is used to evaluate the formula and input data. An example for the evaluation of productivity is shown in Appendix 8.4.1

With regard to all cargo types, annual amount of cargo handling volume of the nationwide

ports is approximately 156 million tons in 1998, while total capacity of the existing nationwide ports is assumed to be approximately 440 million tons.

Some 40% (64 million tons) of the nationwide cargo handling volume is concentrated in the Marmara region, while only some 31% (140 million tons) of the existing nationwide capacity is found in the region. The Aegean region handles approximately 27% of the cargo handling volume which equals its existing capacity (cargo volume: 42 million tons, existing capacity: 120million tons). The Mediterranean region handles approximately 22% (35 millon tons) of the nationwide cargo handling volume, while the existing capacity is approximately 36% (160 million tons) which makes region the most amenable to cargo handling of the four regions. The Black Sea region handles less than 10% of the cargo handling volume which matches its capacity (cargo volume: 15 million tons, existing capacity: 26 million tons).

However, as port cargo handling activities differ by cargo type, capacities need to be considered for each cargo type.

Concerning container cargo, annual amount of the cargo handling volume of the nationwide ports is approximately 1.36 million TEUs in 1998, while the total capacity of the existing nationwide ports is assumed to be approximately 1.81 million TEUs. Container handling volume amounts to some 75% of the existing capacity, which indicates that present port activity is dominated by container handling.

Some 52% (0.7 million TEUs) of the nationwide container handling volume is concentrated in the Marmara region, while some 44% (0.80 million TEUs) of the existing nationwide capacity is found in the region. The Aegean region handles approximately 30% (0.4 million TEUs) of the container handling volume, while the existing capacity is approximately 24% (0.44 million TEUs). Urgent countermeasures will be required to cope with this lack of capacity. The Mediterranean region handles approximately 18% (0.24 million TEUs) of the nationwide container handling volume, while the existing capacity is approximately 22% (0.39 million TEUs), which is a relatively good balance. The Black Sea region handles few containers at present (container volume: 0.01 million TEUs, existing capacity: 0.18 million TEUs).

Concerning present container handling, the prosperous ports for container handling activity tend to suffer a lack of storage capacity because there is no room for expansion.

The present condition of port capacity is summarized from Table 8.4.1 to 8.4.3. Details of existing and planned capacity by each cargo type are shown from Table A8.4.1 (1) to (5) in Appendix for Chapter 8.

The existing principal port development projects are introduced in Chapter 9.

Table 8.4.1 Container Handling Capacity of Nationwide Ports

(Unit: Million tons/year)

Region	Capacity of container						Ratio	
	Existing	Expansion*	Planned	Exist+Expan	Expan+Plan	Total	(A)+(B)	(A)+(B)+(C)
	(A)	(B)	(C)	(A)+(B)	(B)+(C)	(A)+(B)+(C)	(A)	(A)
Mediterranean	4	6	10	10	16	20	2.40	4.78
(Million TEUs)	0.39	0.48	1.00	0.87	1.48	1.87	2.22	4.77
Aegean	4	5	11	9	16	20	2.13	4.81
(Million TEUs)	0.44	0.50	1.10	0.94	1.60	2.05	2.13	4.62
Marmara	7	7	16	14	23	30	2.02	4.29
(Million TEUs)	0.80	0.73	1.68	1.53	2.42	3.21	1.92	4.04
Black Sea	2	1	6	3	7	9	1.53	4.51
(Million TEUs)	0.18	0.16	0.84	0.34	1.00	1.18	1.87	6.43
Total	17	19	43	36	61	78	2.08	4.56
(Million TEUs)	1.81	1.87	4.62	3.69	6.50	8.31	2.03	4.58

Source: Prepared by JICA Study team

Table 8.4.2 General Cargo Handling Capacity of Nationwide Ports

(Unit: Million tons/year)

Region	Capacity of general cargo*						Ratio	
	Existing	Expansion	Planned	Exist+Expan	Expan+Plan	Total	(A)+(B)	(A)+(B)+(C)
	(A)	(B)	(C)	(A)+(B)	(B)+(C)	(A)+(B)+(C)	(A)	(A)
Mediterranean	12	0	2	12	2	14	1.00	1.17
Aegean	13	0	4	13	4	17	1.00	1.31
Marmara	22	0	3	22	3	25	1.00	1.12
Black Sea	13	4	8	17	12	25	1.28	1.90
Total	60	4	17	64	21	81	1.06	1.34

*: Except for container

Source: Prepared by JICA Study team

Table 8.4.3 Dry Bulk Cargo Handling Capacity of Nationwide Ports

(Unit: Million tons/year)

Region	Capacity of dry bulk cargo						Ratio	
	Existing	Expansion	Planned	Exist+Expan	Expan+Plan	Total	(A)+(B)	(A)+(B)+(C)
	(A)	(B)	(C)	(A)+(B)	(B)+(C)	(A)+(B)+(C)	(A)	(A)
Mediterr. (grain)	7	0	2	7	2	9	1.00	1.28
(ore/coal)	32	0	0	32	0	32	1.00	1.00
Aegean(grain)	2	0	3	2	3	5	1.00	2.97
(ore/coal)	5	0	0	5	0	5	1.00	1.00
Marmara(grain)	10	0	2	10	2	12	1.00	1.22
(ore/coal)	27	0	4	27	4	32	1.00	1.16
Black Sea(grain)	1	0	1	1	1	2	1.00	2.06
(ore/coal)	11	0.2	7	11	7	18	1.02	1.62
Sub total (grain)	20	0	8	20	8	28	1.00	1.43
(ore/coal)	75	0.2	11	76	11	87	1.00	1.15
Total	95	0.2	20	95	20	115	1.00	1.21

Source: Prepared by JICA Study team

8.4.2 Calculating Method of Loading/Unloading Capacity

According to the information of TCDD, the calculating methodology of loading/unloading capacity by cargo handling equipment is as follows. (The formula is used to calculate handling amount of cargo handling equipment for per shift):

$$EK = GS \times CS \times TS \times AU \times VE \times RI = \text{TEU/year}$$

EK: Loading/unloading capacity by cargo handling equipment

GS: Number of crane's working days within a year

CS: Working period of one shift (hour)

TS: Average container which the crane can handle in an hour (TEU)

AU: Utilization of cargo handling equipment

VE: Activity coefficient of one shift

RI: Berth occupation rate

For example, the figures for container are as follows:

GS: 330days/year

CS: 7.5hours/shift

TS: 30TEU/hour

AU: 0.9

VE: 100% to one shift, 90% to two shift, 75% to three shift

RI: 0.5

For one shift: $EK = 330 \times 7.5 \times 30 \times 0.9 \times 1.0 \times 0.5 = 33,412\text{TEU/year}$

For two shifts: $EK = 330 \times 7.5 \times 30 \times 0.9 \times 0.9 \times 0.5 = 30,071\text{TEU/year}$

For three shifts: $EK = 330 \times 7.5 \times 30 \times 0.9 \times 0.75 \times 0.5 = 25,059\text{TEU/year}$

In case of a container terminal operating 24 hours per day, annual loading/unloading capacity per container crane is 88,542TEUs/year based on the above calculation.

According to the above methodology, capacity at Mersin port, Izmir port and Haydarpasa port, the only TCDD ports equipped with gantry cranes at present, is 2,855,500tons/year, 4,081,800tons/year and 3,081,500tons/year respectively.

Based on TCDD records, 60% of containers handled are full, while 40% are empty. Accordingly, average weight of 1TEU is 10.75 tons for Mersin port, 9.22 tons for Izmir port and 8.7 tons in Haydarpasa port.

Therefore, container handling capacities of the above ports can be converted to 265,625TEUs/year (Mersin), 442,708TEUs/year (Izmir) and 354,166TEUs/year (Haydarpasa).

The above mentioned capacities are summarized in Table 8.4.4. The loading/unloading capacities of general cargo and dry bulk are also calculated by the above mentioned

methodology. The result is shown from Table A8.4.2 to A8.4.3 in Appendix for Chapter 8.

Table 8.4.4 Loading/unloading Capacity by Container Cranes at TCDD Ports

Port	tons/year	TEUs/year
Mersin	2,855,500	265,625
Izmir	4,081,800	442,708
Haydarpasa	3,081,500	354,166
Total	10,018,800	1,062,499

Source: TCDD

8.4.3 Calculating Method of Storage Capacity

Generally, the calculating methodology of storage capacity of open areas and closed areas is as follows.

$$SK = \frac{DA \times TE \times IG \times (KO)}{DP}$$

SK: Storage capacity

DA: Opened or closed storage area

TE: Materials which can be put in 1 sq.m area

IG: Working days

KO: Rate of using the storage area

DP: Period of load circulation

In the case of general cargo, the figures are usually given as follows:

TE: In an open storage a load of 3 tons can be put in an area of 1 sq.m, in a closed storage a load of 2 tons can be put in an area of 1 sq.m.

IG: One calendar year is 360 working days (three shifts: 22.5hours x 360 =8100hours/year)

KO: 2/3 of storage area is used.

DP: It is accepted that in ordinary conditions load will be circulated in period of 30 days

According to the above methodology, the storage capacities of open and closed area at TCDD ports are 9,285,440tons/year for Iskenderun port, 8,672,016tons/year for Mersin port, 943,568tons/year for Izmir port, 2,012,280tons/year for Bandirma port, 3,151,760tons/year for Derince port, 779,744tons/year for Haydarpasa port and 8,749,024tons/year for Samsun port.

To calculate storage capacity of containers, another method which considers conditions such as the existing ground slots, container circulating period on yard and so on is employed. Based on data of TCDD, the capacities are calculated as 63,168TEUs/year for Iskenderun port, 203,376TEUs/year for Mersin port, 265,728TEUs/year for Izmir port and 52,800TEUs/year for Haydarpasa port.

The above mentioned capacities are summarized in Table 8.4.5. Details of storage and cargo handling capacity at TCDD ports are shown from Table A8.3.2 to A8.3.8, together with the above-mentioned port facility data, in Appendix for Chapter 8.

Table 8.4.5 Storage Capacity of General Cargo and Container at TCDD Ports

Port	General cargo		Container	
	Area (sq.m)	Storage capacity (tons/year)	Area (sq.m)	Storage capacity (TEUs/year)
Iskenderun	393,025	9,285,440	41,007 (General yard)	63,168
Mersin	372,728	8,672,016	277,085	203,376
Izmir	61,248	943,568	211,017	265,728
Bandirma	101,252	2,012,280	-	-
Derince	156,915	3,151,760	-	-
Haidarpasa	38,819	779,744	237,640 (including inland)	264,000
Samsun	401,500	8,749,024	-	-
Total	1,525,487	33,593,832	766,749	796,272

Source: TCDD

8.5 Construction Cost

8.5.1 Outline of Port Construction Cost

To understand the cost of construction for existing ports in Turkey, it is necessary to grasp the cost estimation categorized by facility dimension and structure type.

According to data of TCDD, the construction cost of port facilities of seven TCDD operating ports is US\$15,965,276,337 over an area of 4,269,320sq.m. The cost includes the construction of open and closed storage areas, concrete areas, warehouses, mooring facilities, breakwaters, railway, buildings and so on. The purchase of cargo handling

equipment and the dredging cost of channel and basin construction are not included in the cost. The cost is given in 1997 real price.

The construction cost of berths with a total length of 16,684m is US\$237,683,148, the construction cost of breakwaters with a total length of 12,325m is US\$126,218,372, the construction cost of concrete areas with 2,898,285sq.m is US\$58,411,278, the construction cost of railways with a total length of 106,967m is US\$14,691,042, the construction cost of warehouses with 126,759sq.m is US\$32,990,126 and CFS with 18,005sq.m is US\$520,525.

Above mentioned costs and facility dimensions are shown in Table 8.5.1. The detailed cost estimation of seven TCDD ports is shown from Table A8.5.1 to A8.5.7 in Appendix for Chapter 8.

Table 8.5.1 Construction Cost Estimation of Seven TDCC Ports
(Unit:US\$)

Construction item	Quantity	Construction cost	Cost per unit
Berth	16,684m	237,683,148	14,246\$/m
Breakwater	12,325m	126,218,372	10,241\$/m
Concrete area	2,898,285sq.m	58,411,278	20\$/sq.m
Railway	106,967m	14,691,042	137\$/m
Warehouse	126,759sq.m	32,990,126	260\$/sq.m
CFS	3,400sq.m	520,525	153\$/sq.m
Other	4,269,320sq.m	15,521,195,449	-
Total	4,269,320sq.m	15,991,709,940	3,746\$/sq.m

Source: TCDD

8.5.2 Construction Cost for Berth and Breakwater

To clearly understand berth construction cost, some examples are introduced in which cost are categorized by structure and facility type.

Using records of DLH, the extension of Mersin container terminal is introduced as an example of construction cost. The preliminary design was estimated under the condition of berth length 270m, depth -14m, structure type being concrete block and the reclamation of 36,000sq.m. The cost was estimated at TL35,000,000,000 in 1992 prices, then converted into 1999 value, or US\$5,000,000. The construction was completed in 1999.

The extension of Izmir container terminal is introduced as a second example. The preliminary design was estimated under the condition of berth length 1,450m (seven berths), depth -7 to -13m, structure type being concrete pile and concrete block mould area of 44,600sq.m. The cost was estimated at TL488,000,000,000 in 1978 prices, then converted into 1999 value, or US\$13,900,000.

The new construction of Canakkale Kepez multipurpose general cargo terminal is introduced as the third example of construction cost. The preliminary design was estimated under the condition of berth length 429m (two berths), depth -8 to -25m, structure type being steel pile and terminal combined jetty with reclamation yard area of 33,000sq.m. The cost was estimated at TL187,789,096,394 in 1994 prices, then converted into 1999 value, or US\$9,700,000. The construction is going to be completed in 1999.

The extension construction of Giresun general cargo berth is introduced as the fourth example. The preliminary design was estimated under the condition of the berth length 270m, depth -10m, structure type being concrete block, reclamation area of 40,000sq.m and the breakwater extension of 240m long. The cost was estimated at TL420,000,000,000 in 1995 prices, then converted into 1999 values, or US\$9,900,000.

The breakwater construction of Mersin yacht port is introduced as the fifth example of construction cost. The preliminary design was estimated under the condition of length 960m, depth -7.5m, crown height +5.5m and structure type being rubble mount. The cost was estimated at TL110,000,000,000 in 1993 prices, then converted into 1999 value, or US\$9,500,000. Above-mentioned costs and structure types are summarized in Table 8.5.2.

Table 8.5.2 Construction Cost Related to the Structure Type

(Unit: US\$)

Port	Facility Type	Structure Type	Length (m)	Depth (m)	Area (sq.m)	Rough cost	\$/m	\$/sq.m
Mersin	Container berth	Concrete block	270	-14	36,000	5,000,000	18,519	139
Izmir	Container berth	Concrete pile	1,450	-7 to -13	44,600	13,900,000	9,586	312
Canakkale Kepez	Multipurpose general cargo berth	Steel pile (Jetty)	429	-8 to -25	33,000	9,700,000	22,610	294
Giresun	General cargo berth	Concrete block	270	-10	40,000	9,900,000	36,667	248
Mersin yacht	Breakwater	Rubble mount	960	-7.5	-	9,500,000	9,896	-

Source: DLH

In accordance with the three dredging records of DLH on Bandirma port from 1989 to 1997, the average dredging volume is approximately 45,000sq.m, the distance of unloading place two to five miles. Dredging method uses a surface digging machine (back-hoe type) and a pontoon of 500cu.m which is opened from the middle. The operating expense is estimated at US\$1 to 1.2 /cu.m.

8.5.3 Purchase Cost of Cargo Handling Equipment

In order to understand the present cost of cargo handling equipment, the purchase price of the equipment is grasped based on the data of TCDD. All of the cargo equipment is purchased by TCDD head office, and then assigned to each TCDD operating port. Usually, the cargo handling equipment purchased is new rather than used.

Recent purchase price of handling equipment is as follows:

Gantry crane (40 ton capacity)	: US\$5,000,000
Transtainer (40 ton)	: US\$750,000
Reach stacker (42 ton)	: US\$400,000
Container forklift (40 ton)	: US\$200,000
Forklift (10 ton)	: US\$95,000

8.6 Evaluation on Facility and Cost

With regard to the nationwide ports which handle cargo or passengers, the average berth length per port is approximately 500m. TCDD ports are 2,300m long on average, TDI and the privatized ports of TDI are 600m and the other ports 400m. TCDD ports are large-scale ports not only in terms of cargo handling volume but also in terms of port facility dimensions.

As for container terminals in Turkey, average berth length is approximately 200m and the depth -13m based on the result of the present analysis of the container berth equipped with gantry cranes at TCDD ports.

By international standards, the existing container berths are feeder container port size. If some Turkish container ports aim at becoming hub ports in future, a berth length of over 300m and or depth of over -15m would be required.

Chapter 9 Existing Port Development Projects

The outlines of existing port development projects related here are extracted from the report from the "Maritime Transport Study Group".

9.1 Black Sea Region

(1) Trabzon port

At Trabzon port, the construction of a multi purpose container terminal which has a length of 830 meters and the container handling capacity of 175,000 TEU/year has been completed.

However, the services which are expected from a container terminal can not be sufficiently provided due to inadequate equipment, inefficient operation, and poor road connections.

(2) Samsun port

Due to its "railway and highway connections" and its "large and protected water area", Samsun port would be a strong candidate site for expansion in the event that traffic on the Black Sea greatly increase. The new container terminal project of Samsun Port will create an additional capacity of 200 000 TEU/year.

(3) Giresun port

Expansion works at Giresun port are still continuing (additional capacity 1.1million ton/year). The port is expected to be operated with more efficiency as a result of the addition of a berth (length 200m, depth -10 m) and a breakwater (240m extention).

(4) Filyos port

A new port project is planned on the western Black Sea region at the point where Filyos creek pours into the sea. The contract was concluded in March 1999 on the basis of Build–Operate–Transfer method. A capacity of 5 million tons/year in the first stage and 25 million tons/year in total (800,000TEU/year capacity) will result from this project.

With this project, in order to meet the demand by cargo traffic which will be focused in the western Black Sea , the gate-way of the new industrial zones and free zones which are to be located on the hinterland of the port to the sea is established.

The construction cost is US\$ 151 million for the first stage and US\$ 753 million in total.

(5) Other ports

Feasibility Studies of new projects at Orudu port (3 million tons/year capacity) and Sinop port (3 million tons/year capacity) are currently being executed.

New project of Hopa port (1.4 million ton/year capacity) is in the bidding stage. A breakwater extension project is on-going.

9.2 Marmara Region

Based on the “Marmara Region Port Master Plan Study (1998)” conducted by JICA and the fact that the container cargo demand in Marmara Region is expected to reach to 2.5 million TEU in the year 2015, the construction of Derince container terminal, North Marmara port and the additional facilities at Bandirma port are deemed necessary in order to meet future demand.

(1) Derince port

The construction of Derince container terminal, which has a planned capacity of 1 million TEU in addition to the expansion of the existing port (construction of an additional berth with a length of 200 m), was contracted in April 1999. The terminal will have a 0.5 million TEU/year capacity in the first stage.

The total construction cost is US\$ 217 million.

Derince container terminal was contracted on the basis of the BOT (Build, Operate, Transfer) model as an initial solution for the congestion which is experienced in Marmara region. Derince container terminal is expected to provide services not only for the regional requirements but also for the international container lines.

(2) Northern Marmara port (Tekirdag)

The expected capacity of Northern Marmara port is 688 000 TEU.

(3) Bandirma port

The construction of the new facilities at Bandirma port creates an additional capacity of approximately 180,000 TEU.

9.3 Aegean Region

(1) Izmir port

The preliminary feasibility study related to these projects is being carried out by former OECF. In case credit is received from OECF, the dredging, expansion and equipment supply works of the existing port will be completed in 2 years time.

The tender announcement was made for the extension of the container terminal and dredging in September 1999.

(2) Northern Aegean port (Kuzey Ege)

In this region, there is a need for the construction of a new port (20 million ton/year, 1 million TEU capacity) at an appropriate location in order to meet the port services requirements which are to emerge in the years to come. The feasibility study and EIA (Environmental Impact Assessment) study on the possibility of Northern Aegean port serving as a mother port have been completed.

9.4 Mediterranean Region

(1) Iskenderun port

A container terminal project is planned for the expansion of Iskenderun port, which will result in an additional container handling capacity of 300,000 TEU/year.

The tender announcement was made for the container terminal in September 1999. Furthermore, the bidding is scheduled for 20th October 1999.

(2) Mersin container port

With the construction of the Mersin container port which is planned to be located near Mersin port, the port services will be provided on this main line with a capacity of 1 million TEU. The feasibility study on this project have been completed.

(3) Other port

Feasibility Study of new projects at Gelibolu port is currently being executed.

In case the above-mentioned existing port development projects are carried out, total additional capacity of 5.2 million TEU will be secured. A summary of the above-mentioned investments is shown in Table 9.1.1.

Table 9.1.1 Additional Container Capacity

Name of the project	Capacity
Derince port container terminal	1,000,000 TEU
Iskenderun port container terminal	300,000 TEU
Filyos port	800,000 TEU
Samsun port	200,000 TEU
Bandirma port	180,000 TEU
Mersin container port	1,000,000 TEU
Northern Aegean port (Kuzey Ege)	1,000,000 TEU
Northern Marmara port (Tekirdag)	688,000 TEU
Total	5,168,000 TEU

9.5 Evaluation of Projects

If the construction of modern port facilities in the Iskenderun, Mersin, Kuzey Ege, Tekirdag, Derince, Filyos ports is realized within the planned period, Turkey will be able to become a key player in terms of container cargo traffic.

Furthermore, if such modern ports can be located near international container routes, those ports would have the possibility of functioning as hub ports.

Chapter 10 Port Management and Operation

10.1. Port Administration System

10.1.1 Classification of Ports and Piers

The total coastline of Turkey is 8,333 km. There are approximately 390 shore facilities including ports, piers, yacht marinas and fishing shelters. The ports and piers except yacht marinas and fishing shelters are divided into 3 groups; ports & piers operated by public sectors (including TCDD, TDI, and industrial corporations), ports & piers operated by private sectors and ports & piers operated by regional municipalities.

Table 10.1.1 Classification of ports and piers

Classification of port & piers	Operators (Examples)	Number of ports & piers	Total length of ports & piers (m)
Public sectors	(TCDD)	(7)	(16,458)
	(TDI)	(9)*	(5,593)
	(Industrial corporations)	(37)	(30,662)
	• Turkish Pipeline Corporation (BOTAS)		
	• Iskenderun Iron Steel Factories (ISDEMIR)		
	• Cellulose and Paper Corporation (SEKA)		
	• Turkish Petrochemical Corporation (PETKIM)		
	• Turkish Oil Refineries		
	• Eregli Iron Steel Factories (ERDEMIR)		
	• Turkish Coal Management (TTK) etc.		
	(TOTAL)	53	52,713
Regional Municipalities		38	11,018
Private sectors		58**	28,626

Source: Turkish Shipping Sector Report '98, etc

*Trabzon, Alanya, Istanbul, Kabatepe, Kusadashi, Cesme, Marmaris, Gulluk, and Dikili

**Includes privatized TDI ports (Antalya, Giresun, Hopa, Ordu, Rize, Sinop, and Tekirdag)

As for public ports, major general-purpose ports are operated by two state economic enterprises, i.e. Turkish State Railways (TCDD) and Turkish Maritime Organization (TDI)¹. Ports connected with railway networks are operated by TCDD and the other ports are operated by TDI. These major public ports for general-purpose are under control of the Ministry of Transport which approves the budgets and annual programs of TCDD and TDI. Today most of TDI ports have been already been privatized.

¹ TDI was privatized as TDI Inc. Co. in 1995.

Major public ports for specialized-purpose are operated by state industrial enterprises or semi-public sectors. These ports are under the control of the Ministry of Industry and are mostly confined in purpose to the particular needs of industrial concerns. Some state industrial enterprises are under the control of Privatization Administration, as privatization is making progress recently.

Regional municipalities ports are comparatively small and limited to relatively small volume of coastal traffic serving local needs of provincial towns.

Private ports are constructed and managed by themselves after getting approval from the competent ministries such as Ministry of Public Works and Settlements, Ministry of Transport, Prime Ministry Undersecretariat of Maritime Affairs, Ministry of Finance, Ministry of Environment and so on.

10.1.2 Coordination Function by the Central Government

(1) Port development (Land area)

The General Directorate for Construction of Railways, Ports, and Airports (DLH) formulates development plans and construct port infrastructure for public general-purpose ports (including regional municipalities ports). Some of its maintenance works, which are required vast investment, are also done by DLH. Ministry of Transport proposes port development projects prepared by DLH to State Planning Organization (SPO). SPO considers the total balance of investment in Turkey by giving priorities of projects and judges the feasibility of specific construction. When they are approved by SPO in the Five-Year Development Plan, the Ministry of Finance gives finance for the investment. In the case of private ports and industrial enterprises, they constructed by themselves. DLH only approves their projects and controls all construction.

In general, investors including all private and public institutions or persons who construct coastal structures such as berths, ports, shelters, mooring facilities, piers, breakwaters, etc. or who have them must get approvals from the competent government organizations including DLH. First, the related governor of the province reviews the investment plans, which include whole dimensions and properties of the structures, and reports on the backgrounds and the local information of the area. Then, the Ministry of Public works and Settlement examines the proposal in terms of the general and regional planning principles, and general settlement plan decisions. Prime Ministry Undersecretariat of Maritime Affairs, Ministry of Transport, and Ministry of Environment are also involved in this process. After getting approval by the Ministry of Public works and Settlement, DLH examines the implementation projects from technical point of view. The investors construct with their full responsibilities under control of DLH. After the construction, Prime Ministry Undersecretariat of Maritime Affairs gives the investors the operating rights based on their application.

(2) Maritime affairs

As for maritime affairs, Prime Ministry Undersecretariat of Maritime Affairs has the

responsibilities. The main responsibilities are as follows.

- To take measures providing incentive for the development of maritime trade, maritime ship fleet and shipping industry, and render development and use of maritime industry, sea and fresh waters
- To determine the needs and the requirements related to maritime affairs and making plans accordingly
- To take measures to provide safety of life and asset in the seas
- To determine the basic principle and policy to indicate the technical qualifications & sufficiency of the marine vessels as well as seafarers and make coordination
- To direct and coordinate the other maritime relevant organizations in line with the state's maritime policy and strategy
- To determine the sufficient conditions and principles of services for the maritime agencies and brokers, to inspect and provide necessary certificates for them
- To take all necessary measures to prevent deterioration and pollution of marine environment, to render monitoring and surveillance and to coordinate with the other relevant organizations
- To hold the register for seafarers

Prime Ministry Undersecretariat of Maritime Affairs (PMUMA) has seven District Directorates (Trabzon, Samsun, Istanbul, Canakkale, Izmir, Antalya, and Mersin). Portmaster is stationed at 67 main ports to control sea area and operational matters on ports and piers. Portmasters give certificates of sea going to vessels to navigate based on their applications including documents on clearance for entry/departure and manifests. Each captain calling at ports also has obligation to report to the related portmaster on the information about the ship, cargoes and its route. Those collected data are processed in portmasters and sent to the Headquarters. The headquarters in Ankara enter these data into their computers. Since the software system in portmasters office and the headquarters are different. This includes the breakdown of all ports and piers on operators and basic information of the facilities and those handling cargo volumes in terms of harbors in each District Directorate. The various statistical tables are submitted to relevant governmental bodies including State Institute of Statistics (SIS) and private sector regularly or upon request such as Turkish Maritime Shipping Chamber, State Planning Organization, Undersecretariat of Treasury, Undersecretariat for Foreign Trade, Undersecretariat for Customs Affairs, Ministry of Finance, Ministry of Labor and private organizations such as shipping companies and trade/investment consultancy companies.

(3) City planning

The Ministry of Public Works and Settlement prepares territorial plans. According to the Planning law (No.3194), physical planning hierarchy was defined as follows; regional plans, territorial plans, overall city plans, and implementation plans. Territorial plans are located in the highest level of the physical planning hierarchy. These plans which are sub-regional in character, parallel to national and regional development decisions, define the land use principles of housing, industry, agriculture, tourism, transportation sectors. Territorial plans can include more than one municipality government. A lot of territorial plans particularly for coastal areas and for areas

undergoing rapid industrial growth have been prepared and ratified by the General Directorate of the Ministry of Public Works and Settlement. In the planning process, coordination among the relevant administrations is provided.

In establishing nationwide port development master plans, it must be taken into consideration that they set relations with existing territorial plans. It is because any port proposal will closely effect its close surrounding and has various ingredients to the urbanization process.

A useful tool for coordinating between the existing and proposal ports, and higher scale plans, has being prepared under the General Settlement Atlas Project of Turkey. The “Turkish Planning Atlas” is an information document that provides the basic data required for the planning studies of the Ministry and all other institutions related to planning. Because national development plans of Turkey lack spatial dimensions, and investments are not distributed to achieve balanced urban and regional development. This documentary study is to give a spatial dimension to the socio-economic development plans, and to determine the site selection criterias of both private and public sector investments. It is planned to be published in 1999.

10.2. Current Situation on Port Management and Operation in Major Ports

10.2.1 Responsibilities of Port Management Bodies

- **TCDD ports**

TCDD ports are managed by the ports department in the headquarters which is responsible for the management, overall planning, functioning of the ports, and their coordination. DLH coordinates with TCDD headquarters in formulating the port development plans. Each individual port managed by a Port Manger is mainly in charge of operation including all services to ships and cargoes, using their own labor and equipment. Each port also consults and advises to the headquarters in planning of its port development.

DLH constructs port infrastructure (channels, breakwaters, berths, yards, roads and rails within port, etc.) and does maintenance work which requires vast investment.

TCDD ports procure superstructure (warehouses, CFS, cranes, and cargo handling equipment, etc.), and operate by themselves.

TCDD ports provide marine services (pilot, tug, mooring, water supply, and bunkering). In the port of Izmir, pilotage, tug, and mooring services are provided by TDI. TDI also carries out the pilotage service in the port of Haydarpasa.

- **Other ports**

Ports managed by state industrial enterprises under the control of privatization administration make port development plans and construct port infrastructure by themselves. DLH only gives approvals. Cargo handling and marine services are

provided by private companies under the control of port management bodies. Ports managed by private companies also make port development plans and construct port infrastructure by themselves after getting permission from DLH.

10.2.2 Tariffs

The central government examines and approves tariffs each port operator sets. The competent authority is different by port operators. Ministry of Transport is in charge of the port tariff of TCDD ports. TDI ports are under the jurisdiction of Prime Ministry Undersecretariat of Maritime Affairs (PMUMA). There have been no organizations to coordinate the price levels integrately so far including private ports so far.

● TCDD ports

In general, port tariffs (including cargo-handling charges) are actually decided by board of directors in the TCDD headquarters. Applications from each port operation body are admitted as they are in many cases. As the result, the level of port tariff is different among TCDD ports. Revenues from each port operation belong to the TCDD headquarters. That means each port operation body can not deal with the profit they achieved at his disposal. If necessary, each port operation body must request financial allotment to the headquarters on another occasion.

Table 10-2-1 Revenue – Expenditure Balance of Operational Activities in TCDD

	1993	1994	1995	1996	1997
1.(Passenger+Freight)					
Expenditures	9,528,177	16,096,336	28,151,476	49,854,492	99,669,219
Revenues	2,066,459	3,562,881	6,487,219	12,438,585	26,970,160
Cost coverage Ratio (%)	21.69	22.13	23.04	24.95	27.06
2. (Port services)					
Expenditures	1,728,618	2,683,695	4,320,443	7,017,866	13,936,982
Revenues	1,843,470	3,839,035	6,616,496	13,833,050	30,188,425
Cost coverage Ratio (%)	106.64	143.05	153.14	197.11	216.61
3. (Total)					
Expenditures	11,256,795	18,780,031	32,471,919	56,872,358	113,606,201
Revenues	3,909,929	7,401,916	13,103,715	26,271,635	57,158,585
Cost coverage Ratio (%)	34.73	39.41	40.35	46.19	50.31

Source: the annual statistics 1993-1997 by TCDD

(Million TL)

● Other ports

Other public ports including municipalities ports follow the port tariff of neighboring TCDD ports basically, and can decide their tariff within the TCDD tariff. Some industrial ports under privatization apply discount rate to the loading/unloading charge. Private ports can decide their tariff by themselves and have freehand to deal with their revenues based on their own port investment plans.

10.2.3 Port Promotion Activities

- **TCDD ports**

In general, the headquarters of TCDD have responsibility of ports promotion activities. Each port operation body can do research activities within its budget and report to the General Directorate. The progress of the activities is different from each TCDD port. Some ports stress their budget restriction in contrast to their intention, and others have no interest in the activities. There are some ports such as the Port of Mersin, which is very active in marketing research, in addition to setting cheaper tariff.

- **Other ports**

Some industrial ports are very active in increasing their cargo handling volume. One of the examples is the port of Tasucu. The operator, SEKA (Cellulose & Paper Corporation) who is now under privatization process, has set 25% discount tariff compared with the neighboring TCDD port. As their present cargo handling volume is quite few, they need to raise the operation rates of their facilities. Because they are pressed to be more profitable in their privatization process. The cargo handling volume of other cargoes has exceeded that of their original paper related cargoes these several years. Other examples are some industrial ports lend their own piers shippers in extraordinarily cheaper price when those facilities are out of operation. These movements cause serious damage in cargo handling volume to neighboring major ports. It is said the port of Iskenderun has been spoiled in the cargo handling volume by neighboring small piers. Private ports and piers around Marmara area are also very aggressive in collecting container cargoes. In the case of Gemport, which is located in Gemlick, they decide their tariff to be applied flexibly. This private port examines shippers' cargo handling achievement in the past and their potentials in price setting, in addition to the price of the neighboring ports. Also, their service quality stands high in public estimation, because Gemport has established the system to check their cargo handling efficiency by making advantage of their port statistics data. Their container cargo handling volume is estimated to be over 100,000 TEU in 1999 which is triple as in 1995. One of other private ports around Marmara area, Kumport has treated approximately 185,000 TEUs in 1998, which ranked 4th in Turkey, next to Izmir, Haydarpasa, and Mersin.

10.2.4 Operation and Staff Training

In major TCDD ports (Hydarpasa, Izmir, and Mersin), investment for the modernization of the cargo handling equipment has been done in January 1999. This investment includes the purchase of the latest reach stackers, transtainers, container forklifts, and a post-panamax typed gantry crane, which are expected for these main container handling ports to improve their handling efficiencies. In the port of Gemport, one of major private ports in Turkey, they operate the latest cargo handling equipment procured by lease agreements. The productivity of their container cargo handling is approximately 15-16 unit/crane/hour.

With regard to handling operation in TCDD ports, basically TCDD workers are engaged in. As an exceptional case, in the port of Izmir, there are some cases that temporary workers are dispatched from private stevedoring companies during busy time.

In TCDD ports, productivity standards to be achieved are stipulated in the collective agreement between the authorities and labor unions. Additional allowance is provided when workers achieve the standard productivity for cargo handling. TCDD also has a staff training courses, which covers maintenance, repair, operation, and tug.

In major TCDD ports, information management system using computers has being introduced. The port of Izmir has installed the system, and just started the operation. The system is developed especially for container terminals. It includes loading/unloading and container tracing information. The port of Mersin has now tackled to introduce the revised new system by the end of 1999. This revised system is scheduled to connect with shipping agencies and customs offices on line. It is planned this new system will be introduced to other main container ports (Hydarpasa and Izmir) in the future.

As for the railways connected with TCDD ports, the operation rate as a main transport measure to the destinations is extremely low at present according to interviews on sites.

Another dimension as an obstacle to efficient cargo handling is a customs procedure. It takes too much time for clearance, and interrupts the smooth operation of the imported cargo. Present customs regulations and laws do not contain a special definition for containers, and treat the containers as goods, even though it is empty or not. Therefore, containers can be brought outside the customs zone through temporary imports only.

10.3. Port Privatization and its Impact

10.3.1 Privatization as State Strategy

Generally, privatization has been regarded one of the most essential financial reforms of the global economic agenda since cold war. In this context, efforts for minimizing government involvement over the economy have gained considerable ground both in the developed countries and developing countries. In Turkey, the privatization process has began almost 15 years before in order to relieve the burdens of inefficient and over-manned state industries, as well as to provide an important source of funds for the government. Numerous state enterprises have now passed to private sectors.

10.3.2 Privatization Methods and its Procedures

The privatization law No.4046 of 1994 sets out the principles and procedures regarding privatization implementation in Turkey. The law stipulates not only providing adequate framework to accelerate privatization and restructuring but also establishing a social security net for workers who lose their jobs as a result of privatization.

The Privatization High Council (PHC) is the ultimate decision-making body for privatization in Turkey. PHC, which is under the chairmanship of the Prime Minister, is composed of Deputy Prime Minister (in case of a coalition), 2 state Ministers, the Minister of Finance and the Minister of Industry and Trade. PHC nominates organizations for privatization and is responsible for determining methods and deadlines and decides to buy

and sell shares and all commercial papers of state-owned enterprises in the privatization portfolio. As privatization methods, sales, lease, and grant of operational rights, etc. are taken. The Privatization Administration (PA) executes the decision of PHC, and advises the PHC on the privatization of state-owned enterprises. Also, PA manages Privatization Fund in which all privatization proceeds are allocated. This fund is to be used for restructuring/rehabilitation and capital increases of state-owned enterprises, privatization expenses, and social safety and so on. This fund is not used in the general budget.

10.3.3 Privatization Implementation in Port sector

As for the privatization of the public service organizations such as highways, ports.etc. the operational rights can be transferred.

- TDI ports

General Directorate of TDI, which is one of related organization of Prime Ministry is now under process of privatization. TDI has been approved as “Turkish Maritime Operations Incorporated Company” (TDI Inc. Co.) in 1995. Seven ports of eight TDI ports that mainly treat cargoes have already been privatized. In each port, the management right of the port facilities has been transferred to a private operating company for 30 years in return for a price exclusive of property rights.

- Industrial ports

Some of the state-owned companies that manage ports or piers have also been in the privatization portfolio.

- TCDD ports

Seaports of Turkish State Railways (TCDD) are planned to be taken into the privatization portfolio in the near future.

Table 10-3-1 Companies in the privatization portfolio

Name of the company	Industry type	Share of Privatization Administration (%)
TDI*	Maritime	100.00
SEKA	Pulp and paper production	100.00
ISDEMIR	Iron and steel	100.00
PETKIM*	Petrochemical	95.86
ERDEMIR*	Iron and steel	51.66

Source: Privatization in Turkey, 1999

Table 10-3-2 Privatization on TDI ports

Port	Operator	Privatized on
Antalya	Ortadogu Antalya Port Operation Inc.	August,1998
Tekirdag	Tekirdag Akport Port Operations Inc.	June,1997
Rize	Riport Rize Port Operation Inc.	August, 1997
Ordu	Cakiroglu Ordu Port Operations Inc.	July, 1997
Sinop	Cakiroglu Ordu Port Operations Inc.	July, 1997
Giresun	Cakiroglu Ordu Port Operations Inc.	July, 1997
Hopa	Park Shipping and Hopa Port Operation Inc.	June, 1997
Trabzon	TDI Inc.Co.	(Scheduled in 2000)

Source: TDI,etc.

10.3.4 Impact on Port Management and Operation

Here, we review port privatization in privatized TDI ports where the management rights of the ports were transferred to the private operating companies as a typical example.

(1) Management Framework under the concession

A transfer contract of the operation right is signed among Privatization Administration, TDI, and an operating company. The outline is as follows. The foreign capital share of the operating company must not exceed 49%, and the authorized majority for administration must be Turkish citizens. The operating company needs necessary payment as an operation price for 15 years to get the operation right and operate. This operation right includes the usage rights of land and superstructures, and services such as cargo handling, marine services, warehousing, etc. for 30 years. The operating company also pays 25% of the incomes and rents in the activities each year. Operating company must establish a Management Board including a TDI personnel and a staff from the Governor of Province as the board members. Operating company can decide port tariffs up to 20% for themselves. (However, approval by TDI is necessary for the first 5 years after privatization.) At the end of the operation period, operators do not have any right to require to extend the operation period.

(2) Responsibilities of port management bodies

Operating companies make investment plans and construct port infrastructures by themselves after getting approval of the competent ministries. Operating companies also procure superstructures and operate and provide marine services. As for maintenance works of port infrastructure, operating companies also take the responsibility. The costs of damages of the breakwaters by natural disasters are shared by TDI and operating companies equally on the concession. However the cost sharing in case of maintenance works which require vast investment is under discussion. In case of the repair of the breakwater at the port of Giresun, it has been recently settled that the government will bear the burden fully.

(3) Result of Privatization

It is necessary to take time to evaluate port privatization in TDI ports, because it has just started since 1997. Followings are the items we have surveyed at present.

- 1) Flexible Investment*
- 2) Enrichment of maintenance and repair work*
- 3) Operation in fewer number of workers*
- 4) Aggressive port promotion activities*

After privatization, operating revenues are at operating companies' disposal except for the allotment of TDI. Operating companies can decide their port investment flexibly according to their urgent necessities. As an example, one port has made market research covering its hinterland, and found potential demand for container cargo handling. The port has then decided setting one gantry crane, which is scheduled to be operated at the end of 1999. Another example is that maintenance and repair works of cargo handling equipment have been implemented on the spot, having higher priority. It has contributed to improving the cargo handling efficiency. At the port of Antalya whose operation was transferred to a private operating company in August 1998, only 6 of 13 handling equipment were in operation before privatization, but now all equipment is available.

10.4. Evaluation on Port Management and Operation

Sea is an inherent infrastructure for transportation. Sea transportation in Turkey has played a very important role especially in the foreign trade transportation. In order to respond increasing cargo volumes in the future under the budget restriction, Turkish ports and harbors should be more competitive compared with neighboring countries' ports. From this point of view, we would like to suggest some points as follows.

Table 10-4-1 Foreign Trade Transportation in Turkey

	1991	1992	1993	1994	1995
Seaways	63,889,510	67,696,796	79,947,599	78,697,517	86,027,027
(%)	89.6	89.4	91.8	92.0	91.5
Railways	845,451	772,820	611,984	428,428	708,462
(%)	1.19	1.02	0.70	0.50	0.75
Highways	6,450,960	6,626,538	5,905,635	6,132,669	7,177,739
(%)	9.05	8.76	6.78	7.18	7.63
Airways	95,747	543,302	636,068	211,530	156,303
(%)	0.13	0.72	0.73	0.25	0.17
Total	71,281,668	75,639,456	87,101,286	85,470,144	94,069,531

Source: Turkish Shipping world (June, '96): (Export + Import) ton

(1) Enrichment of coordination function by the Central Government

It is essential to have strategic planning and coordination function on port development in Turkey with the nation-wide and long-term perspective to distribute effectively limited budgets on the national level. It is desired that this function should not be dispersed over related organizations.

The Ministry of Transport (DLH) makes port development implementation in Turkey at present mainly in terms of individual port construction projects base. The integration of the whole projects from the nation-wide viewpoint is done by State Planning Organization. As for the approval of constructions of coastal structure including port infrastructure, the Ministry of Public Works and Settlement takes in charge. In the construction steps, the Ministry of Transport (DLH) examines the implementation from technical point of view. The responsibilities of DLH lie in land areas (construction of port facilities). However, responsibilities on maritime affairs has Prime Ministry Undersecretariat of Maritime Affairs. It includes providing safety in the sea areas, developing maritime trade, and conserving marine environment.

In order to make strategic planning and coordinate on the nationwide port development, both of land area (port) development and sea area (maritime) development are essential to be considered. Because these are inseparable matters each other. Ports work for sea transport activities. It is imperative to keep in mind that port construction activities mean to control nationwide physical distribution. Therefore it is necessary to have a viewpoint that includes not only technical matters of port constructions, but also coordination between promoting maritime trade and construction of port as the gateways. For the implementation, it may be necessary to have integration function beyond the present responsibilities divided into the relevant ministries to make national strategic masterplan.

(2) Information-intensive management for policy making

It is desired to concentrate the related information on one relevant authority in order to plan, practice and coordinate in terms of nation-wide perspective. At least, information on the total number of ports and piers, handling capacities of each port and the achievements of cargo handling at each port are essential to grasp the present situation in Turkey. These data are basically available in Prime Ministry Undersecretariat of Maritime Affairs (PMUMA) at present. The data source of statistics by PMUMA is declaration by captains as applications for port entries/departures. In the meantime, port statistics by each port operator are also available. But the data of port operators are inconsistent with that of PMUMA on the port name as a statistical unit, the number of containers which are handled, and the categories of items.

(3) Progress of port privatization and its restriction

As port privatization process has made progress in Turkey, privatized ports have been increasing. The method of privatization called “transfer of operation rights”, which TDI

ports have adopted has impacted in some respects positively so far on port management and operation. Operating companies can make their port development plans and invest them flexibly to adjust increasing demands, by using their revenues for themselves. They can also decide port tariffs. Handling productivity has become rather high because of brisk maintenance and repair works of handling equipment. Those measures lead to improvement of their services, and increasing of cargo handling volumes.

Basically, those investments by privatized ports, coupled with private ports' investments are considered to make up for cargo handling volumes public ports can not follow within their budget restrictions. As an example, private ports and piers in Marmara area has played important roles in container handling instead of Haydarpasa. Because, one of the advantages by private ports that include privatized ports is that the scale of their investments is not rather huge, but they are so flexibly made without missing good chances.

As for the investments by private sector, however, there are some matters to obstruct their investments. First thing is the initial payment to the Privatization Administration, which is necessary to get operating rights. It is said that it is a burden for operating companies because this payment has to be done before they start operating ports.

Second one is a burden of the maintenance cost of port infrastructures (channels, breakwaters, etc.) which requires vast investments for private ports. In the case of privatized TDI ports, they have arrangements on the cost sharing between operating companies and TDI about repairs on damages in harbors by natural disasters. Nevertheless, as a matter of fact, we have a port that has been under discussion in the details of on their cost sharing. But the government recently decided to pay the entire cost for the repair of the breakwater at the port of Giresun. Investment in construction or big maintenance of such non-profitable facilities is extremely difficult to bear for the private companies. We have some exceptional cases such as Gempport which is not provided with channels and breakwaters because of its geographical location; it is their overwhelming advantage. However, taking into consideration that ports are generally one of the influential providers of public services, it may be possible as one of alternatives that even privatized ports shall be considered in the nationwide frame of port development in Turkey.

(4) Coordination between public and private ports

On the other hand, it is afraid that unsolicited developments by private ports and piers may spoil the effects of the investment for upgrading capacities in main state ports. One of the examples is that private companies or state industrial enterprises have collected cargoes by setting extraordinary prices in Marmara area, Black Sea area, and Mediterranean Sea area. Because they can get some revenues by letting users operate their small piers while they are out of operation. It is possible that these movements may cause dispersion of cargoes around the country. It is said that some state ports such as Iskenderun and Derince, which are expected to handle a large amount of cargoes, have been damaged in their cargo handling volumes. Overlapped investments that aim for common hinterlands should be avoided from the viewpoint of the optimum distribution of limited financial resources. It is

desired that any system to coordinate such kind of operations by private companies shall be established.

(5) More autonomous port management body

As far as we surveyed, among the classification of ports and piers in Turkey, state ports managed by TCDD have virtually taken major roles as core strategic ports for nationwide port development in Turkey. It is true that present management system under control of the headquarters seem to work well to some extent in major state ports in Turkey, considering the recent tackling of intensive investments in major container handling ports, which are expected to improve cargo handling efficiencies.

At Present each port management body in TCDD ports has mainly played a role as just an operator. Port management function such as making port development plans takes the TCDD headquarters in Ankara. Each port operation manager on the site can not decide how to deal with its profit as he considers. Each port must ask the headquarters and follow its decision. This system enables to manage each port from the total management point of view, and at the same time, it is also possible to miss the chances to make timely decisions at the right moment.

Another matter is manager's entrepreneurship. In general, bureaucratic way of business sometimes has a tendency to cause lack of entrepreneurship. Some ports consider that their duties are to practice devotedly what the headquarters decided. Other ports are convinced that they can achieve double in cargo handling volume if they can stand on their own feet in authorities and responsibilities. In private ports, they are very aggressive in their port promotion activities, demonstrating their entrepreneurship, and have achieved fruitful result in their cargo handling.

It is truly desired to establish any management systems to bring out each port operation manager's entrepreneurship and make the most of the talented personnel. It is the ports that know the most what should be done just now to provide better port services. More independency in authorities and responsibilities should be given to each port management body of state ports. The necessary authorities should be granted to each port management body who has responsibilities on its own port management. In general, authorities and responsibilities go hand in hand. By granting necessary authorities corresponding with responsibilities, each port management body get to decide flexibly with its entrepreneurship.

In addition, a system for the involvement of the related organizations such as port users and local vocational chambers in the port management would be helpful in order to more strengthen the autonomy. Because they have common interests in port business. Also, they have own useful information and know-how for improving port services. By combining them with entrepreneurship of port management, the port can be changed into completely another one as a "user-friendly port".

(6) Position of state ports

In terms of their strategic locations and its scales, state (TCDD) ports hold important positions in Turkish ports. One of the main functions to be expected in TCDD ports is rail connections with the ports. In general, ports with rail connections can be considered one of the advantages among ports in the world. As far as we surveyed, however, this function has not fully utilized at present. Judging from the situation, management by TCDD has not been completely made the most of in the major ports.

As for the reasons why rails has not been used so often, it is said; first, rails for national transportation is not high in the capacity, secondly, it is not suitable for time-saving transportation, and thirdly, it requires additional vast investments to provide full-fledged services and so on.

The point is how rail transports should be ranked relation to other traffic modes for cargo transportation to connect ports with the destinations. If these ports continue to play major roles as core strategic ports in Turkey, they should be developed based on nation-wide strategic point of view, not on one port management body's financial situation.

(7) Concept of Port development as a tool for the regional development

It is desired that coordination function between port management bodies and the relevant local government shall be strengthened in order to spread port development into the relevant regional development.

At present, Turkish ports are generally managed separately from the relevant local government, although we have some exceptional cases that some municipality governments operate ports or piers by themselves. As for ports managed by regional municipality governments, the Central government constructs and maintenances the infrastructures. The municipality governments are mainly engaged in the management activities such as collection of port tariffs. They can get the revenues by port management after transferring the 10 % to the Central government.

In Turkey, the Ministry of Public Works and Settlement has also responsibilities of the preparation and approval of overall urban plans, in addition to the preparations and approvals of territorial plans. Physical planning and implementation powers at urban level have been delegated to municipalities governments by the Ministry. Local governments prepare and ratify their urban plans.

In general, port development has closely connected with the regional development, as well as the national development. Especially as door-to-door transportation become popular under containerization movement in the world, access transports from ports to hinterlands using various traffic modes such as roads, rails, and airs have been one of the important factors for the ports and port users to get more competitiveness compared with rival ports. Secondly, when port expansions into sea areas are not available, it become necessary to

consider port expansions in the regional development framework including possibilities of relocation of city zones. In Japan, local municipal governments which are in charge of their regional developments have also responsibilities to manage ports and harbors. One of the advantages is the local governments can take their port development as one of their strong measures for their regional development.

Municipalities governments have responsibilities of developing their region including the hinterland of the relevant ports within their boundaries. Ports and their hinterlands are inseparable, because ports provide physical distribution with gateways for exports and imports. Ports connect production sites with consumption sites. At present, however, the importance of ports as social infrastructure is not recognized well for local governments. The relevant local government can involve the port management as a facilitator to promote the port activities. For instance, local governments tackle inviting factories, which produce cargoes for the regional development. Ports can improve the port services by handling more cargo volumes. More cargo handling at the relevant port can give positive impacts on the regional economy such as employment, and the local authorities' revenues.

Chapter11 Public Investment in Port Development and Operation

11.1 General

The Turkish government is expected to move on structural reform, cut inflation and to achieve a primary budget surplus in order to realize further progress.

Earthquakes have inflicted economic damage on the country. Financial damage from the August earthquake is estimated at US\$ 3-6.5 billion and the value of lost production is estimated at 0.6-1.0% of GNP. The cost of housing reconstruction is estimated at US\$ 3.6-4.6 billion. The World Bank will loan more than US\$ 3 billion for reconstruction and the European Parliament will contribute around Euro 1 billion in the form of a grant and a loan. Economic damage from the November earthquake is being assessed as of January 2000.

Current Financing scheme for port development and maintenance is as follows; Construction of port sub-structure at public ports is undertaken by the national budget of maritime port while maintenance for these structures is undertaken by respective port management bodies at their own expense. Super-structures and cargo handling facilities are procured by port management bodies and/or private operating companies.

11.2 Public Port Investment

11.2.1 Port Investment by the Public

See Table 11.2.1

Gross fixed investment reached US\$ 52.89 billion. Public investment reached US\$ 12.544 billion in 1998, slightly under the peak of US\$ 13 billion in 1993. Government investment reached US\$ 4.4 billion in 1998 and occupied 35-40 % of the total public investment in the 1990's.

See Table 11.2.2

Transportation investment by the government was US\$ 2 .0 billion, occupying more than 60% share of the government investment in the beginning of the 1990's. However, the amount has fallen to the US\$ 1 billion level, representing below 50% share of the government investment. More than 70% of transportation investment went for road and the remaining was divided into maritime, railway, airway and pipeline.

Maritime transportation investment by the government was US\$ 100 million, occupying a 3% share of the government investment in the beginning of the 1990's. However the amount has been decreased to the US\$ 50 million level, representing a 1% share of the government investment.

See Table 11.2.3

Maritime transportation investment mainly comprises maritime port, TCDD port sector and maritime affairs. The share of these three organizations has increased and reached more than 90% in 1998.

Maritime port investment was more than US\$ 30 million in the beginning of the 1990's but decreased to US\$ 20 million in 1998. The share in maritime transportation investment was nearly 40% but less than 0.5% of government investment. This share is extremely small figure compared to road investment, which occupies around 30% of government investment.

It should be noted that this present amount of maritime investment is insufficient to meet the foreseeable demand and that the authorities should endeavor to increase the investment amount.

11.2.2 Port Investment Program

Port investment budget is appropriated in an account of DLH and in principle expensed for construction of port sub-structures. On the other hand, respective port management bodies like TCDD and TDI undertake construction of super-structure and procurement of facilities for operation at their own expenses. Maintenance works is implemented by port management bodies but large-scale maintenance is sometimes carried out by DLH's budget of maritime port investment after arrangement of appropriation for the investment program.

See Table 11.2.4, 11.2.5 and 11.2.6

Port investment during 1990-1998 totaled US\$ 168 million while the average annual investment was US\$ 18 million. During this period, US\$ 47 million was invested in TCDD's seven ports, in which US\$ 29 million went for Izmir port and US\$ 8.8 million for Mersin port. US\$ 25 million was invested in TDI's nine ports, in which US\$ 12.4 million went for Kabatepe port and US\$ 8.7 million for Alanya port. The Black Sea ports of Artvin and Rize received US\$ 4.1 million respectively for breakwater construction.

There are 20-40 on-going projects under the port investment program. The project period is generally more or less five years though some are nearly ten years.

Project period would be elaborated in order that an effectiveness of port investment would be appeared as reasonable period.

Table 11.2.1 Gross Fixed Investment

		1990	1991	1992	1993	1994
Public Sector	BillionTL	27,684	47,146	81,295	143,977	192,052
	Million US\$	10,615	11,306	11,835	13,105	6,466
Government	BillionTL	8,902	17,146	29,239	53,161	72,788
	Million US\$	3,413	4,112	4,257	4,839	2,450
SEE's	BillionTL	10,203	14,892	23,137	38,680	53,743
Provincial Bank	BillionTL	792	1,261	2,260	3,156	5,850
Local Administration	BillionTL	1,959	4,755	10,795	19,146	31,151
Revolving Funds	BillionTL	521	726	628	1,082	1,293
Social Security Administrative Funds	BillionTL	196	376	470	831	1,362
	BillionTL	5,111	8,428	14,765	27,921	25,866
Private Sector	Billion TL	62,208	102,571	177,111	381,529	760,270
	Million US\$	23,853	24,597	25,784	34,729	25,595
Total	Billion TL	89,892	150,156	258,406	525,506	952,322
	Million US\$	34,468	36,009	37,619	47,834	32,060
Average Exchange Rates	TL/US\$	2,608	4,170	6,869	10,986	29,704

		1995	1996	1997	1998
Public Sector	BillionTL	329,515	764,426	1,733,050	3,262,060
	Million US\$	7,210	9,421	11,445	12,544
Consolidated Budget	BillionTL	123,777	289,493	700,382	1,155,000
	Million US\$	2,708	3,568	4,625	4,442
SEE's	BillionTL	80,873	168,472	385,318	899,558
Provincial Bank	BillionTL	8,386	19,521	42,442	77,478
Local Administration	BillionTL	66,212	158,459	339,843	634,268
Revolving Funds	BillionTL	5,130	12,660	13,756	37,307
Social Security Administrative Funds	BillionTL	2,548	7,919	9,868	20,844
	BillionTL	42,589	107,903	241,441	437,605
Private Sector	Billion TL	1,552,710	2,993,386	5,995,322	10,491,518
	Million US\$	33,972	36,893	39,592	40,346
Total	Billion TL	1,882,225	3,757,812	7,728,372	13,753,578
	Million US\$	41,182	46,314	51,036	52,890
Average Exchange Rates	TL/US\$	45,705	81,137	151,429	260,040

Source: Main Economic Indicators, SPO

Note: 1998 is Program

Table 11.2.2 Transportation Investment by the Government

		1990	1991	1992	1993	1994
Maritime Transportation	Billion TL	271	421	593	846	867
	Million US\$	104	101	86	77	29
	Share in Gov. Investment(%)	3.0	2.5	2.0	1.6	1.2
Highway Transportation	Billion TL	4,059	8,213	12,521	24,737	34,262
Railway Transportation	Billion TL	706	934	1,480	2,120	2,925
Airway Transportation	Billion TL	345	688	700	2,715	5,869
Pipeline	Billion TL	450	610	1,220	1,100	2,800
Total	Billion TL	5,831	10,866	16,514	31,518	46,723
	Million US\$	2,236	2,606	2,404	2,869	1,573
	Share in Gov. Investment(%)	66	63	56	59	64
Government Investment	Billion TL	8,902	17,146	29,239	53,161	72,788
		1995	1996	1997	1998	
Maritime Transportation	Billion TL	1,284	3,802	8,336	15,055	
	Million US\$	28	47	55	58	
	Share in Gov. Investment(%)	1.0	1.3	1.2	1.3	
Highway Transportation	Billion TL	31,782	47,686	157,852	377,765	
Railway Transportation	Billion TL	4,593	9,352	17,419	31,660	
Airway Transportation	Billion TL	4,744	20,675	27,047	56,550	
Pipeline	Billion TL	3,900	0	0	45,000	
Total	Billion TL	46,303	81,515	210,654	526,030	
	Million US\$	1,013	1,005	1,391	2,023	
	Share in Gov. Investment(%)	37	28	30	46	
Government Investment	Billion TL	123,777	289,493	700,382	1,155,000	

Source: State Planning Organization

Note: Figure is appropriation budget

Table 11.2.3 Maritime Transportation Investment by the Government

		1990	1991	1992	1993	1994
Maritime Port	Million TL	88,900	119,500	111,320	214,000	265,000
	Million US\$	34	29	16	19	9
	Share(%)	32.8	28.4	18.8	25.3	30.6
General Directorate of TCDD	Million TL	29,000	55,000	100,000	100,000	185,000
	Million US\$	11	13	15	9	6
	Share(%)	10.7	13.1	16.9	11.8	21.3
Maritime Affairs	Million TL	79,000	70,000	93,000	160,000	200,000
	Million US\$	30	17	14	15	7
	Share(%)	29.1	16.6	15.7	18.9	23.1
Ministry of Transport	Million TL	1,750	3,775	3,000	8,000	-
	Share(%)	0.6	0.9	0.5	0.9	-
Gen.Directorates of Shore Safety	Million TL	-	-	-	-	-
General Directorate of DITAS	Million TL	900	500	1,000	1,600	2,000
Ministry of Finance and Customs	Million TL	900	500	37,000	36,000	10
Gen.Directorates of Petrol Office	Million TL	11,000	12,000	7,850	11,000	40,000
Navy under Secretary Ship	Million TL	-	-	-	-	34,990
Navy Bank for Maritime	Million TL	60,000	160,000	240,000	315,000	140,000
Total	Million TL	271,450	421,275	593,170	845,600	867,000
	Million US\$	104	101	86	77	29
	Share(%)	100	100	100	100	100

		1995	1996	1997	1998
Maritime Port	Million TL	417,000	1,268,000	3,171,100	5,750,000
	Million US\$	9	16	21	22
	Share(%)	32.5	33.4	38.0	38.2
General Directorate of TCDD	Million TL	300,000	1,498,000	2,218,000	4,500,000
	Million US\$	7	18	15	17
	Share(%)	23.4	39.4	26.6	29.9
Maritime Affairs	Million TL	250,000	500,000	2,100,000	3,800,000
	Million US\$	5	6	14	15
	Share(%)	19.5	13.2	25.2	25.2
Ministry of Transport	Million TL	-	-	-	-
	Share(%)	-	-	-	-
Gen.Directorates of Shore Safety	Million TL	-	-	-	200,000
General Directorate of DITAS	Million TL	1,500	3,500	7,000	550,000
Ministry of Finance and Customs	Million TL	-	-	-	-
Gen.Directorates of Petrol Office	Million TL	60,000	99,000	-	5,000
Navy under Secretary Ship	Million TL	55,000	73,500	120,000	250,000
Navy Bank for Maritime	Million TL	200,000	360,000	720,000	-
Total	Million TL	1,283,500	3,802,000	8,336,100	15,055,000
	Million US\$	28	47	55	58
	Share(%)	100	100	100	100

Source: State Planning Organization Note: Figure is appropriation budget

Table 11.2.4 Port Investment Amount

			(Thousand US\$)				
Province	TCDD ports	Other ports	1990	1991	1992	1993	1994
ARTVIN		Hopa	0	120	1	364	471
RIZE		Rize	0	0	15	910	471
TRABZON		Trabzon	288	0	0	0	0
GIRESUN		Giresun	0	0	0	0	168
ORDU		Fatsa	0	240	364	0	168
SAMSUM	Samusun		149	0	0	0	0
SINOP		Sinop	0	0	15	556	237
KASTAMONU		Inebolu	0	0	0	0	101
BARTIN			0	0	218	364	202
ZONGURDAK			4	120	15	36	3
SAKARYA			0	0	0	0	0
KOCAELI	Derince		0	0	0	0	30
YALOVA			0	0	0	0	0
ISTANBUL	Hydarpasa		119	863	364	364	17
TEKIRDAG			0	0	0	0	0
CANAKKALE		Ugurlukoy	621	1,487	510	1,090	1,042
BALIKESIR	Bandirma		0	0	0	9	84
BURSA			0	0	0	0	0
IZMIR	Izmir		10,215	7,470	4,252	6,326	135
MUGLA		Gulluk	0	0	0	0	0
ANTALYA		Alanya	5,748	2,878	146	0	0
ICEL	Mersin		2,013	719	291	482	323
HATAY	Iskendern		0	0	0	0	0
OTHERS			0	0	0	1	337
GENERAL			14,931	14,520	10,162	8,612	5,101
TOTAL			34,087	28,417	16,206	19,115	8,921

Province	TCDD ports	Other ports	1995	1996	1997	1998	Total	(%)
ARTVIN		Hopa	766	616	681	1,154	4,173	2.5
RIZE		Rize	547	740	3,566	1,711	7,960	4.7
TRABZON		Trabzon	44	616	726	288	1,962	1.2
GIRESUN		Giresun	219	542	991	1,154	3,074	1.8
ORDU		Fatsa	372	370	264	123	1,901	1.1
SAMSUM	Samusun		0	185	660	192	1,186	0.7
SINOP		Sinop	459	493	958	576	3,294	2.0
KASTAMONU		Inebolu	328	863	1,354	1,790	4,435	2.6
BARTIN			683	394	0	0	1,861	1.1
ZONGURDAK			28	40	53	0	299	0.2
SAKARYA			0	0	0	0	0	0.0
KOCAELI	Derince		46	0	0	0	76	0.0
YALOVA			0	185	0	0	185	0.1
ISTANBUL	Hydarpasa		459	702	0	0	2,888	1.7
TEKIRDAG			0	0	0	0	0	0.0
CANAKKALE		Ugurlukoy	726	1,972	2,179	2,823	12,449	7.4
BALIKESIR	Bandirma		394	1,109	2,642	1,307	5,545	3.3
BURSA			0	0	0	0	0	0.0
IZMIR	Izmir		0	123	763	58	29,343	17.4
MUGLA		Gulluk	368	247	1,453	38	2,105	1.2
ANTALYA		Alanya	0	0	0	0	8,771	5.2
ICEL	Mersin		1,125	1,232	1,044	1,569	8,799	5.2
HATAY	Iskendern		1	0	0	0	0	0.0
OTHERS			1,094	3,807	2,311	481	8,030	4.7
GENERAL			1,400	1,391	1,297	3,041	60,310	35.7
TOTAL			9,124	15,628	20,941	16,305	168,745	100.0

Source: DLH Note: OTHERS are lake ports in BITLIS and VAN, and hydraulic center in ANKARA

Table 11.2.5 Port Investment Works

Province	TCDD ports	Other ports	1990	1991	1992	1993	1994
ARTVIN		Hopa		infra.		infra.	infra.
RIZE		Rize			infra.	infra.	infra.
TRABZON		Trabzon	infra.				
GIRESUN		Giresun				plan	infra.
ORDU		Fatsa		infra.	infra.		infra.
SAMSUM	Samusun		infra.				
SINOP		Sinop			plan	plan	plan
KASTAMONU		Inebolu					infra.
BARTIN					infra.	infra.	infra.
ZONGURDAK			infra.	infra.	plan	plan	plan
SAKARYA							
KOCAELI	Derince					plan	plan
YALOVA							
ISTANBUL	Hydarpasa		infra.	infra.	infra.	infra.	infra.
TEKIRDAG						plan	plan
CANAKKALE		Ugurlukoy	infra.	infra.	infra.	plan	plan
BALIKESIR	Bandirma					infra.	infra.
BURSA						plan	plan
IZMIR	Izmir		container,dredg.	container,dredg.	container,dredg.	container,dredg.	container
MUGLA		Gulluk					
ANTALYA		Alanya	infra.	infra.	infra.		
ICEL	Mersin		infra.	infra.	infra.	plan	plan
HATAY	Iskendern						plan,infra.
OTHERS						infra.	infra. hydro.

Province	TCDD ports	Other ports	1995	1996	1997	1998
ARTVIN		Hopa	breakwater	breakwater	breakwater	breakwater
RIZE		Rize	breakwater	breakwater	breakwater	breakwater
TRABZON		Trabzon	shore investi.	fortification	fortification	shore
GIRESUN		Giresun	quay	quay	quay	quay
ORDU		Fatsa	pier	pier	pier	pier
SAMSUM	Samusun			embankment	embankment	embankment
SINOP		Sinop	pier	pier	pier	pier,build.
KASTAMONU		Inebolu	shpyard	quay	quay	quay
BARTIN			dock,dregd.	dregding		
ZONGURDAK			study	study	study	
SAKARYA						
KOCAELI	Derince		EIA,embank.			
YALOVA				quay		
ISTANBUL	Hydarpasa		pier	pier		
TEKIRDAG			study	plan		
CANAKKALE		Ugurlukoy	pier	pier	pier	breakwater
BALIKESIR	Bandirma		pier	pier	pier	pier
BURSA			study	plan	plan	
IZMIR	Izmir			quay,dregd.	emb.,dregd	quay,dregd.
MUGLA		Gulluk	shore investi.	shore investi.	pier	pier
ANTALYA		Alanya				
ICEL	Mersin		quay	EIA,quay	quay	quay,rail
HATAY	Iskendern		study,investi.			
OTHERS			hydro.center	fortification	fortification	shore

Source: DLH Note: OTHERS are lake ports in BITLIS and VAN, and hydrolic center in ANKARA

Table 11.2.6 New Port Facilities from 1990-1998

Province	Port	Specification of Facilities	Investment Period
ARTVIN	Hopa	Breakwater extension of 250m, total 1900m length, -2m--19m depth	1991-2000
RIZE	Rize	Breakwater extension of 250m, total 1500m length, -4m--17m depth Breakwater construction of 102m	1991-2001
GIRESUN	Giresun	Quay construction of 310m length and -10m depth, general cargo	1993-2000
ORDU	Fatsa	Pier construction of 238m length and -4m--19m depth	1995-2003
SINOP	Sinop	Pier construction of 210m length and -7m--13m depth, Ro-Ro Ships	1993-1999
KASTAMONU	Inebolu	Quay construction of 330m and -4m depth	1995-2000
CANAKKALE	Ugurlukoy	Pier and breakwater	1993-1999
ICEL	Mersin	Quay construction of 270m length and -14m depth, container	1975-1999

Prepared by OCDI on the basis of information from DLH

11.3 Financial Resources for Port Investment

11.3.1 Financial resources from the government

See Table 11.3.1

Port investment budget is appropriated in the general budget of the national account, which comprises of the general budget and annexed budget.

The national revenue has not been sufficient to cover expenditures. The borrowing amount was more than 50% of the revenue and the repayment amount was 30% of the revenue. The revenue was equivalent to the amount of 19% of GDP in 1994 and has reached 23% in 1998.

Tax receipts have been contributing to the national revenue, representing 80% of the total revenue. There are three types of tax receipts: taxes on income, taxes on goods and services, and taxes on foreign trade. Taxes on foreign trade consist of five taxes whose receipts represent 17% of total tax revenue. Port duty is one of the taxes on foreign trade, but receipts of port duty have not entered into the revenue since 1996.

Taxes related to transport and vessels are environmental fund tax, transport infrastructure duty, and transportation fund duty. Environmental fund tax is imposed on vessels registered to Turkey and the fund is used for environmental improvement.

11.3.2 Financial resources from local administrations

See Table 11.2.1 and 11.3.2

Local administrations also implement public investment at their own expense. The total amount of investment by local administrations was US\$ 2.4 billion in 1998, which was equivalent to the amount of 55% of government investment. However, local administrations have not invested in ports in recent years, although local administrations provide budgetary item of pier and berth within investment of transport services.

Impacts of port development spread over the surrounding area by facilitating logistic and transport functions in the area. In this sense, it should be taken into account that local administrations are involved as a partner for cost sharing.

11.3.3 Port tariff and related Charges

Maximum **port tariff** rates are decided by the government but generated revenues belong to the port management bodies. Each port management body has the right to decide its own rates less than the maximum. In general, TCDD port tariffs act as a benchmark and tariffs of neighboring ports do not exceed those maximum rates.

Other public ports including municipal ports follow the port tariff of neighboring TCDD ports basically, and can decide their tariffs within the TCDD tariffs.

Port operating companies at privatized ports cannot raise tariffs more than 20% in the first five years but have the right to increase after that time. On the other hand, privatized ports

are not permitted to discount their tariffs to prevent excessive competition.

Private ports managing company can decide their tariffs by themselves and negotiated rates are sometimes adopted.

TCDD port tariffs are set in US\$ for each port and are comprised of the following.

- Pilotage and Tug: rate is set by vessel gross tonnage.
- Sheltering: rate is set by unit gross tonnage per day.
- Loading/ Unloading/ Shifting/ Transshipment: rates are set by kind of commodity.
- Warehousing: rate is set by commodity type and by export/ import/ transit.
- Loading/Unloading/Transshipment: rate is set by laden/empty, by service type.
- Warehousing of Container: rate is set by container size (40ft/20ft), dwelling period, and by export/import/transit/domestic.
- Water supply: method of water supplying
- Collection of vessel's discharge: rate is set by solid/liquid and by shore/off-shore
- Lash Service: rate is set by shore/off-shore/sea and by carrying tons.
- Weighing Service: rate is set by vehicle type.
- Parking: by number of car
- Renting machinery vehicle and equipment: rates are set by equipment and by hour.

See Table 11.3.3 and 11.3.4

Typical cargo handling charges and container handling charges are roughly estimated as shown in Table 11.3.3 and 11.3.4.

11.3.4 International Borrowing

Turkey has been developing infrastructures through bilateral and multilateral aid. Following multilateral organizations are lending around US\$ 5 billion a year to Turkey in terms of development according to the Statistical Yearbook of Turkey; European Investment Bank, Islamic Development Bank, International Development Association, International Bank for Reconstruction and Development, and Nordic Investment Bank.

TCDD has experience in obtaining a loan for procurement of container handling facilities from European Investment Bank. The credit limit is Euro 36 million for container handling equipment at Haydarpaşa, Izmir and Mersin Port, which has been installed during 1997-1999.

Table 11.3.1 Consolidated Budget (Realization)

(Billion TL)

	1994		1995		1996		1997		1998	
Expenditure	897,296	120	1,710,646	123	3,940,162	146	7,946,854	119	15,396,480	132
Current	368,902	49	644,149	46	1,282,719	47	2,768,976	41	5,140,996	44
Personnel	295,495	40	502,600	36	974,148	36	2,073,140	31	3,870,228	33
Other Current	73,407	10	141,549	10	308,571	11	695,836	10	1,270,768	11
Investment	50,355	7	91,777	7	238,085	9	579,835	9	885,606	8
Transfers	478,039	64	974,720	70	2,419,358	90	4,598,043	69	9,369,878	80
Revenues	746,116	100	1,394,023	100	2,702,034	100	6,700,961	100	11,670,888	100
General Budget	739,950	99	1,381,579	99	2,676,000	99	5,675,318	85	11,616,702	100
Tax Revenues	587,760	79	1,084,350	78	2,244,094	83	4,745,484	71	9,232,930	79
Non-tax Revenues	48,365	6	86,044	6	159,990	6	404,679	6	1,217,831	10
Special Revenues & Funds	103,825	14	211,185	15	271,916	10	525,155	8	1,165,941	10
Annexed Budget	5,166	1	12,444	1	26,034	1	25,633	0	54,186	0
Budget Balance	-162,180	-22	-316,623	-23	-1,238,128	-46	-2,245,903	-34	-3,725,592	-32
Deferred & Adv. Payments Net	255		22,320		-29,606		20,222		-111,666	
Cash Balance	-161,926	-22	-294,303	-21	-1,267,734	-47	-2,225,681	-33	-3,837,258	-33
Financing										
Repayment	206,401	28	376,780	27	721,333	27	1,274,946	19	3,348,483	29
Foreign	111,204		238,984		412,097		691,267		1,838,866	
Domestic	95,197		136,796		309,236		583,679		1,509,617	
Borrowing	364,962	49	672,140	48	1,882,105	70	3,327,879	50	6,903,094	59
Foreign	44,030		157,746		277,687		238,682		803,299	
Domestic	320,932		514,394		1,604,418		3,089,197		6,099,795	
(Government Bonds)	24,858		222,453		583,276		2,068,523		2,806,639	
(Treasury Bill-Net)	244,217		197,218		792,189		1,020,674		3,293,156	
(Central Bank)	51,857		94,723		228,953		0		0	
Financing Surplus	158,561		296,360		1,160,772		2,052,933		3,554,611	
Other	-6,636		-2,057		106,962		172,748		282,647	

Source: Main Economic Indicators, June, 1999

Table 11.3.2 Municipality Budget Tree

Public Works Services
Development Services
Current Expenditures
Investment Expenditures
Transportation Services
Transportation services
Current Expenditures
Transportation Services within the city
Pier,Berth and Other Water Passage Service
Personnel Expenditures
Travel Funds
Service Allocation
Consumption Goods and Equipment Allocation
Inventory Stocks Allocation
Other Payment
Parking Lot Service
Metropolitan transportation Coordination Center Service
Investment Expenditures
Transportation Services within the city
Pier,Berth and Other Water Passage Service
Machine,Equipment,vehicle Allocation
Construction,Institution and Repairment Expenditures
Parking Lot Service
Metropolitan transportation Coordination Center Service

Prepared by OCDI based on Municipality Investment Program

Table 11.3.3 Cargo Handling Charges

(US\$/ton)

	Derince		Bandirma		Samsun		Iskenderun		Tasucu
	Import	Export	Import	Export	Import	Export	Import	Export	
General Cargo									
Loading	-	3.5	-	6.5	-	6.5	-	6	4.88
Unloading	4	-	8	-	8	-	7	-	6.23
Warehousing	0.65	0.55	0.65	0.55	0.4	0.35	0.35	0.3	
Dry Bulk									
Loading	-	3.5	-	4.5	-	4.5	-	2.5	3.38
Unloading	4	-	6	-	6	-	3	-	4.65
Warehousing	0.7	0.6	0.7	0.6	0.5	0.45	0.4	0.35	

Source: Courtesy of TCDD and Tasucu Port Office of SEKA

Note: Charges are roughly estimated by OCDI

Table 11.3.4 Container Handling Charges

(US\$/Unit)

	Haydarpass				Izmir				Mersin				Gempport	
	Import		Export		Import		Export		Import		Export		Im.	Ex.
Laden Container														
Ship side														
Loading	-		55		-		55		-		55		-	30
Unloading	90		-		90		-		90		-		80	
Land side														
Loading			110				110				110			30
Unloading														
Stacking	20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft		
7days	84	140	40	60	56	105	28	48	14	28	12	24		21
Total	284	340	205	225	256	305	193	213	214	228	177	189	131	81
Empty Container														
Ship side														
Loading	-		35		-		35		-		35		-	15
Unloading	25		-		25		-		25		-		15	
Land side														
Loading														5
Unloading														
Stacking	20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft	20ft	40ft		
7days	20	32	20	32	8	14	8	14	8	14	8	14		21
Total	45	57	55	67	33	39	43	49	33	39	43	49	41	41

Source: Courtesy of TCDD and Gempport

Note: Container handling charges are roughly estimated by OCDI

11.4 Treasury Receipts by Maritime Transport

Treasury receipts consist of three tax revenues, taxes on income, taxes on goods and services, and taxes on foreign trade. Taxes on foreign trade comprise customs duty, value-added tax on import and other foreign trade income. Receipts from foreign maritime trade represent 7% of total tax revenues or 6% of the government revenue in 1996. This is a significant source of government revenue.

See Table 11.4.1 and Figure 11.4.1

Receipts of value-added tax on import have increased in close correlation with import value and volume, and reached annual receipts of US\$ 1.7 billion in 1996. This means that the receipts of value-added tax will rise in proportion to increases in maritime imports. Ports facilitate foreign trade: 85% of trade volume and 46% of trade value pass through ports. In this sense, the authorities should give priority to port investment.

11.5 Financial Performance of TCDD ports and TDI ports

11.5.1 Financial Performance of TCDD ports

See Table 11.5.1, 11.5.2 and Figure 11.5.1

Port account has been in the black since 1996 and a profit of US\$ 72 million was generated in 1997. The revenue was US\$ 203 million and the expenditure was US\$ 132 million in 1997. Financial performance has been rapidly improving. The operating ratio and the working ratio have entered satisfactory ranges.

Rail account is still in the red although revenues have increased and expenditure has been decreased. The problem is that non-operating expenditure has occupied more than 40% of the total expenditure. Operating revenue has increased, which has been realized by increasing freight revenue. The subsidies have been around 30% of the total revenue.

Improvement of financial performance has been realized by various factors. One of factors is effective investment. Operating revenue totaled US\$ 1,420 million during 1990-1998 while operating expenditure totaled US\$ 823 million during the same period. Investment amount during the same period summed up to US\$ 144 million including repayment to European Investment Bank. This means that an investment of US\$ 144 million has enabled the port to increase capacity and operating efficiency, which has generated a rough operating profit of US\$ 468 million.

11.5.2 Financial Situation of TDI ports

See Table 11.5.3

TDI's revenue was US\$ 265 million, the expenses US\$ 169 million and the profit US\$ 96 million in 1998. Half of the revenue came from maritime passenger service of its own vessels and the remaining half from port services. Almost all expenses went for administration and operation.

Financial performance of both operating ratio and working ratio has worsened, and is of the 80% level compared to 1994. The operating profit was US\$ 28 million, sharing 29% of the total profit. This reason for the decline is assumed to be that profitable segments have

been privatized during 1997 to 1998. On the other hand, external activities made a profit of US\$ 68 million in 1998, which is twice as much as the operating profit.

11.6 Financing Scheme for Roads

See Table 11.6.1

Roads have been developed and maintained using various financial resources; total budget was around US\$ 1.7 billion in 1998. The national general account provided 46% of the total expenses, tax revenue of gasoline provided 1%, toll fee of motorway provided 0.4%, loan from the World Bank provided 2%, the Private Participation Funds 42% and credits from contractors 9%.

The expenses for motorway come from the Private Participation Funds, which was established in 1984 and is now under the Finance and Trade Agency. The sources of the Funds are personal deposits, bonds and proceeds from sales of national enterprises' stocks.

Table 11.4.1 Treasury Receipts by Maritime Trade and Maritime Amount/Volume

		1992	1993	1994	1995	1996
Treasury Receipts	Million US\$	1,466	1,767	1,328	1,746	2,004
Custom duty	Million US\$	107	504	324	435	322
Value-added tax on imports	Million US\$	876	1,185	975	1,282	1,676
Other foreign trade income	Million US\$	-	79	28	29	6
Stamp duty on imports	Million US\$	258	-	-	-	-
Port duty	Million US\$	225	-	0	1	-
Foreign Trade						
Maritime Import						
Amount	Million US\$	12,050	16,103	12,182	18,874	21,618
Volume	Thousand tons	48,234	62,781	54,628	63,882	67,879
Maritime Export						
Amount	Million US\$	5,919	6,431	8,037	8,978	9,815
Volume	Thousand tons	20,957	17,264	24,072	22,068	19,677

Source: 1)Statistical Yearbook of Turkey 1998, State Institute of Statistics, Prime Ministry

2)Main Economic Indicators 1999, SPO

3)Foreign Trade by Transport System,SIS

Note: 1)Tax receipts are the data of Statistics Yearbook

2)Maritime Import amounts/volumes are the data of Foreign Trade by Transport System

3)Maritime Export amounts/volumes are the data of Foreign Trade by Transport System

4)Treasury Receipts are the amount allocated by maritime share of total import amount

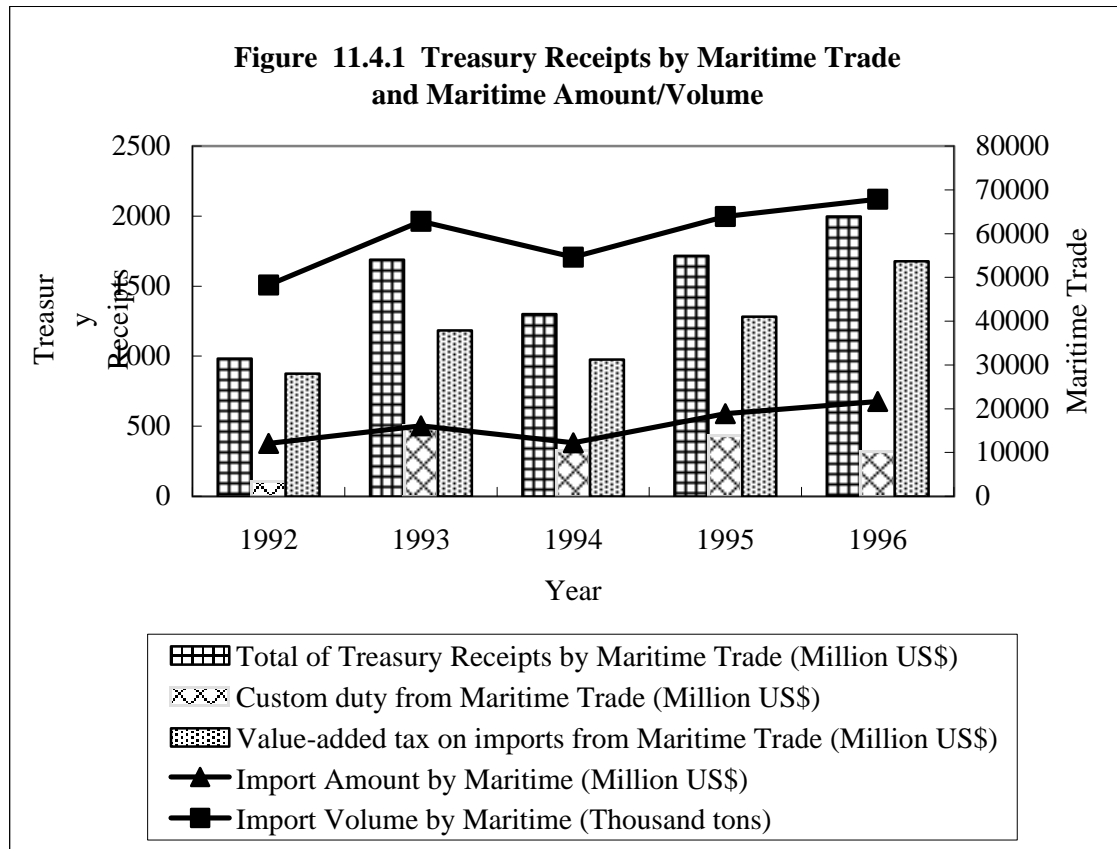


Table 11.5. 1 TCDD Revenue-Expenditure

		(Million US\$)			
		1994	1995	1996	1997
Port	Revenue	134	148	174	203
	Operating Revenue	129	145	170	199
	Subsidies for Van Lake Operation	5	4	3	4
	Expenditure	143	154	149	132
	Administrative and Operating	81	79	74	79
	Depreciation	10	16	12	13
	Non-Operating	52	59	63	40
	Profit/Loss	-9	-5	25	72
Railway	Revenue	251	266	274	303
	Operating Revenue	120	142	153	178
	Passenger and Baggage	40	44	49	53
	Freight	151	185	234	0
	Subsidies	86	91	87	96
	For track maint. and repair	12	11	10	9
	For uneconomical lines	74	80	77	87
	Non-Operating Revenue	44	34	34	30
	Expenditure	1,100	1,093	1,048	1,061
	Operating	421	449	451	488
	Depreciation	74	118	105	99
	Administration	47	49	58	71
	Non-Operating	558	477	434	403
	Profit/Loss	-849	-826	-774	-758
Total	Profit/Loss	-858	-831	-749	-686

Prepared by OCDI on the basis of the TCDD Annual Report

Note: Exchange rates are yearly average rates based on Main Economic Indicators published by SPO

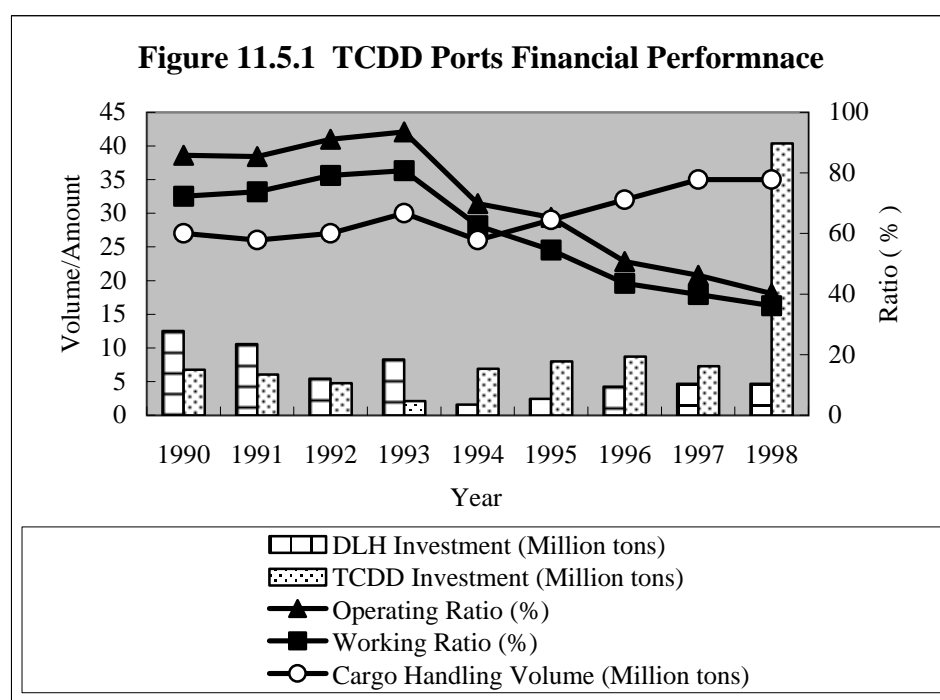


Table 11.5.2 TCDD Ports Financial Performance

		1990	1991	1992	1993	1994
Cargo Handling Volume						
Total	1000 ton	27,283	25,921	27,184	30,052	25,867
Container	TEU	352,432	396,403	456,564	572,078	588,341
Administration						
Official	Number	1,523	1,444	1,407	1,376	1,296
Permanent Workers	Number	3,823	3,808	3,669	3,552	3,370
Investment						
Total	Million US\$	19	17	10	10	8
by DLH	Million US\$	12	11	5	8	2
by TCDD	Million US\$	7	6	5	2	7
Foreign loan included	Million US\$	0	0	2	0	0
Revenue						
Operating	Million US\$	109	136	144	168	129
Expenses						
Administrative and Operating	Million US\$	79	101	114	136	81
Depreciation	Million US\$	15	16	17	21	10
Operating Ratio	%	86	85	91	94	70
Working Ratio	%	72	74	79	81	63
			1995	1996	1997	1998
Cargo Handling Volume						
Total	1000 ton		29,267	31,643	34,770	35,155
Container	TEU		715,239	874,121	1,001,692	972,307
Administration						
Official	Number		1,229	1,184	1,160	1,298
Permanent Workers	Number		3,237	3,106	4,412	4,172
Investment						
Total	Million US\$		10	13	12	45
by DLH	Million US\$		2	4	5	5
by TCDD	Million US\$		8	9	7	40
Foreign loan included	Million US\$		0	0	1	31
Revenue						
Operating	Million US\$		148	174	203	220
Operating	Million US\$		145	170	199	220
Expenses						
Administrative and Operating	Million US\$		79	74	79	80
Depreciation	Million US\$		16	12	13	9
Operating Ratio	%		65	51	46	40
Working Ratio	%		54	44	40	36

Source: TCDD Annual Reports, interviews, and DLH Investment Program

Note: Investment by TCDD includes foreign loans

Table 11.5.3 TDI Revenue-Expenses

(Million US\$)

	1997	1998
Revenue	273	265
Operating	191	191
Maritime Passenger Transportation	101	110
Port Service	88	79
(pilotage,water supply,loading/unloading,warehouse/terminal)		
Sales of Service and Rental(restaurant,hospital,insurance)	1	1
Other income		
External Activities	82	74
Expenses	174	169
Operating	168	163
Administration and Operating	157	153
Tax, Due, Charge	1	1
Depreciation and Consuming margin	10	9
External	6	6
Other possible activities	4	3
Financing expenses	1	1
Extraordinary expenses	1	2
Difference between Revenue and Expenses	99	96
Operating Ratio(%)	88	85
Working Ratio(%)	83	81

Prepared by OCDI on the basis of the TDI annual report

Note: Exchange rates are rates on Main Economic Indicators published by SPO

Operating ratio is the proportion of operating expenses versus operating revenue

Working ratio is the proportion of operating expenses excluding depreciation versus operating revenue

Table 11.6.1 Road Financing Scheme in Turkey (1998)

Receipts	Budget	Ratio
	(Million US\$)	(%)
Government General Account	791	46
Loans from World Bank		2
Gasoline Tax	23	1
Toll Fee from Motorway	0	0
Private Participation Funds	717	42
Credits from contractors	161	9
Total	1,722	100

Source: Butce ve harcamalara ait genel bilgiler 1998

Note: Exchange rate of 1998 is 260,040 TL/US\$

11.7 Evaluation on Port Investment by the Public

(1) Port Investment

Maritime port investment was more than US\$ 30 million in the beginning of the 1990's but decreased to US\$ 20 million in 1998. The share in maritime transportation investment was nearly 40% but less than 0.5% of government investment. This share is extremely small figure compared to road investment, which occupies around 30% of government investment.

It should be noted that this present amount of maritime investment is insufficient to meet the foreseeable demand and that the authorities should endeavor to increase the investment amount.

There are 20-40 on-going projects under the port investment program. The project period is generally more or less five years though some are nearly ten years. Project period would be elaborated in order that an effectiveness of port investment would be appeared as reasonable period.

Local administrations have not invested in ports in recent years, although local administrations provide item of pier and berth within investment of transport services.

Impacts of port development spread over the surrounding area by facilitating logistic and transport functions in the area. In this sense, it should be taken into account that local administrations are involved as a partner for cost sharing.

Treasury receipts of value-added tax on import have increased in close correlation with import value and volume, and reached annual receipts of US\$1,676 million in 1996. This means that the receipts of value-added tax will rise in proportion to the increase of maritime import. Ports facilitate foreign trade: 85% of trade volume and 46% of trade value pass through ports. In this sense, the authorities should give priority to port investment.

(2) Financial Performance of TCDD ports

TCDD port account has been rapidly improving its financial performance. The operating ratio and the working ratio have entered satisfactory ranges.

Improvement of financial performance has been realized by various factors. One of factors is effective investment. Operating revenue totaled US\$ 1,420 million during 1990-1998 while operating expenditure totaled US\$ 823 million during the same period. Investment amount during the same period summed up to US\$ 144 million including repayment to European Investment Bank. This means that an investment of US\$ 144 million has enabled the ports to increase capacity and efficiency, which has generated a rough operating profit of US\$ 468 million.

(3) Financial Performance of TDI

TDI Financial performance of both operating ratio and working ratio has worsened, and are of the 80% level compared to 1994. The operating profit was US\$ 28 million, sharing 29% of the total profit. This reason for the decline is assumed to be that profitable segments have been privatized during 1997 to 1998. On the other hand, external activities made a profit of US\$ 68 million in 1998, which is twice as much as operating profit.

Chapter 12 Private Investment in Port Development and Operation

12.1 General

See Appendix for Chapter 12

Private investment has increased, since the promotion of private participation and privatization of the state owned organizations began in the 1980s, and now accounts for more than 70% of the gross fixed investment. **Existing capacity** in private ports represents more than 50% of the national port capacity. Port operation at TDI ports has been transferred to the private sector and BOT projects have been conducted.

However, due to a lack of financial and legal incentives, private companies are finding it difficult to generate expected profits, although Privatization Administration observed that a certain revenue increase had been witnessed in some private ports.

12.2 Built-Operate-Transfer (BOT) Scheme

12.2.1 General

BOT model was legislated in 1984 and was divided into two BOT models in 1994. One is the model for power plants and the other is the model for infrastructures including port projects.

BOT model for power plants has been changed sometimes from the viewpoint of risk sharing between the government and contractors in order to accelerate construction of power plants. One of changes is that the Constitutional Court's decision in 1996 excluded international arbitration for disputes, which precludes international finance for the BOTs. Another change is that Built-Operate (BO) model was thought out in 1997, under which private companies were allowed to build plants and then operate and own them in order to attract foreign investors.

BOT model for infrastructure is basically unchanged from 1994. Ports, roads and bridges are planned or contracted under this scheme.

12.2.2 BOT Port Projects

BOT port projects were contracted in 1999 for Fylios Port and Derice Port, and are outlined below. Bidding on BOT projects for Iskendeln Port and Izmir Port is scheduled, but no bidder have yet come forward.

Container Terminal Project in Derince Port

- The Ministry and a joint venture of Titas Toprak Ins. ve TAHH A.S. and P&O Australia Ports Pty. Ltd. signed the contract in April 1999.
- The contract period is 46 years; 3 years of construction and 43 years of operation.
- The contractor will spend US\$ 217 million for this work.
- The capacity is 0.5 million TEU per year at first step and 1 annual million TEU in total.
- The construction includes landfill, equipment and connection road/railway.
- At present a settlement plan is in preparation.

Multipurpose Terminal Project in Filyos Port

- The Ministry and Kardemir A. S.(Steel plant maker) signed the contract in March 1999.
- The contract period is 49 years.
- The contractor will spend US\$ 151 million in the first stage and US\$ 753 million in total.
- The capacity is 5 million tons per year at the first stage and 25 million tons per year in total.
- The construction includes breakwater, landfill, quay, equipment and connection road/railway.
- Hydraulic experiment and soil examination has been finished, and the analysis is on going. A settlement plan is in preparation.

12.2.3 BOT Bidding Procedure

See Appendix for Chapter 12

BOT bidding is carried out under the scope of the law of “ Application of the model called as BUILD, OPERATE, TRANSFER for some investments and services” by Ministry of Transport, General Directorate of Railways, Ports and Airports Construction. Respective ministry selects a project after judging whether the project is suitable and feasible for BOT bidding or not.

A tender document is prepared by DLH and the tender is held by means of sealed tender. Private companies established in Turkey as themselves or as a joint venture with another Turkish private company or foreign private company are eligible to submit a proposal to DLH, if they fulfill the requirements of Law no. 4105. In addition, bidders are required to show their certificates that prove their actual results about any works of infrastructures for the public organizations or production, investment or endorsement, with the cost of at least TL 1 trillion in specified year.

The bids are opened by the Bidding Committee in front of the bidders according to their sequence of submission. A sub-committee first evaluates technical aspects of the submitted bid. The technical evaluation has the following point system; functional features worth 35 points, physical features 35 points, economical consistency 10 points and environmental cautions 20 points. Bids receiving over 70 points are submitted to the Ministry for approval.

For the financial evaluation, the Bidding Committee opens the inner envelopes of bidders whose technical proposals are found sufficient. The importance sequence is usage price which is said to be paid during the operation period, the requested total investment period, experience and financial sufficiency of the firm.

In selecting the winning bid, the technical evaluation has a weight of 40% and the financial evaluation a weight of 60%. The bid with the highest grade is accepted as the most suitable one.

12.2.4 BOT Construction Procedure

See Appendix for Chapter 12

An investor, namely the winning bidder of a BOT project, must follow the procedure that has been agreed upon among ministries concerned, when constructing coastal structures. This procedure is briefly described as follows.

An investor provides the Ministry of Public Works and Settlement with a status plan including a key plan through the associated local government. The Ministry examines the submitted status plan in making inquiries to the Undersecretariat of Maritime, Ministry of Transport and Ministry of Environment, and instructs the associated local government to prepare the settlement plan. In case of an investment in the Tourism Areas and/or the Special Environmental Protection Areas, the procedure is different.

An investor applies to DLH with the following documents which are related to the Landfill Settlement Plan approved by the ministry and also related to coastal structure; investment projects, all kinds of calculation, geotechnical report and model experiment report if necessary.

An investor also applies to the General Directorate of National Estates with the following documents in order to obtain the permission which constitute a base for the construction permit related to the investment; approved landfill settlement plan and implementation projects approved by DLH.

An investor obtains a construction permit from the associated administration by showing the permit issued by the General Directorate of National Estates. The procedure for a construction permit is carried out in accordance with the related articles of the Settlement Law 3194.

The structure is built under the supervision of DLH within the bounds of possibility in full responsibility of the investor.

Upon the completion of the construction, an investor applies to the Undersecretariat of Maritime and gets a permit for availability for operation, and then sends a copy of this permit to the General Directorate of National Estates.

12.2.5 BOT Contract Agreement: in case of Derince Container Terminal

See Appendix for Chapter 12

The agreement comprises 37 articles. Some articles make contractors hesitant to enter the bidding because of unclearness or unfairness, and this may preclude international finance for the projects.

Articles to be reconsidered are as follows;

a) **Arbitration**: related to Article-26, 27 of the agreement and Article-29 of the bidding papers. Arbitration should be resolved by the framework of international arbitration rule. The arbitration takes place in the English language in Paris, Geneva, New York and Singapore.

The Constitution has been amended this August to enable the government to enter international arbitration, but the concrete procedure is not published in English.

b) **Account:** related to Article-23 and –25 of the agreement

It should be stipulated that the account for income of the contractor should be an offshore account in US\$ because transactions between the contractor and consignors will be made in US\$, and payment to the Treasury is designated in US\$.

c) **Cost Increases:** related to Article-8 and -24 of the agreement

The government should share or bear the cost increase by an increase in taxes and an adoption of new taxes because the government can manage the tax system.

d) **Force Majeure:** related to Article-26 of the agreement

The government should share some of the outcome of force majeure that happens due to a lack of governing ability because the contractor cannot manage whole matters outside the contract.

e) **Termination:** related to Article-21, –26 and -27 of the agreement

It should be stipulated that the contractor must comply with instructions of the government that are in accordance with the scope of the agreement. However, the contractor should have the right not to comply with any instructions not in the agreement.

In addition, the contractor should have the right to terminate the agreement when the government does not comply with the agreement.

12.2.6 BOT Contractor's Financial Operation: in case of Derince Container Terminal

The expenses of the contractor are US\$ 217 million for the construction and a land use fee of US\$ 991 million which is paid to the Treasury. In addition, the contractor will spend money for management and operation of the terminal after three years of the agreement and will make a repayment to a lender.

The expected income is accrued from terminal operation where 0.5 million TEU containers will be handled after the completion of the terminal and 1 million TEU will be handled after 11 years of agreement.

The contractor's payment is based on terminal operation earnings that have a correlation with the handling volume of containers. But the government and other authorities do not guarantee the handling volume. In addition, the contractor cannot prevent competitors from appearing in the neighboring region. In other words, though only the contractor has a market risk, the contractor cannot govern the market.

12.2.7 BOT Power plant Projects

The agreement guarantees that a value of 80% of electricity generated by BOT power plants will be paid by TEAS(government corporation) when the demand does not reach the target kilowatt-hours in order to avoid a market risk. The contract agreement also provides

that in a case of force-majeure, payment will be allocated from the Energy Electricity Funds equal to the value of target kilowatt-hours during the period. This means that the government takes a risk.

12.2.8 Principle of BOT scheme

BOT is a project financing scheme, by which income generated from projects is applied to repayment of a loan and the assets employed in the projects are used as collateral for the loan. In other words, the contractor of BOT projects has to repay lenders from cash generated by terminal operation. The prime characteristics of this concept is that the parent company of the project is not responsible for financing as a general rule.

Lenders' obligation is to eliminate every risk or, if this is impossible, to control and manage every risk as far as possible. However, it is impossible for lenders to actually control and manage all risks. In this situation, the government is expected to take the initiative in projects and to provide projects with overall support. If the government is willing to take a risk, lenders will be more likely to grant loans for projects.

Risk sharing between the government and contractors should be appropriate and fair in order to attract investors into projects. A guideline of risk sharing is that a party efficiently governing a risk should bear the risk. Operational risks such as designs and management could be basically borne by contractors. On the other hand, the contractors should not bear onesidedly risks on earnings such as market and taxes. In this sense, it is necessary for the government to take a market risk during some period, because it would be rare for the contractor to achieve the target volume at the beginning of operation.

Coordination mechanism should be incorporated into the agreement. This mechanism includes legal and economic procedures, which will allocate risks reasonably when risks happen. Because risks will occur in response to socioeconomic changes, it is impossible for the government to prepare an agreement that foresees all risks during the contract period.

Consultation with financial advisers and lawyers is very useful to grasp the views of the private sectors. This kind of consultation is very important to improve/develop skills on BOT scheme, because risk sharing is formed on the basis of culture, tradition, and experience of each country.

12.3 Port Operating Company at Privatized Ports

12.3.1 General

See Appendix for Chapter 12

Transfer contracts of operation right were signed between Privatization Administration, Turkish Maritime Administration and a private operation company. Bidders were more or less than 5 domestic companies at each port. Some of them had experience related to port operation while others did not.

Operation rights are rights of providing port services like loading, pilotage and water supply by using the unmovable and super-structures, the tax-free shop and institutes, and the open or closed area in the port.

12.3.2 Contract Agreement on Transfer of Operation Right

See Appendix for Chapter 12

Contract agreements comprise 42 articles. Some articles are unclear or unfair, which would result in a financial burden for contractors.

Articles to be reconsidered are as follows;

a) **Repair cost of natural disaster:** related to Article-17 of the agreement

Repair cost of damage by natural disaster should be paid by the government because contractors pay both an operation right price and a concession fee for using unmovable and super-structures belonging to the government. In addition, contractors have limited capital and precise estimation of damage cost is impossible at the moment of the signing.

Recently an amendment has been introduced which incorporates insurance coverage against damage caused by natural disaster, while the payment of insurance premium is left to the responsibility of contractors.

b) **Assignment of authorization:** related to Article-22 of the agreement

It should be defined that contractors may transfer all of their rights to lenders or their nominees with prior written consent of the government, if contractors go bankrupt or experience financial difficulties.

12.3.3 Financial Situation of Private Operating Company

The expenses of “A” Operating Company are US\$ 5,606 thousand as operation right price to Privatization Administration, and 25% of operation income and 2% of other income out of operation every year during 30 years to TDI. In addition, “A” Company will spend money for management and operation and will make a repayment to a lender.

The expected income is accrued from services to port users. The “A” Company can decide tariff for port services, but cannot increase tariffs more than 20% in the first 5 years and approval of TDI is necessary. After that time TDI’s approval is unnecessary.

See Table 12.3.1

Income statement of “A” Company shows a loss of US\$ 639 thousand including a US\$ 216 thousand operating activities loss. Operating ratio is extremely inefficient, which suggests that the financial situation will not be rapidly improved. Even though the relationship between gross sales and tariffs is unknown, “A” Company is in a financially difficult position and cannot afford to spend money for maintenance or new investment.

Pre-and post-privatization conditions should be surveyed and results should be reflected in the agreement and in the administrative policies. It should be noted that operating ratio of TDI was high at the beginning of the 1990s when ports were under operation of TDI, but

operation ratios both of TDI itself and of an operating company have been low since the privatization.

12.4 Private Port Managing Company

Private ports have been contributing to development of the nation by providing the country with a connecting function of sea-land transportation. However, some ports are in financial difficulties.

See Table 12.3.2

Income statement of “B” Company shows a loss of US\$ 981 thousand despite an operating profit of US\$ 1,450 thousand. This is caused by repayment of US\$ 2,686 thousand for the long-term debt. Operating ratio is not high and thus the operating income would be examined from a viewpoint of relationship between competitiveness and tariffs. Financial performance would be improved in the future but “B” Company will not be able to invest in new projects.

Table 12.3.1 "A" Port Operating Company Income Statement

(Thousand US\$)

	1997	1998	
Revenue	189	485	
Gross Sales	189	474	
Other Usual Activities		11	Note:
Expenses	109	1126	1) The transfer contract of the operation rights is signed and activated on 6/8/1997
Operating Activities	103	690	2) Exchange rates are yearly average exchange rates.
Cost of sales sold	0	94	3) This Income Statement is rearranged from the original statement for comparison with other financial reports.
Administration	103	596	4) Operating ratio is the proportion of operating activities versus gross sales
Other Usual Activities	3	411	
Long-term debt		411	
Short-term debt	3		
Extraordinary	3	25	
Deferred expenses	3	25	
Operating Activities Profit/Loss	86	-216	
Other Usual Activities Profit/Loss	-3	-400	
Total Profit/Loss	80	-639	
Operating ratio(%)	-	145	

Table 12.4.1 "B" Port Managing Company Income Statement

(Thousand US\$)

	1999	
Revenue	11,252	
Gross Sales	10,943	
Other Usual Activity	286	Note:
Selling stocks and bonds		1) Exchange rates are yearly average exchange rates.
Exchange profits		2) Figures of 1999 are figures of during Jan.-Sep.1999.
Extraordinary Revenue	23	3) This Income Statement is rearranged from the original for comparison with other financial reports.
Expenses	12,233	4) Operating ratio is the proportion of operating activities versus gross sales
Operating Activities	9,493	
Cost of sales sold	8,695	
Sales discount	110	
Administration, Marketing	688	
Other Usual Activities	2,738	
Exchange losses	52	
Long-term debt	2,686	
Extraordinary Expenses	2	
Operating Activities Profit/Loss	1,450	
Other Usual Activities Profit/Loss	-2,452	
Total Profit/Loss	-981	
Operating ratio(%)	87	

12.5 Investment Scheme for the Private

12.5.1 Investment Incentive Scheme for Domestic and Foreign Investors

Investment incentive scheme is provided for domestic and foreign investors. This scheme guarantees equal treatment between domestic and foreign investors by the law and treaties. Investors must receive an incentive certificate from the authority to enjoy this benefit.

The incentive tools granted are;

- Exemption from customs duties and fund levies,
- Investment allowance,
- Value Added Tax (VAT) exemption for imported and locally purchased machinery and equipment,
- Exemption from taxes, duties and fees.

Exemption from customs duties and fund levies ensures that the imported machinery and equipment for investment can be brought to the country with the exemption of customs duties and fund levies. Raw materials and intermediate goods are not included within this context.

Investment allowance is a corporate tax exemption applied to taxpayers. The current allowance rate is 100%, which means that an amount equal to the fixed investment cost can be deducted from the future taxable profits. Investment allowance rate can be increased up to 200% in correlation with the investment amount.

VAT exemption allows investors to import and/or purchase in local without paying VAT, with approval of machinery list.

Exemption from taxes, duties and fees means investors are exempt from stamp, duties and fees related to investing activities, when the investors commit to realize US\$ 10,000 of export upon completion of the investment.

The incentive regime is applied varying to the location, scale and subject of investment as follows;

Incentive Regime

(as of November 1998)

Region	Investment Type	Scale
Developed Regions Istanbul and Kocaeli, Ankara,Izmir,Bursa,Adana and Antalya.	Types are limited. Infrastructure investments and Ports/Quays are applicable.	Investment amount is more than TL 50 billion. Equity rate is more than 40%.
First Priority Regions 50 cities determined by the Council of Ministers.	All types are applicable.	Investment amount is more than TL 25 billion. Equity rate is more than 20%.
Normal Regions The remaining cities.	All types are applicable.	Investment amount is more than TL 50 billion. Equity rate is more than 40%.

12.5.2 Foreign Investment Policy

Foreign Investment Policy is comprised of the following main principles, which are legislated by the law and related decrees.

- Equal treatment: Foreign investors have the same rights and obligations as domestic capital,
- No limitation in participation of foreign capital,
- Free transfer of profits, fees and royalties and repatriation of capital in the event of liquidation, or sale are guaranteed,
- Open field activity: All field which are open to the Turkish private sector are open to foreign participating companies,
- Employment of foreigners: There is no limitation for assigning expatriates as managers and technical staff.
- One stop agency: General Directorate of Foreign Investment has been authorized to implement these policies effectively.

12.5.3 General Tax System concerning Investment

A corporation tax is imposed on a profit of an enterprise with maximum rate of 46%, which is receipted by the Treasury. A business tax and a property tax are not found in the receipts of Treasury.

A prepaid stock dividends system is not found in the accounting system. This system enables an enterprise to pay stockholders a dividend, even through the enterprise cannot make a profit because of partial operation of facilities. In this system, an entrepreneur can easily issue stocks at trading market for fund raising to establish an enterprise. As it takes a long time for enterprises to generate earnings in the port business, this system is helpful to enter the port business.

Depreciation for special purpose is not found in the accounting system. This system permits enterprises to depreciate their facilities in the short term. Port operating companies are small enterprises and they cannot afford to renew their facilities and equipment. Therefore this system is helpful.

12.6 Present Situation of Private Capitals

12.6.1 Investment Trends

See Table 12.6.1

The amount of Incentive Investment Certificates declined to US\$ 15 million in 1998 from US\$ 25 million in 1996. Manufacturing investment has fallen to 50% of the total while services investment has increased to 40% of the total. Private capitals have invested more than 40% of the total amount in the Marmara Region, 16% in the Aeagean and 13% in Central Anatolia. Private capitals like to realize efficient performance of investment in the region where market is expanding, industries are piling up, connection to market is easy and human life infrastructure is well developed.

12.6.2 Domestic Private Capitals

See Table 12.6.2

The outstanding amount of domestic deposits was a low ratio of 20% of GDP, amounting to around US\$ 40 billion in 1998. It is assumed that the citizens are putting their money under their pillows because of their distrust in the present banking system. It is also assumed that enterprises cannot raise funds from private banks. The outstanding amount of domestic credits is the same as the outstanding amount of domestic deposits. In other words, private banks have no money to invest and enterprises have no way to raise funds at present.

The trading volume at stock market, on the other hand, was 35% of GDP, amounting to around US\$ 70 billion. However, there are only 260 companies listed in the Istanbul Stock Market, which will give enterprises a barrier for equity finance.

12.6.3 Foreign Direct Investment

See Table 12.6.3

Foreign direct investment in the world has been increasing, reaching US\$ 329 billion in 1995 and US\$ 644 billion in 1998, according to the 1999 World Investment Report published for the U.N. Conference on Trade and Development. Most foreign direct investment is made to the developed countries, although the developing countries' share had been growing steadily until 1997, when it reached 37%. Its subsequent decline to 26% in 1998 reflected the strong foreign direct investment performance of developed countries in that year.

Foreign Direct Investment (FDI)

FDI inflows comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise, or capital received from an FDI enterprise by a foreign direct investor. There are three components of FDI: equity capital, reinvested earnings and intra-company loans.

- *Equity capital is the foreign direct investor's purchase of shares of an enterprise in a country other than its own.*
- *Reinvested earnings comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested.*
- *Intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises.*

Turkey comes 55th among countries receiving foreign direct investment, amounting to US\$ 807 million. Turkey was the only developing country among the 20 most competitive economies in the world in 1986 and was ranked 22nd in the first half of the 1990s. However, Turkey has since lost its position, and six other developing countries are listed in 1998.

The report concluded that the capacities of host developing countries to regulate enterprises in terms of competition policy and environment policy are emerging as the

most active policy-making areas. An effective competition policy is therefore an absolute necessity. It is important for host countries to learn the process of improving these skills and expertise step by step.

See Table 12.6.4

Foreign direct investment of US\$ 10.1 billion is permitted by the government during 1995-1998. The amount of manufacturing investment was US\$ 4,511 million from 1995 to 1998 and the amount of services was US\$ 5,346 million. On the other hand the amount of banking was US\$ 238 million, investment financing was US\$ 260 and marine transportation was US\$ 3 million. However, the government is concerned about the decline in foreign direct investment and has increased promotional efforts.

Table 12.6.1 Investment Amount of Investment Incentive Certificates

	(Million US\$)			Population	GDP
	1996	1997	1998		
Investment Amount of Investment Incentive certificates	25	22	15		
Sectors Breakdown	100.0	100.0	100.0		
Agriculture	1.8	0.8	2.1		
Mining	1.3	1.7	2.2		
Manufacturing	73.7	63	48.9		
Energy	3.4	7.0	5.0		
Services(Transportation, Tourism, Other)	19.8	27.6	41.8		
Regional Breakdown	100.0	100.0	100.0	100.0	100.0
Marmara	49.2	44.0	39.4	26.2	36.1
Central Anatolia	11.0	13.6	13.2	17.1	16.0
Aegean	11.5	14.7	16.5	13.7	15.9
Mediterranean	10.0	12.9	9.3	12.3	12.9
Black sea	11.7	3.8	7.2	12.7	9.7
East Anatolia	2.2	1.9	2.8	8.0	4.0
Southeast Anatolia	9.6	7.1	7.6	9.9	5.4
Multi-Regional	1.5	2.1	4.0		

Source: Main Economic Indicators 1999 and Turkish Economy: Statistics and Analysis, 1999

Table 12.6.2 Domestic Credits, Deposits and Stock Trading Value

	(Million US\$)					
	1996		1997		1998	
GDP	182,064		190,425		198,528	100.0
Outstanding Amount of Domestic Credits	40,715		46,577		42,256	21.3
Central Bank Credits(Public)	4,367	2.4	2,237	1.2	4	0.0
Deposit Money Bank Credits	34,208	18.8	42,160	22.1	39,952	20.1
Invest. Dev. Bank Credits	2,140	1	2,180	1	2,299	1.2
Outstanding Amount of Domestic Deposits	32,113	17.6	34,004	17.9	39,884	20.1
Commercial Deposits	4,909	2.7	4,339	2.3	6,748	3.4
Time Deposits	20,791	11.4	20,343	10.7	23,993	12.1
Other Deposits	6,413	3.5	9,322	4.9	9,143	4.6
Trading value at Stock Market	37,737	20.5	58,104	31.4	70,396	34.9
Trading value of Bond and Bill	32,737	18.0	35,472	19.0		

Source: Main Economic Indicators 1999 and hearing from Istanbul Stock Exchange Market

Note: Figures of Credits and Deposits were taken on the last Friday of December of each year

12.7 Evaluation on Port Investment by the Private

(1) Built-Operate-Transfer (BOT) Scheme

BOT bidding procedure and construction procedure are well provided and port projects have been carefully carried out taking an overall settlement into consideration. The projects have also been carefully scheduled with regard to landfill.

BOT agreement has some articles that make contractors hesitant to enter the bidding because of unclearness and unfairness, and this may preclude international finance. The authorities should reconsider articles concerning arbitration, account, cost increase, force majeure and termination.

BOT scheme should be reexamined by the authorities from the viewpoint of risk sharing. And the agreement should incorporate a coordination mechanism, which includes legal and economic procedures to allocate risks reasonably when risks happen. Generally risk sharing is formed on the basis of culture, tradition, and experience of each country. Therefore consultation with financial advisers and lawyers is important to improve skills on BOT scheme.

(2) Port Operating Company at Privatized Ports

Transfer contract of operation right has some articles, which would result in a financial burden for contractors. The authorities should reconsider articles concerning repair cost of natural disaster and assignment of authorization.

One of **the private operating companies** is suffering from inefficient performance that will not be rapidly improved. Since privatization, operating ratios of both TDI and contracting companies have become worse. The authorities should survey the reasons and reflect results in the agreement and in the administrative policies.

(3) Private Managing Company

One of **the private port managing companies** is facing a financial difficulty. They cannot afford to invest in new projects.

(4) Investment Scheme for the Private

Government investment incentive scheme is well provided, but the amount enjoyed by companies has been declining. A **tax incentive** is not available for small companies when they invest in new equipment. **Foreign direct investment inflows** have also been declining.

(5) Present Situation of Private Capitals

There is a shortage of funds in domestic banks and in the stock market. Therefore private sectors who intend to start port business or to renew port facilities, find it difficult to raise funds.

Chapter 13 Port Operation

13.1 Present Situation of Container Handling Operation

In Turkey, there are various entities engaged in the field of cargo handling ; TCDD and TDI undertake cargo handling in their ports themselves, a private sector undertakes it in TDI privatized ports and a private sector undertakes it in a privately owned port.

According to surveys from certain ports, the productivity of container handling is 22-25 TEU per hour at some TCDD ports by using gantry cranes and 18-19 TEU per hour by mobile cranes at some private ports.

However, according to cargo volume-berthing time analysis based on TCDD statistics (Limani Aylık İstatistik Cetveli, 1998), the container handling productivity (gross time) can be assumed 10.11-10.17 box/hour/crane (about 15 TEU/h/c). Table 13.1.1 shows specifications of major container terminals, which includes a Japanese port for comparison. Annual productivity was 60,466-80,649 TEU/berth in 1997.

Table 13.1.1 Container Terminal Facilities & Operation in Selected Ports

Item		Haydarpasa	Izmir	Mersin	Osaka (Japan)
Container handling volume (TEU,1998)		322,596	398,619	241,865	1,155,980
Container Berth	Berthing capacity at the same time	4	5	4	11
	Berth length (m)	650	1,050	980	3,365
	Berth depth (m)	-12	-13	-10,-14	-13
Handling productivity (TEU/berth)		80,649	79,724	60,466	105,089
Container stacking	Holding capacity (TEU)	8,800	11,072	8,474	8,820
	Stacking gross area (m2)	179,040	211,017	266,130	620,000
Equipment	Gantry crane (unit)	4	5	3	21
	Transtainer (unit)	9	9	11	-

Source : materials provided by DLH and TCDD statistics

13.2 Present Situation of Conventional Cargo Handling Operation

In Turkey, major conventional ports are Haydarpasa, Mersin, Samsun and Derince, whose total cargo volume amounts to 5.9 million tons in 1998 (86% of the total 6.9 million tons handled at TCDD). The following Table 13.2.1 shows present situation of conventional berths in major ports. Usually, conventional cargoes are loaded and unloaded by shore crane with hook & sling. If necessary, ship cranes and floating cranes (60t-250t) are used. In TCDD ports, shore crane with hook & sling is used for conventional cargo handling while shore crane with grab bucket is used for dry bulk cargo handling (See Chapter 13.3). Preliminary analysis exhibits that the annual ratio of handling volume to berth length was around 1,500 ton per one meter of berth length in almost all the ports in 1997.

Table 13.2.1 Present Situation of Conventional Berths at Major Ports

(Unit : Ton)

		Haydarpasa	Mersin	Samsun	Derince	Iskenderun (Reference)
Cargo volume (1998)		2,828,327	1,698,209	816,785	623,678	202,251
Berth	No.	No2, 4-10, 13-17 (13 berths)	No.2-7 & 16-19 (11berths)	No3-7 & 9-10 (7berths)	No.1-8 (8berths)	No.1-4 (4 berths)
	Length	96-334m	69-480m	150-400m	55-400m	170-353m
	Depth	-6m ~ -10m	-6m ~ -12m	-6m ~ -12m	-3.5m ~ -15m	- 10m
Handling Equipment	* Shore & yard crane (3-35t)	28 units	17 units	19 units	11 units	21 units
	Mobile crane (3-25t)	22 units	18 units	8 units	10 units	15 units
	General Cargo Forklift (2-5ton)	54 units	46 units	18 units	30 units	40 units
Open storage (m2)		174,282	669,880	356,530	182,300	170,000
Warehouse (m2)		22,786	22,340	12,018	14,500	20,265

Source : materials provided by DLH & TCDD statistics

* Note : Shore crane with grab bucket type for dry bulk cargo is also used.

13.3 Present Situation of Dry Bulk Cargo Handling Operation

(1) Outline of Dry Bulk Cargo Handling

The major dry bulk cargo ports in Turkey are Bandirma, Mersin, Samsun, Izmir and Hayderpasa (TCDD ports). The following Table 13.3.1 shows the outline of bulk terminals at 5 major ports. In Turkey, bulk terminals are not so large (water depth is -8.3m - -14.5m), and vessel type is from 10,000 DWT to 80,000 DWT.

Generally, grab bucket type is the most popular for handling dry bulk cargo, and pneumatic unloader is the most popular for loading and unloading grains. Handling operation by using shore cranes (grab bucket) is directly conducted by TCDD staff. However, pneumatic unloaders usually are owned and managed by TMO (state-owned company), which has also a silo and conveyor system.

(2) Example of Bandirma Port

The Port of Bandirma is one of the largest grain ports. The port has 8 berths with total length of 1,313 m and 8 shore cranes with grab bucket (5-10 t) for dry bulk handling. Generally, the port exports various kinds of ores (lead, borax, kaolin, cement & zinc) and imports grains (flour, corn, soybean & rice) from USA, Australia, Russia and other countries. There are a lot of ore mines behind the port. Generally, the efficiency of handling is not so high owing to low capacity of handling equipment.

1) Grain

Grain is handled at No.5, 9 & 11 berths. There are 2 methods of grain unloading. One method is to use shore cranes and the other method is to use pneumatic unloaders at No.11 berth (TMO). Unloaded cargoes are loaded onto truck through portable hopper or transferred to the grain silo through conveyor system (newly introduced at the end of 1996). The productivity is 750-900 t/shift (8 hours ; 93-112t/h) by using 10t crane and 300-500 t/shift (38-62 t/h) by using 5t crane.

2) Coal & Other Ores (clinker, lead, borax, kaolin, cement & zinc)

Coal is handled at No.7 and 8 berths using 5 and 10 ton cranes. Unloaded coal is transferred onto trucks through portable hopper. The productivity is 600-700 t/shift (75-87 t/h) by using 10t crane.

Table 13.3.1 Present Situation of Dry Bulk Berths at Major Ports

(Unit : ton)

Port		Mersin	Bandirm	Samsun	Izmir	Hayderpasa (Reference)
Cargo volume (1998)		3,369,472	3,134,771	1,453,458	1,688,727	237,888
Kinds of bulk cargo		Ore & grain	Import (phosphate , sulfur) Export (ores & acid)	Import (Fertilizer, coal) Export (iron ore, fertilizer)	Cement & Grain	Grain
Berth	No.	No.7,14,15	No.7-14	No.1&2	No.3	No.9
	Length (m)	158-275	80-203	326	150	190
	Water depth (m)	-10 ~ -14.5	-8.3 ~ -13	-10.5	-10.5	-10
Cargo handling equipment	* Shore crane (grab type)	1 (10 t)	8 (5-10 t)	5 (5-10t)	5 (3-5 t)	1 (25 t)
	* Shore crane (hook type)	16 (5-35t)	7 (5-35 t)	10 (3-35 t)	4 (5-10 t)	16 (5-10 t)
	Pneumatic Unloader (TCDD)	2 (160t/h) 5 (50t/h)	4 (50t/h)	-	-	-
	Pneumatic Unloader (TMO)	2 × 1,200t/h (loading) 2 × 600t/h (unloading)	150t/h	5 × 75t/h (loading) 3 × 50t/h (unloading)	2 × 150t/h	2 × 150t/h
Others		There is a conveyor system whose loading rate is 2,400t/h & discharging rate is 1,200t/h.	Efficiency of coal handling is about 600-700 tons /crane/shift .	An ore conveyor system operates at a rate of 700t/h for vessel loading.	Bulk ore is loaded by grabs with daily loading cap/shift (8h) of 750-1000t.	There are 2 pneumatic unloaders whose capacity is 2,000 ton/day.
Silo (ton)		100,000 (concrete grain silo)	30,000 (new concrete silo)	34,000 (grain silo)	76,000 (grain silo)	70,580 (grain silo)

Source : TCDD & Ports of Turkey (Shipping Agency CO. INC.)

* Note : Some grab type can be convert to hook type and vice versa.

13.4 Present Situation of Computer System

(1) Current Situation

Hayderpasa port introduced its present computer system in 1998. The system is now connected with TCDD headquarters in Ankara. New computer system covering all kinds of cargo-related activities is now being developed in Hayderpasa Port to replace the present one. In addition, Izmir will start its new computer operation in 2000. Mersin also plans to introduce the same system with that of Izmir (See Table 13.4.1).

Furthermore, TCDD plans to extend the system to the other TCDD ports. TCDD has an idea to establish computer network between headquarters & all its ports and between TCDD ports. Introduction of computer system is one of the key elements for securing efficient management and operation.

(2) Computer System at Haydarpasa

The main purpose of present computer system is to calculate and collect tariff (See Figure 13.4.1). It is also used for the control of location of containers in the regular container terminal and inland container terminal. However, this system is not connected to the other activities of container handling operation. Therefore, container handling operation still depends upon handwritten documents and manpower. This is one reason for inefficient operations. The new computer system is under development and will be introduced in the near future.

(3) Computer System at Izmir & Mersin

So far, Izmir and Mersin have been conducting non-computerized container handling operation although respective container handling volumes are 398,167 TEU and 241,865 TEU (1998). Today, almost all container operations are still conducted manually. Nevertheless, introduction of computer system is essential to maintain high quality of container services. Izmir port plans to introduce a new computer system in 2000. The system covers shipping, loading/unloading, container movement at a yard and in-out of container tracks.

(4) EDI System

So far, EDI system has not yet been introduced in Turkish ports. Therefore, all relevant application procedures including customs clearance & port entry are performed by hard copy (paper document). In addition, port users such as shipping lines and consignees can't get access to ports through on-line system in order to exchange necessary information.

Table 13.4.1 Present Computer System at Hayderpasa, Izmir & Mersin

1) Hayderpasa Port

System name	Ultra 10 Sun Server + Operating System (UNIX)
Composition	10 terminals, 12 data lines
Terminus	45 personal computer + 12 printer
Present situation	Billing & determination for tariff Input of manifest information
Future plan (new system)	Plans to introduce same system with Izmir

2) Izmir Port

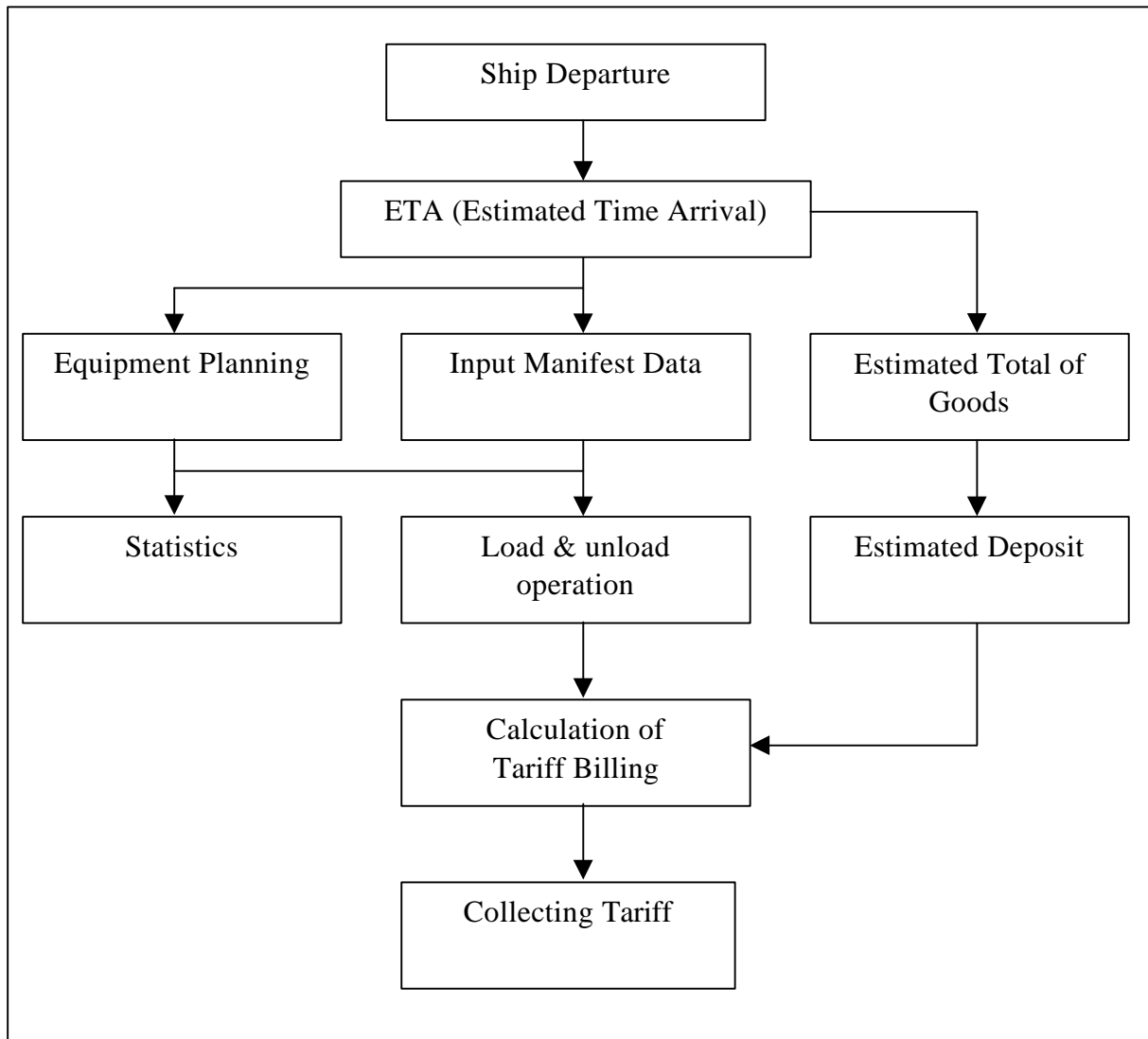
System name	ALPHA Server + WINDOWS NT (Operation System)
Composition	2 work station + Operating system (UNIX)
Terminus	66 digital PC + WINDOWS 95 (166 MMX ,16 MB, 2.1 GB, 14”) + other peripherals (printers)
Present situation	Billing & determination for tariff Input of manifest information
Future plan (new system)	Upgrading the existing relational Date base (ORACLE)

3) Mersin

System name	-
Composition	-
Terminus	-
Present situation	-
Future plan (new system)	Plans to introduce same system with Izmir

Source : TCDD

Figure 13.4.1 Present Computer System at Hayderpasa Port



Source : TCDD

13.5 Evaluation on Port Operation

In the following 2 respects, it is very important for Turkish ports to increase the productivity of cargo handling and service levels.

- 1) To effectively use existing facilities
- 2) To be more competitive

If Turkish ports use the existing facilities efficiently, the government can avoid further investment for the ports. If the productivity of cargo handling increases by 30%, the cargo volume also may increase by 30%. In the future, the increase of the cargo volume can be expected. In this sense, effective use of existing facilities enables government not only to secure efficient port operation and but also to avoid further investment.

On the other hand, it is very necessary for container ports in Turkey to increase handling productivity in order to be more competitive. Especially, Turkish ports have been facing severe competitions in attracting container cargoes from neighboring rival ports in eastern Mediterranean region. Therefore, it is necessary for the ports to increase the overall productivity and improve service levels in order to compete with the rival ports.

in not only in hardware aspect but also software aspect. It is very possible for Turkish ports to attract more cargoes in the future if the productivity increases and service level improves.

Based on the obtained data and discussions, the current situation on port operation can be evaluated as follows ;

(1) Container Handling Operation

In Turkey, generally, container handling productivity is not so high compared with many other major ports in the world. This is mainly due to lack of capacity, old handling equipment, lack of trucks & trailers, traffic congestion etc. Introduction of advanced communication system between gate, control center & cargo handling equipment and sophisticated computer system will be a key to increase the overall productivity. Based on clear understanding of the present situation and issues, effective measures shall be carefully considered in the strategy.

(2) Conventional Cargo Handling Operation

Generally, the productivity seems not to be high. This may be mainly due to the waiting time for many direct loading & unloading, unavailability of truck/forklift, the waiting time for custom clearance, old handling equipment, etc. Based on a clear understanding of the current situations and problems, the effective measures should be carefully elaborated in the strategy.

(3) Dry Bulk Cargo Handling Operation

It can't be said that productivity of dry bulk handling is high. Generally, productivity for dry bulk mainly hinges upon the quality of the cargo handling equipment. Therefore, the reasons for low productivity are mainly due to the old handling equipment and its low capacity. In the future, it is expected that specific Turkish ports need dry bulk terminals with greater length and depth (e.g. length 300m & depth -15m). In order to raise the productivity and meet the increasing demand for dry bulk cargo, it is advisable for ports to introduce advanced handling equipment.

(4) Computer System

Today, advanced ports in the world are promoting port information network system such as EDI in order to become user-oriented. Turkish container ports have been trying to introducing computer system mainly for calculating and collecting tariffs. However, the main purposes of computer system are to improve service level and to increase operational productivity for port users. In this sense, Turkish ports are still behind world ports in terms of introduction of computer system. Thus, it is essential for Turkish ports to establish an efficient computer network system including EDI as soon as possible in order to compete with rival ports.

Chapter 14 Environmental Aspects

14.1 Laws and Regulations

14.1.1 General

Environmental policy in Turkey is set out in the 1982 Constitution. The Constitution establishes the right of each citizen to a healthy and balanced environment and makes it the shared responsibility of the state and citizenship to improve the environment, to protect environmental health and to prevent pollution

The Environmental Law, which was enforced in 1983, is the major framework of environmental administration in Turkey. This law is based on the principle called “Polluter pays” and most of the relevant laws and regulations derive from this law. Other key environmental laws and regulation are as follows.

- (1) National Park Law (1983)
- (2) Bosphorus Law (1983)
- (3) Protection of Cultural and Natural Assets Law (1983)
- (4) Regulation on Environmental Pollution Prevention Fund (1985)
- (5) Housing and Building Code (1985)
- (6) Regulation on Noise Control (1986)
- (7) Regulation of Air Quality Control (1986)
- (8) Regulation on the Establishment of Guilt in Fines to Levied on Ships and Other Marine Vessels (1987)
- (9) Regulation on Water Pollution Control (1988)
- (10) Regulation on the Protection of Surface Water Supply (1984) (Revised in 1990)
- (11) Regulation on Solid Waste Control (1991)
- (12) Regulation on Medical Waste Control (1993)
- (13) Regulation on the Control of Toxic Chemicals and Products (1993)
- (14) Regulation on the Control of Hazardous Waste (1993)
- (15) Regulation on Environmental Impact Assessment (EIA) (1993) (Revised in 1997)

14.1.2 Outlines of Key Laws and Regulations

(1) Environmental Law

This law handles the issue of environment on a very broad scope. The aim of the law, which considers the environment as a whole, is not only to prevent and eliminate environmental pollution but also to admit the necessity of the management of natural and historical assets and the land.

(2) National Park Law

This law forms an extension of the Forestry Law, by making specific reference to the role of National Parks, Natural Parks, Natural Monuments and Nature Protected Area, for the

preservation of ecosystems, rare and endangered species.

(3) Bosphorus Law

The purpose of this law is to protect and develop the cultural and historical values and natural beauty of the Istanbul Bosphorus Area and to set down building regulation to be implemented to restrict population growth in the area

(4) Regulation on Noise Control

This regulation sets out levels of noise permissible from various sources, including acceptable noise level in the work place and noise control measures to be taken when levels are exceeded. Industrial facilities are required to report on their anti-noise measures, operating hours and noise limits when they apply for operating permits. The Noise Standard is shown in Appendix (Table A.14.1.1).

(5) Regulation of Air Quality Control

This regulation aims to control soot, smoke, gases, steam and aerosols released into the atmosphere as a result of all kind of activities and to protect human beings and their environment from air pollution. The Air Quality Standard is shown in Appendix (Table A.14.1.2).

(6) Regulation on Water Pollution Control

This regulation constitutes the main regulation governing water pollution. It aims to define the principles for water pollution control in order to protect water and groundwater potential for all types of uses. And this regulation has the Water Quality Standard by class. It is shown in Appendix (Table A.14.1.3).

(7) Regulation on Environmental Impact Assessment (EIA)

This regulation requires that an EIA is mandatory for major infrastructure projects or for activities proposed in the protected areas under the national legislation and international conventions as well as sensitive areas. The EIA is required to be prepared during the planning phase. The proposed development can only receive the approval after the Ministry of Environment (MOE) has issued an EIA positive certificate. Public participation is designed to take place through the Local Environment Committee. The MOE is responsible for monitoring and issuing certification. An Initial Environment Evaluation (IEE/ Preliminary Environmental Impact Assessment), consisting of a checklist and an evaluation table, is required for a range of less polluting activities. Procedures of EIA and IEE are shown in Appendix and activities, which are subject to EIA, are shown in Appendix.

Environmental quality standard for coastal waters in Japan is shown in Appendix. (Table A.14.1.4-5)

(8) Regulation on Hazardous Waste Control

This regulation together with the Environmental Laws and the Solid Waste Control Regulation form main regulations relating to waste management. The regulation includes the definition of hazardous waste and necessary measures to be taken by every organization when the organization treats the hazardous waste.

14.1.3 Administrative Organization

Before the establishment of the Ministry of Environment (MOE), several ministries through their organizational establishment laws carried out environmental issues in Turkey. Now the main environmental organization is MOE. The Ministries of Agriculture, Forestry, Health, Culture, Energy and Natural Resources, Industry and Trade have environmental responsibilities. Specialized agencies that focus on the environmental issues are the State Hydraulic Works, Electricity Survey Administration, Hygiene Institute, GAP Regional Administration and General Directorates of Forestry and Rural Services. Most of the public agencies have created their own environmental departments.

Environmental issues have been executed at both the central and local level. At the central level, the ministries that have some responsibilities regarding environment carry out their implementation roles. The MOE has 40 local branches in provinces. These provincial environmental units work under the authorities of governors appointed by the Ministry of Interior. These units implement the decision taken by the MOE and enforce the environmental legislation.

In a Municipality, the majority of regulatory functions are undertaken by the Municipality. In major cities, metropolitan governments are invested with special regulatory powers.

14.2 Present Situation of Marine and Coastal Area

14.2.1 General

The seas around Turkey are generally distinct from each other. This fact restricts water exchange and it is thus more difficult to dilute and flush wastes discharged into these seas. Also vertical mixing of water masses stops below a certain depth (especially in the Sea of Marmara and Black Sea), which concentrates pollutants within each strata. The cause of separation varies. The narrow straits of the Bosphorus and Dardanelles that, respectively, connect the Black Sea to the Sea of Marmara, and the Sea of Marmara to the Aegean Sea, block the confluence of these waters. The Aegean Sea's connection to the rest of the Mediterranean is constrained because of many islands including Crete and Rhodes.

The coastal areas, with their 8,333 km of shoreline, and about 160 islands with another approximately 9,000 km of shoreline, constitute important ecosystems. Each coastal zone has different features that require different management approaches.

14.2.2 The Mediterranean

(1) Characteristics

With a surface area of 2.5 million km², the Mediterranean is the largest inner sea in the world. About one third of the water lost by evaporation in the sea is renewed by fresh water inflow and a continuous surface inflow from the Atlantic Ocean. The northeastern Mediterranean has a narrow continental shelf; Oxygen exists at all depths, a westerly current moves along the Turkish coast; average salinity is around 0.38‰; average annual water temperature is 15-17 degrees C; and total annual discharge to the sea is 36,300 km³ entirely from streams. Because of coastal settlements and high marine traffic, this part of the sea is very sensitive to pollution.

(2) Pollutant

Ninety nine percent of the annual discharge to the sea from rivers and sewage canals is river effluents. Although industrial wastewater constitutes less than 1 % of the total volume, it contains highly toxic substances such as mercury, lead, chromium and Zinc. Agricultural activities constitute the largest volume of pollutants carried to the sea by rivers and streams: 90 % of tobacco and sunflower seed production, 80 % of cotton and corn output and 70 % of rice growing in the coastal provinces (OECD, 1992). Farming activities contribute 58 % of COD, 29 % of phosphorus, 24 % of nitrogen and 14 % of BOD.

(3) Critical coastal and near-shore areas

Critical coastal and near-shore areas along the Turkish portion of the sea include the following.

1) The Bay of Iskenderun which has both special hydrological features (shallow bottom, potential for aquatic products) and an inflow of domestic and industrial wastewater.

2) The coast from Kemer to Alanya including the city of Antalya, which has recently experienced rapid population and tourism growth that, in turn, overloaded the environmental infrastructures and disrupted the ecology from the construction works along the coastlines.

3) The Goksu delta which is a specially protected area because of its value for waterfowl preservation and reproduction.

4) Various shoreline areas where secondary homes and tourist facilities are densely developed. The sea is also home to the Mediterranean Monk Seal, which is one of the most 12 endangered species in the world. Of the 300-400 thought to exist, about 50 live on desolate parts of this coast.

14.2.3 The Aegean Sea

(1) Characteristics

With a coastal perimeter of 2,805 km, the Aegean Sea is one of the five distinct basins of the Mediterranean. The north-south length is 600 km, while its width is 270 km in the north, 150 km in the center and 400 km in the south. The surface area is 214,000 km² and average depth is 100-150 m. Due to current, its water movements are extremely varied. The sea has three distinct oceanographic features. In the northeast, less saline water of the Black Sea origin flows as a surface current to the Aegean Sea through the straits and then turn west with a cyclonic bend. Away from the straits, water stratification arising from different levels of salinity becomes less pronounced. Also, northern winds peculiar to the region stir up the waters.

(2) Pollutant

Wastewater discharge into the Aegean Sea occur at nearly 50 major points (seven rivers, at least 40 tourism and vacation resorts, one industrial zone and input from the Black Sea) along the coast as well as a number of domestic sewage outfalls. The total pollution load from these sources is equal to a population of 20 million, 10 million of which comes from the Black Sea discharge. A load of 7.5 million population equivalent should be added from adjacent Greek settlements and industries for a total load equal to that of 27.5 million people. Localized pollution problems include high level of suspended solids, dissolved / dispersed petroleum hydrocarbons, mercury and cadmium. BOD, nitrogen and phosphorus from sewage discharges in northern Aegean are expected to nearly double from 1990 – 2010.

(3) Critical coastal and near-shore areas

Critical coastal and near-shore areas include the following.

1) The Bay of Izmir whose inner bay suffers from organic pollution from Izmir's sewage, heavy metal concentrations industries and petroleum and other ship wastes from port activities.

2) Candarli Bay, which is polluted by tanker traffic, refineries and tanker-filling installations as well as organic loads from rivers.

3) The coastline from Kusadasi to Marmaris, which has experienced rapid population and tourism growth and the construction of secondary homes with associated pollution and ecosystem disruption.

14.2.4 The Black Sea

(1) Characteristics

The Black Sea extends over 1,200 km from east to west and 600 km from north to south. With a base of 422,189 km², it is semi-island sea. Total water volume is 536,969 km³, 87 % of which is deep water without oxygen. The water collection basin is 2.2 million km² and

the average depth is 1,277 meters; 37 % of the sea floor is deeper than 2,000 meters. The shallow sections (less than 200 meters) are to the north and west and constitute 27 % of the total. Average salinity is 0.18 – 0.19 %, increasing below 100 meters and reaching 0.22 % around 200 meters. Surface water temperature varies from 21 – 24 degrees C in summer and from 12 – 13 degrees C in winter. In the northwest tip, it falls to 2 degrees C in winter. The sea has a surplus of surface water, because of high precipitation, limited evaporation and abundant continental fresh water inflow. This leads to an annual average outflow of surface water into the Sea of Marmara of 612 km³. However, the Sea also receives 312 km³ average annual inflow of saline water from the Mediterranean through the counter current along the Bosphorus.

(2) Pollutant

The pollution load is relatively high from natural causes and waste deposited from large rivers such as the Tuna, the Dinyeper and the Dinyester of several countries. Pollutants from 16 countries flow in and 160 million people live in its catchment basin. The Danube River alone discharges 60 tons of mercury, 1,000 tons of chromium, 4,500 tons of lead and 50,000 tons of oil annually, which, in turn, affect the Sea of Marmara and the Aegean. It is also an aquatic environment where bacteria found in sewage can remain alive longer than in Turkey's other seas due to relatively low solar radiation, water temperature and salinity. The sea is rich in plankton and in fishes that live on this biomass making it Turkey's most important fishery area.

14.2.5 The Sea of Marmara

(1) Characteristics

The Sea of Marmara also displays peculiar hydrodynamic features because of the structural character of the straits that connect it to other sea. It extends over 11,350 km² and has 3,377 km³ of water. In the south, there is a wide and relatively shallow shelf, but to the north, depth is over 1,000 meters extending from east to west. Its oceanographic features vary in line with those of the Aegean and Black Sea. Water temperatures vary according to the seasons. Less saline surface water of the Black Sea origin and deep water of the Aegean origin with higher salinity form two strata with limited confluence. The oxygen saturation of water at 25 – 30 meters vary from 20 – 30 %, which poses a problem in decomposition of coastal discharges and organic substances coming from the Black Sea.

(2) Pollutant

An estimated 766 million m³/year of wastewater is discharged into the sea. This figure does not include wastewater from industries in metropolitan Istanbul, since no detailed inventory exists. Organic matter equal to 158,000 tons of BOD and 370,000 tons of COD are discharged annually into the surface water of the Bosphorus at its junction with the Sea of Marmara.

(3) Critical coastal and near-shore areas include as follows.

1) The Bay of Izmit, which receives waste from Turkey's most important industrial area as well as the domestic waste of the city of Izmit.

2) Gemlic Bay, which receives pollution from the Lake Iznik as well as industrial household waste from adjacent towns.

14.3 Air pollution in Turkey

In Turkey, air pollution is mainly caused by the residential buildings in which the low quality fuels are used and by various industrial facilities, motor vehicles and the atmospheric conditions. Although the lignite reserves are in abundance in Turkey, the utilization of low quality lignite and the usage of lignite without applying an enriched procedure constitute one of the most important causes of air pollution.

Air pollution, which is caused by the industrial activities, is mainly resulted from the selection of inappropriate locations for industrial activities, discharge of the solid waste, residues and gas and dusts into atmosphere and by the selection of inappropriate and insufficient technologies. Currently, the area on the axis of Istanbul-Gebze-Hereke-Izmit, Bursa, Adapazari, Samsun, Murgul, Izmir, Adana-Tarsas-Mersin, Karadeniz, Ereğlisi, Karabuk, Bartın and Kirikkale are the areas where air pollution caused by industrial activities has reached in great proportion.

14.4 Environmental Issues around Ports

14.4.1 Administrative aspects

One of the most important activities concerning the environment is the periodical monitoring of water quality, air quality, noise level and other necessary items. In Turkey, this kind of monitoring is conducted by the Ministries concerned, their local branches and Municipalities. A port managing body has nothing to do with the periodical environmental monitoring even in the port area except the case in which the port managing body is conducting the construction works and relevant laws and regulations oblige the port managing body to monitor the environmental qualities.

Generally, water qualities of ports, which are located in metropolitan areas and industrial areas, are seriously bad due to the inflow of the domestic and industrial wastewater to port area. As a port managing body is no direct polluter to the sea, it does not need to implement a project for water quality improvement. Legal responsibility belongs to the Ministries concerned, their local branches and Municipalities. This fact applied to the accidental oil leakage from vessels in the port area.

14.4.2 Environmental Qualities around Ports

(1) Water quality

As water quality monitoring in port area is conducted by other organizations, port managing bodies do not have enough data for the analysis on water qualities. However, many environmental reports suggest environmental seriousness of the following areas.

- 1) The Bay of Iskenderun
- 2) The Bay of Izmir
- 3) The Bay of Candarli
- 4) The Bay of Izmit
- 5) The Bay of Gemlic
- 6) The Bay of Golden Horn

(2) Air quality

As air quality monitoring in port area is conducted by other organizations, port managing bodies do not have enough data for analysis on air qualities.

(3) Noise level

As noise level monitoring in port area is conducted by other organizations, port managing bodies do not have enough data for analysis on noise levels.

However, it is reported that people residing in an adjacent area to a port facing to the Black Sea commenced to make a complaint about the noise from port activities. Recently, cargo handling of 24 hours is prevailing in many ports not only in Turkey but also in the rest of the world. With growing environmental consciousness among the people, it is easily expected that the number of complaints will increase year by year, particularly in a port, which is located near the residential area.

14.4.3 Maritime Transport

Maritime Transport is an additional source of marine pollution from accidents, especially in the case of petroleum transport, and improper disposal of ballast and bilge waters.

Particularly if maritime accidents including collisions of petroleum, chemical product and other hazardous material carriers occur in the Turkish Straits, the maritime environment will be devastated thoroughly. The number of maritime accidents and malfunctions in the Istanbul Straits last decade are shown in the Table 14.4.1

Table 14.4.1 Number of Accident and Malfunctions in Istanbul Straits

year	1990	1991	1992	1993
No. of accident	43	49	39	25

1994	1995	1996	1997	1998
12	4	7	11	11

Source: General Directorate of Maritime Affairs

Fortunately the number of accidents itself decreased dramatically due to the introduction of revised Regulation on the Maritime Traffic Order of the Turkish Straits. However, it should be noted again that once the collision of large size petroleum carrier occurs in the Straits, huge damage not only to environmental condition but also to national economy of many countries would take place. In this context, securing the safety traffic of the Turkish Straits is very serious and important issue for many countries.

14.4.4 Review of an Existing Report of Environmental Impact Assessment

The Study Team reviewed an existing report of Environmental Impact Assessment on a new terminal project. This EIA report deals with various matters to be tackled during the construction works and operation. Main issues of evaluation are as follows,

- Definition of the Project and Its Characteristics -
- Present and Planned Usage Status of the Project Area -
- Close Environmental Relation with Shore Profile (Coastal Erosion)
- Procedures of Dredging and Filling -
- Removal of Sea Bottom Mud -
- Land Transportation -
- Rail Transportation -
- Maritime Transportation -
- Air Pollution -
- Water Pollution -
 - Domestic Waste Water, Bilge Waste Water, Rain Water
- Solid and Dangerous Waste -
- Noise -
- Fire Security -
- Monitoring -
- Plan for Emergency -
- Land Utilization -
- Flooding -
- Surface and Underground Water -
- Wildlife, Flora and Fauna -
- Cultural and Historical Heritage -

14.4.5 Review of Existing Maritime Legislation Related to Environment

The Study Team reviewed existing maritime legislation related to environment. The foundation law of the Under-secretariat of Maritime Affairs defines its duties. The item h) of article 2 of the law states that taking every measure to ensure controls and examinations for the purpose of preventing destruction and pollution of the maritime environment in the matters are under the scope of the duties and responsibilities of the Under-secretariat, and cooperating with other related organization are the Under-secretariat's duties. As mentioned in the Progress Report of ULIMAP, a port managing body does not manage the water area as a whole. And the port managing body is exempted from the maintenance and

improving works of environmental quality in port area.

14.5 Evaluation of the Current Environmental Situation

(1) Under the existing laws and regulations, a port managing body has responsibility on utilization and maintenance of port facilities. A port managing body does not manage water area as a whole. And the port managing body is exempted from the maintenance and improving works of environmental quality in port area. Taking the fact that ports are located in the coastline which is not only very precious space but also common assets of all the people into consideration, responsibility of the port managing body should not be limited only to facility management. The port managing body should bear wider responsibility such as water area management including environmental matters.

In this context, the Under-secretariat of Maritime Affairs should provide port managing body with the authority to monitor the environmental quality and implement the environmental projects to the extent possible under the law.

(2) Generally, port activities are closely related to the industrial development and other projects in the hinterland, which have wide ranging impact and effect on economic growth and urban activities. In this context, environmental consideration in port development should be done not only on the port facilities and activities but also on related economic activities in the hinterland.

(3) The assessment is well conducted in line with the EIA regulation. The report mentions a lot of measures to be taken during the construction works and operation in future. Among them, oil-combating measures and facilities in emergency are most important and urgent. A huge amount of petroleum product leaked out of tanks into sea and devastating sea contamination was witnessed when the Kocaeli Earthquake jolted western Turkey. Since Turkey is prone to suffer from seismologic tremors, appropriate countermeasures and equipment should be prepared. Individual companies and organizations can not cope with an emergency situation like the oil leakage caused by the Kocaeli Earthquake. Comprehensive oil-combating system involving the relevant public and private sectors should be established.

Chapter 15 Earthquake

15.1 Earthquake Zone in Turkey

The first-degree quake zone starting from Varto in Eastern Anatolia transits Erzincan, Resadiye, Niksar, Cerkes, Bolu and Adapazari, and stretches out the Aegean region. The second-degree quake zone that lies at the south and north of aforementioned quake zone, starts from the periphery of Kars and Van, transits the whole Northern Anatolia and the Aegean region. Another zone at the Iskenderun Gulf transits Bingol and Tunceli region and cross the Erzincan first-degree zone.

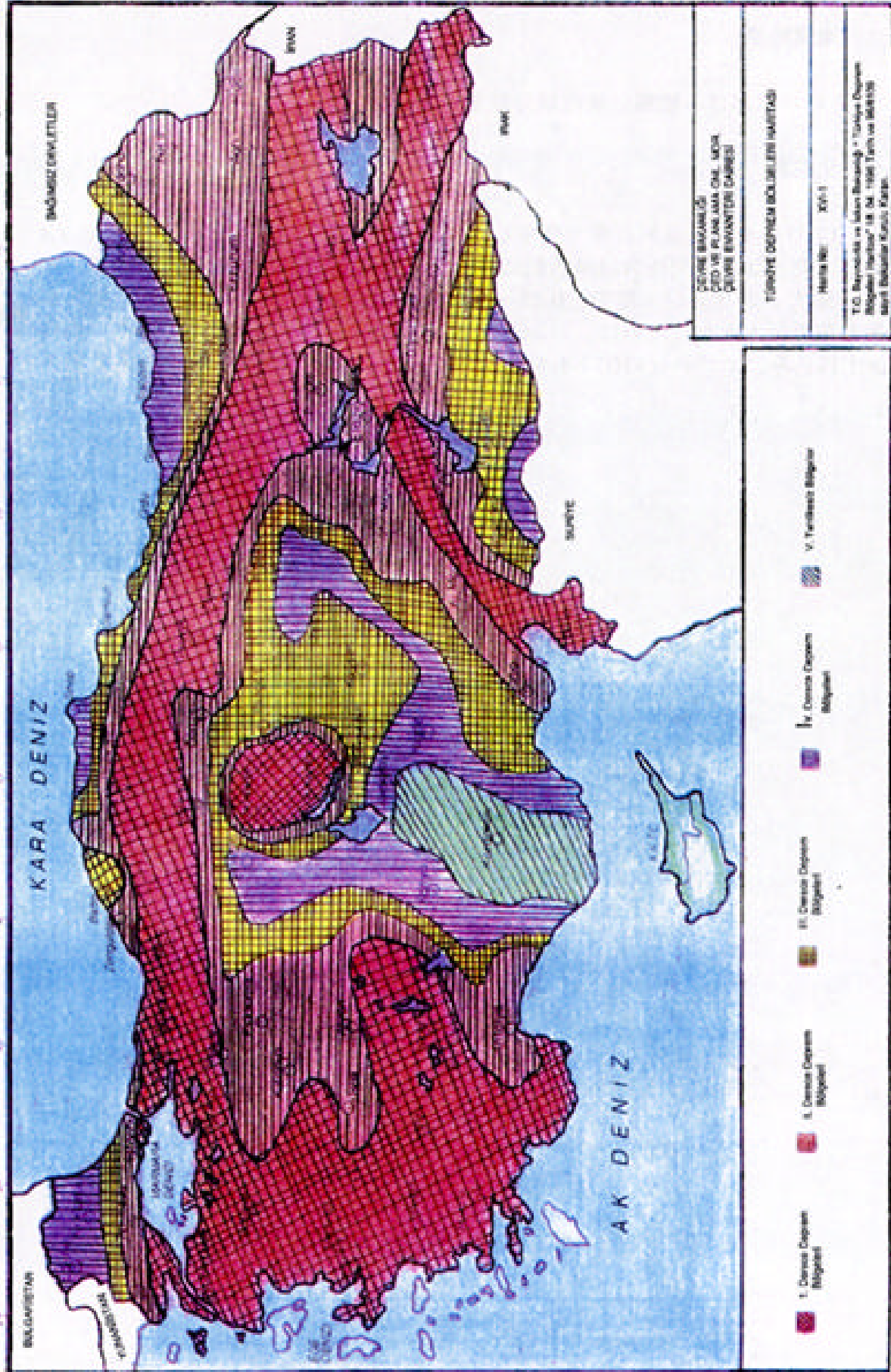
In Eastern Anatolia there is an active fault starting at Amik plain and reaching to Bingol, Karliova. On this zone big quakes have occurred in seventh and tenth centuries. Volcanic mountains such as Nemrut and Suphandagi are on this zone.

Figure 15.1.1 is the Map of Quake Zone Region in Turkey.

15.2 Kocaeli Earthquake

The Kocaeli earthquake ($M_w = 7.4$) of August 17, 1999 hit Izmit area, resulting in devastating loss of lives, economic and social impacts. Derince Port, managed by TCDD and located near Izmit, which was shaken with a peak ground acceleration of 0.25 to 0.3 g, suffered damages. The most serious damage occurred at concrete block type quay walls with water depths ranging from 6 to 12 m (Nos. 6 through 8 quay walls). Seaward displacement of 0.7 m maximum occurred, resulting in 0.5-m settlement in the backfill. Evidence of liquefaction was found at the backfill. The settlement of at the backfill caused settlement of the land side crane rail foundation, resulting in tilting of cranes on rails. One crane was overturned. Other cranes were derailed due to rocking response to the earthquake shaking. Damage to these cranes may be the major cause for the loss of serviceability in the Derince Port. No damages were found at quay wall nos. 3 and 4, however, cranes on Nos. 3 and 4 quays were derailed due to rocking response, resulting in yielding at the land side legs. This caused loss of operations of crane-conveyor system at these quay walls.

Figure 15.1.1A Quake Zone Region in Turkey



APPENDIX FOR EACH CHAPTER

Appendix for Chapter 6

Appendix for Chapter 6

Appendix 6.1 Nationwide Cargo Traffic in Ports

1. Cargo Traffic in Ports of TCDD

TCDD operates seven major ports, Haydarpaşa, Derince, Samsun, Mersin, Iskenderun, Bandırma and Izmir, which are playing major role in international trade.

(1) Cargo traffic in TCDD ports by category

The trend of cargo traffic in TCDD ports by category is shown in Table A 1.1. The traffic of export cargo has been smaller than that of import cargo except for 1994. Both export cargo and import cargo have increased for the past ten years (1989-1998).

In 1998, the total cargo traffic reached 35.1 million tons. The cargo handling traffic of TCDD ports is equal to 22.6% of total nationwide cargo traffic. It has risen 1.1% compared with the previous year because of the increase of exports. The domestic cargo traffic, which has been decreasing slightly, has remained 2.5 million tons. In 1998, the share of domestic cargo shows 7.2% in total.

(2) Cargo traffic in TCDD ports by packing type

The trend of cargo traffic in TCDD ports by packing type is shown in Table A 1.2. In 1998, the cargo traffic of dry bulk and container, which has increased continuously in recent years, reached 11.7 million tons and 9.7million tons respectively, while the cargo traffic of liquid bulk and general cargo leveled off.

The share of dry bulk, liquid bulk, general cargo and container shows 33.3%, 19.4%, 19.6% and 27.7% respectively. Among these four items, only container cargo shows continuous growth for the past ten years.

(3) Cargo traffic in TCDD ports by port

The trend of cargo traffic by port is shown in Table A 1.3. In 1998, Mersin port accounts for 13.9 million tons (39.4% of total cargo handling traffic), Izmir port accounts for 6.3 million tons (18.0%), Haydarpasa port accounts for 6.1 million tons (17.5%). The share of these three major ports accounts for 74.9%.

The cargo handling traffic of Mersin port , Ismir port and Haydarpasa port has been showing remarkable progress from 1994 among these seven ports,

Table A.6.1.1 Cargo Traffic in TCDD Ports (1989-1998)

Unit : (tons)

YEAR	LOADING				UNLOADING				GRAND TOTAL			
	EXPORT	DOMESTIC	TRANSIT	TOTAL	IMPORT	DOMESTIC	TRANSIT	TOTAL	DOMESTIC	INT'L	TRANSIT	TOTAL
1989	7,150,653	3,138,844	572,606	10,862,103	7,769,161	5,380,064	1,246,600	14,395,825	8,518,908	14,919,814	1,819,206	25,257,928
1990	6,797,402	3,041,918	295,608	10,134,928	11,419,535	4,497,927	907,929	16,825,391	7,539,845	18,216,937	1,203,537	26,960,319
1991	9,357,406	1,849,796	136,679	11,343,881	11,045,793	2,452,765	516,315	14,014,873	4,302,561	20,403,199	652,994	25,358,754
1992	10,959,114	1,656,039	146,989	12,762,142	11,544,041	2,113,158	506,994	14,164,193	3,769,197	22,503,155	653,983	26,926,335
1993	8,917,842	1,862,190	146,181	10,926,213	16,558,184	2,014,183	338,315	18,910,682	3,876,373	25,476,026	484,496	29,836,895
1994	11,136,968	1,387,743	148,227	12,672,938	11,114,257	1,757,083	244,916	13,116,256	3,144,826	22,251,225	393,143	25,789,194
1995	10,863,205	1,295,815	260,403	12,419,423	14,581,670	1,876,672	355,006	16,813,348	3,172,487	25,444,875	615,409	29,232,771
1996	10,763,021	1,294,027	314,629	12,371,677	16,745,924	2,098,076	426,913	19,270,913	3,392,103	27,508,945	741,542	31,642,590
1997	12,364,015	1,345,076	328,458	14,037,549	17,734,083	2,448,503	550,347	20,732,933	3,793,579	30,098,098	878,805	34,770,482
1998	14,345,158	1,065,444	280,518	15,691,120	17,601,346	1,455,497	407,440	19,464,283	2,520,941	31,946,504	687,958	35,155,403
Share(1998)	40.8%	3.0%	0.8%	44.6%	50.1%	4.1%	1.2%	55.4%	7.2%	90.9%	2.0%	100.0%

Source: TCDD

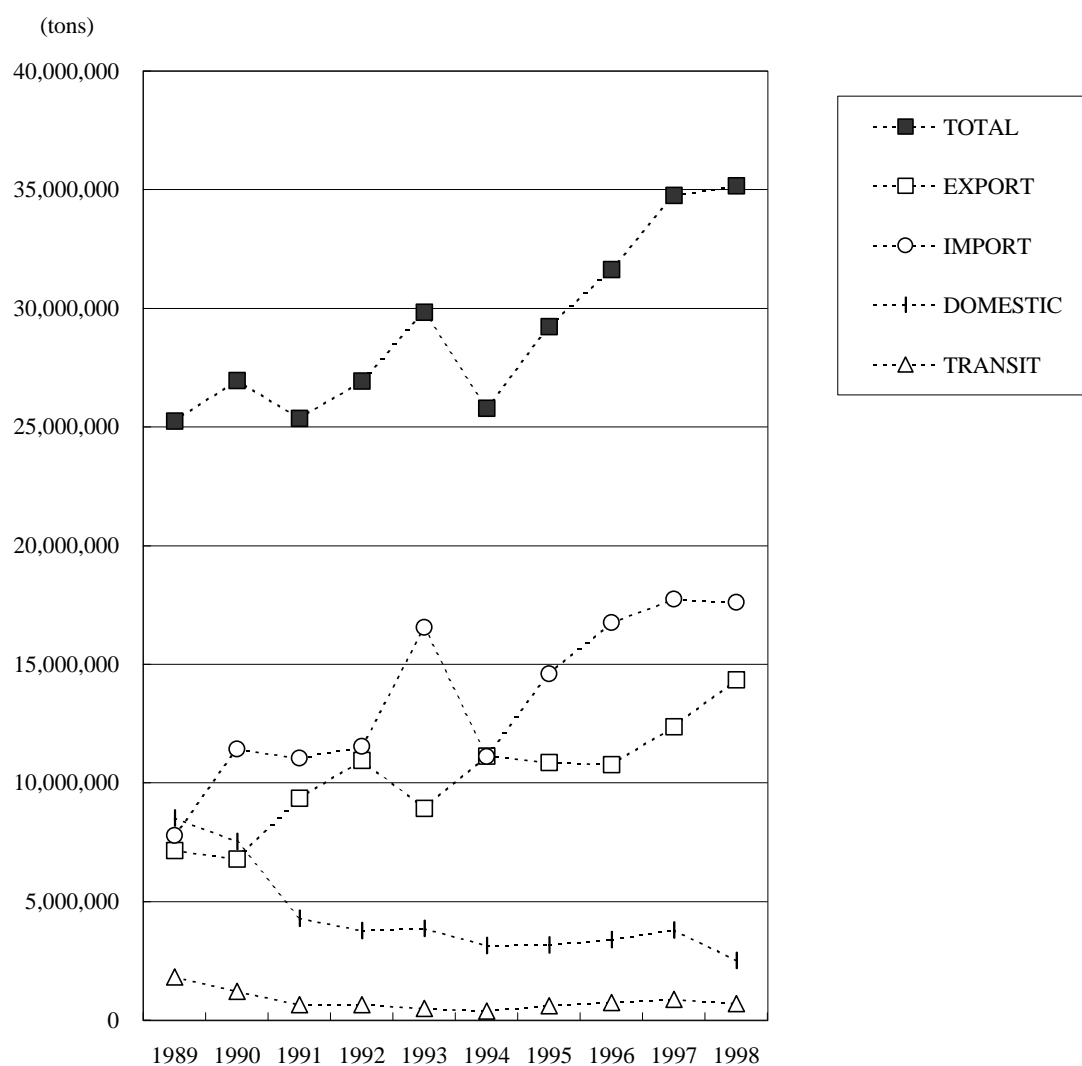


Figure A.6.1.1 Cargo Handling Volume in TCDD Ports (1989-1998)

Table A.6.1.2 Cargo Traffic by Packing Type in TCDD Ports (1993-1998)

Unit:(tons)					
YEAR	DRY BULK	LIQUID BULK	GENERAL CARGO	CONTAINER	TOTAL
1989	8,988,925	7,647,754	6,109,241	2,512,008	25,257,928
1990	9,115,993	8,427,016	6,249,723	3,167,587	26,960,319
1991	7,673,022	8,007,977	6,267,261	3,410,494	25,358,754
1992	10,323,599	6,650,323	5,966,613	3,985,800	26,926,335
1993	8,035,706	8,513,607	8,148,228	5,139,354	29,836,895
1994	7,308,236	6,695,023	6,306,209	5,479,726	25,789,194
1995	8,044,858	7,547,590	6,777,835	6,862,488	29,232,771
1996	8,539,718	7,021,567	7,663,908	8,417,397	31,642,590
1997	10,204,535	7,428,694	7,477,928	9,659,325	34,770,482
1998	11,706,157	6,830,841	6,895,577	9,722,828	35,155,403
Share(1998)	33.3%	19.4%	19.6%	27.7%	100.0%

Source: TCDD

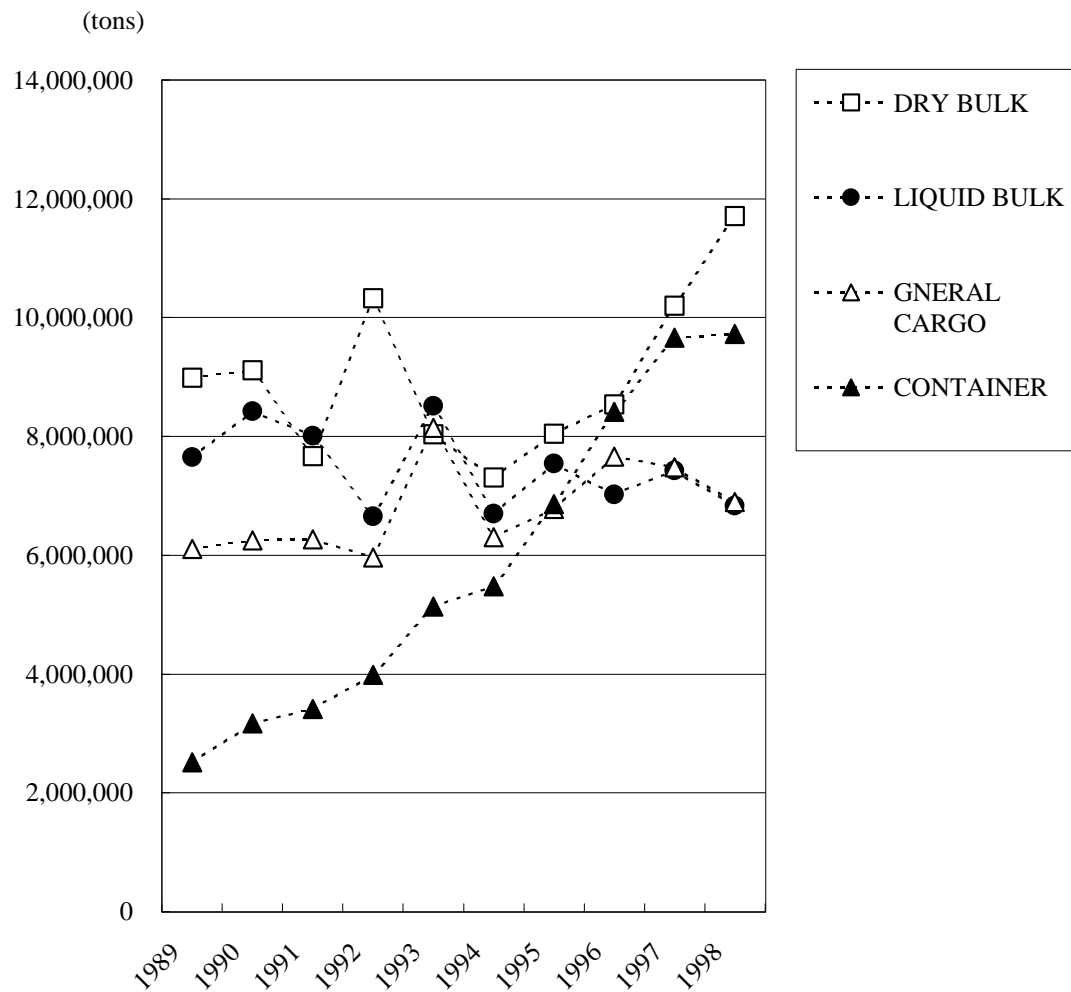


Figure A.6.1.2 Cargo Traffic by Packing type in TCDD Ports

Table A. 6.1.3 Cargo Traffic by Port in TCDD (1989-1998)

YEAR	Unit:(tons)							TOTAL
	HAYDARPASA	DERINCE	SAMSUN	MERSIN	ISKENDERUN	BANDIRMA	IZMIR	
1989	2,896,506	866,030	2,782,467	10,108,545	3,465,346	2,433,248	2,705,786	25,257,928
1990	3,230,592	2,381,149	2,495,307	11,576,013	1,916,459	2,416,615	2,944,184	26,960,319
1991	3,411,402	824,025	1,889,828	11,516,505	2,099,571	2,423,202	3,194,221	25,358,754
1992	3,566,361	975,092	1,520,531	11,810,046	1,703,057	3,108,122	4,243,126	26,926,335
1993	4,073,522	1,590,304	1,823,633	11,666,624	2,356,631	3,269,958	5,056,223	29,836,895
1994	3,563,290	999,867	1,075,840	10,874,367	1,735,579	2,778,355	4,623,143	25,789,194
1995	4,726,705	1,222,573	1,870,168	11,713,691	1,967,057	2,928,441	4,804,136	29,232,771
1996	5,757,022	1,724,436	2,407,844	11,586,618	1,637,085	3,002,627	5,526,958	31,642,590
1997	6,039,467	1,852,552	2,583,365	13,106,165	1,933,972	3,331,074	5,923,887	34,770,482
1998	6,139,519	1,365,126	2,305,260	13,854,952	1,644,077	3,494,512	6,321,957	35,155,403
Share(1998)	17.5%	3.9%	6.6%	39.4%	4.7%	9.9%	18.0%	100.0%

Source: TCDD

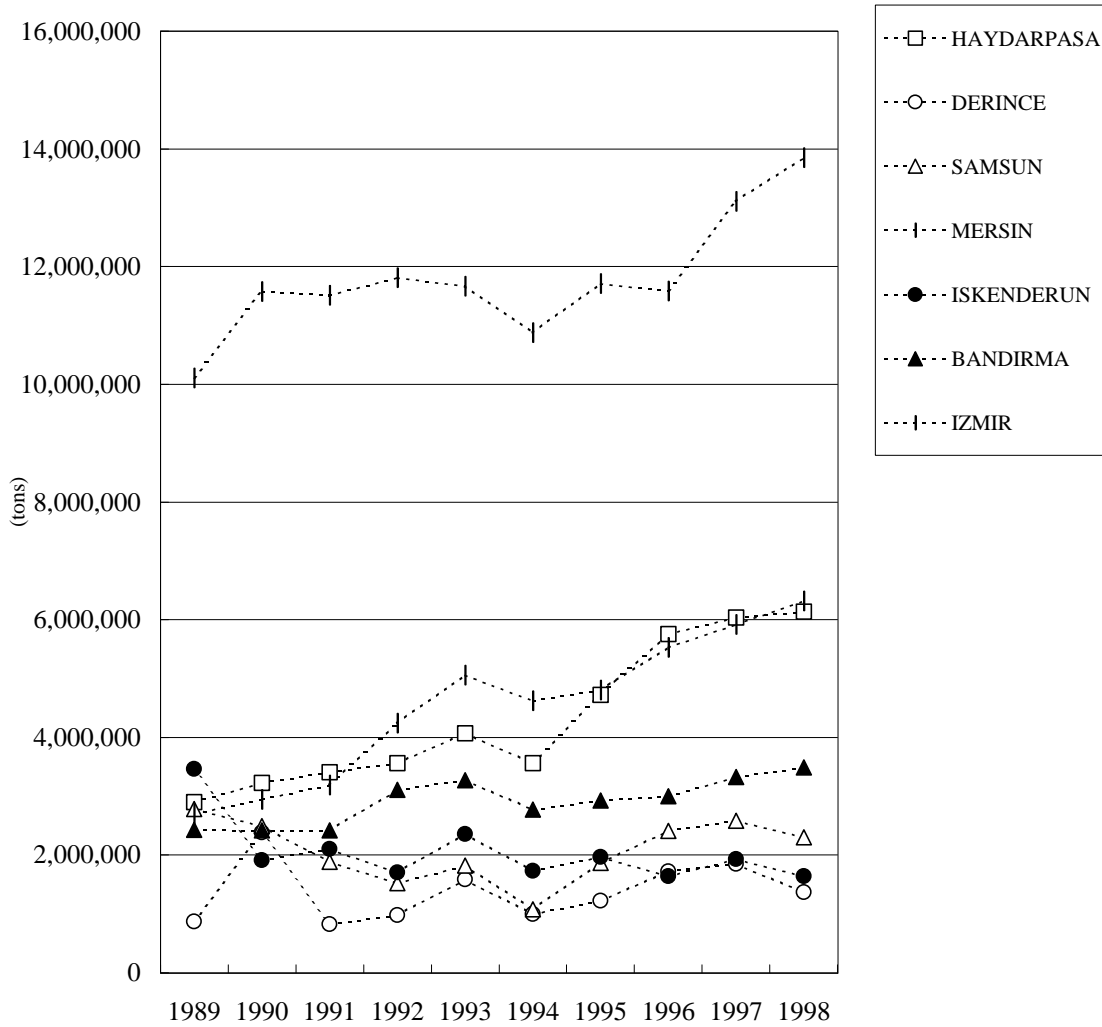


Figure A.6.1.3 Cargo Traffic by Port in TCDD

Appendix 6.5 Nationwide Passenger in Ports

1. Passengers carried by TDI

(1) International and domestic lines transportation services

In 1998, foreign lines transported 120,404 passengers, and 27,000 vehicles in 273 voyages, while domestic lines transported 522,526 passengers, 25,000 in 645 voyages .

1) International lines transportation

In the Adriatic line, nearly 47,000 passengers and 20,000 vehicles are transported annually. This especially provides journey for the tourists and for Turkish citizens who are living in Germany. The existing international lines are Izmir-Venice, Cesme-Birindici and Mersin-Magosa.

2) Domestic lines transportation

The domestic line transportation is done in the following lines, which have the cabotage rights. The existing domestic lines are Istanbul-Trabzon-Rize, Istanbul-Imrali, Istanbul-Avsa, Istanbul-Gokceada and Istanbul-Izmir.

(2) Transportation within the city

In 1998, Istanbul City-Line Administration transported nearly 79 million passengers and 5 million vehicles in its 378,000 voyages. City-Line Administration owns a total of 73 ships, 50 passenger ships and 23 ferryboats.

Izmir Bay Line transported nearly 5 million passengers and 147.000 vehicles in its 22,046 voyages. Izmir Port Administration owns a total of 11 ships; 9 passenger ships and 2 ferryboats.

Existing passenger ship lines are Eminonu-Kadikoy, Karakoy-Haydarpasa-Kadikoy, Other Marmara, Eminonu-Uskudar, Uskudar-Kabatas, Uskudar-Besiktas, Besiktas-Kadikoy, Other Bosphorus, Kartal-Yalova, Halic, and Ortakoy-Besiktas-Sirkeci

Existing ferryboat lines are Harem-Sirkeci, Eskihisar-Topcular, Canakkale-Eceabat and Gelibolu-Lapseki, Geyikli Yukyeri-Bozcaada, Marmara-Avsa-Erdek and Kabatebe-Gokceada.

Table A.6.5.1 International Lines Passenger 1989-1998 (TDI)

YEARS	IZMIR-VENICE	Mersin-Magosa	CESME-VENICE, CESME- BRINDISI(1996-)	International TOTAL
1989	17,571	115,116		132,687
1990	12,994	238,135		251,129
1991	27,422	89,731		117,153
1992	41,277	58,339		99,616
1993	26,391	54,410	13,964	94,765
1994	27,463	47,289	13,910	88,662
1995	22,727	72,530	9,019	104,276
1996	22,922	61,574	22,453	106,949
1997	20,277	68,917	19,678	108,872
1998	22,919	63,263	34,222	120,404
Share(1998)	19.0%	52.5%	28.4%	100.0%

Source: TDI

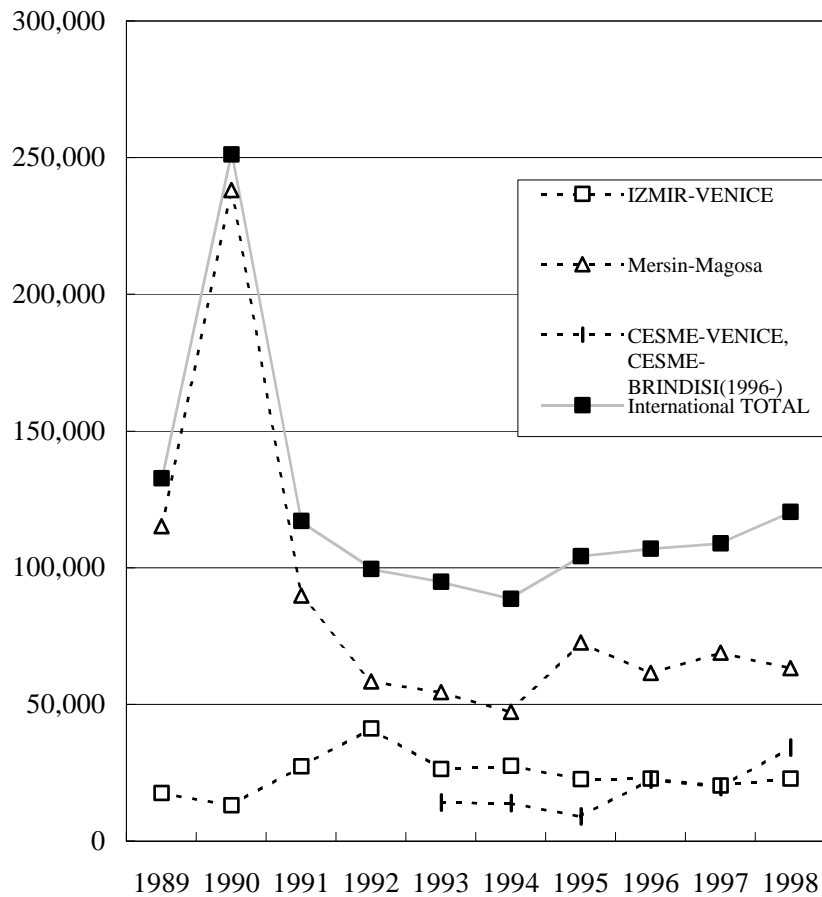


Figure A.6.5.1 International Lines Passenger 1989-1998 (TDI)

Table A.6.5.2 Domestic Lines Passenger 1989-1998 (TDI)

YEARS	TRABZON	IZMIR	BANDIRMA	CANAKKALE	KABATEPE-	MARMARA-	AVSA	ISTANBUL-	Domestic
	FERRY	FERRYBOAT	FERRY BOAT	-GOKCEADA	GOKCEADA	KABATEPE--ERDEK			
1989	17,237	69,354	618,610	72,410	35,772	34,113	152,306	21,795	1,021,597
1990	16,914	47,932	468,974	82,267	39,230	24,843	135,553	17,851	833,564
1991	11,248	37,883	308,943	72,833	17,528	11,865	117,210	11,084	588,594
1992	6,311	15,217	201,843	75,664	20,286	17,293	101,786	12,737	451,137
1993	6,489	23,452	155,878	76,278	53,243	29,145	75,134	14,151	433,770
1994	2,991	17,059	111,043	83,576	44,005	20,756	91,940	13,074	384,444
1995	9,036	28,292	170,039	48,696	32,268	45,865	93,584	12,272	440,052
1996	5,832	25,446	166,360	96,115	48,495	40,773	92,827	10,418	486,266
1997	3,097	21,239	165,330	43,826	91,000	46,000	114,133	9,489	494,114
1998	2,748	20,319	137,956	64,621	95,000	51,000	135,385	15,497	522,526
Share(1998)	0.5%	3.9%	26.4%	12.4%	18.2%	9.8%	25.9%	3.0%	100.0%

Source: TDI

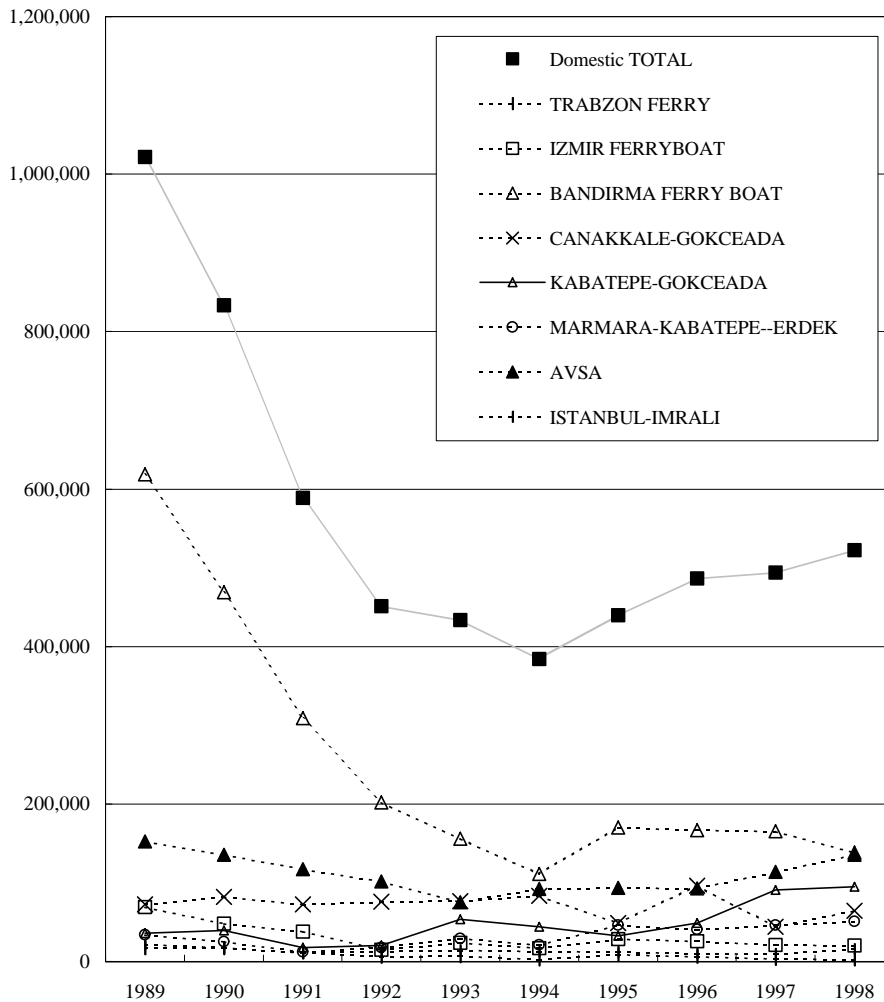


Figure A.6.5.2 Passenger of Domestic Lines 1989-1998 (TDI)

Table A.6.5.3 City Lines Passenger 1989-1998 (TDI)

YEARS	MARMARA	KARAKOY-HAYDARPASA-KADIKOY	EMINONU-KADIKOY	EMINONU - USKUDAR	USKUDAR-BESIKTAS	EMINONU STRAIT	HALIC	IZMIT	BESIKTAS-KADIKOY	USKUDAR-KABATAS	KARTAL-YALOVA	CIYTY LINE TOTAL
1989	7,763,533	35,514,337	19,670,142	23,002,816	11,009,000	3,970,094	1,103,279	303,561		1,214,340		103,551,102
1990	7,814,845	30,792,990	18,803,440	25,247,855	3,103,000	4,334,000	843,000	293,670	3,801,945	1,132,837	670,000	96,837,582
1991	7,082,000	31,591,567	19,526,031	25,087,701	4,085,215	4,021,000	760,229	53,192	4,923,876	1,196,679	165,000	98,492,490
1992	7,004,000	28,824,000	18,204,000	20,962,000	4,465,663	3,643,000	729,000	162,000	5,053,327	1,138,000	436,000	90,620,990
1993	7,440,067	23,471,568	18,091,381	18,252,489	3,930,859	3,726,296	656,387	140,510	5,195,006	999,202	329,316	82,233,081
1994	7,281,000	21,384,000	15,027,367	14,218,000	3,242,000	3,437,000	462,232	133,000	4,947,210	839,681	229,842	71,201,332
1995	8,212,000	20,441,000	13,953,000	14,550,000	3,328,000	3,339,000	412,000	140,000	5,201,000	864,000	269,000	70,709,000
1996	8,088,000	22,800,000	11,870,000	15,077,000	3,516,000	3,233,000	385,000	119,000	6,334,000	1,174,000	339,000	72,935,000
1997	7,985,000	22,677,000	11,712,000	17,215,000	3,238,000	3,431,000	350,000	117,000	8,067,000	1,008,000	429,000	76,229,000
1998	7,425,000	21,181,000	11,726,000	16,313,000	2,522,000	3,171,000	270,000	38,000	7,767,000	766,000	397,000	71,576,000
Share(1998)	10.4%	29.6%	16.4%	22.8%	3.5%	4.4%	0.4%	0.1%	10.9%	1.1%	0.6%	100.0%

Source: TDI

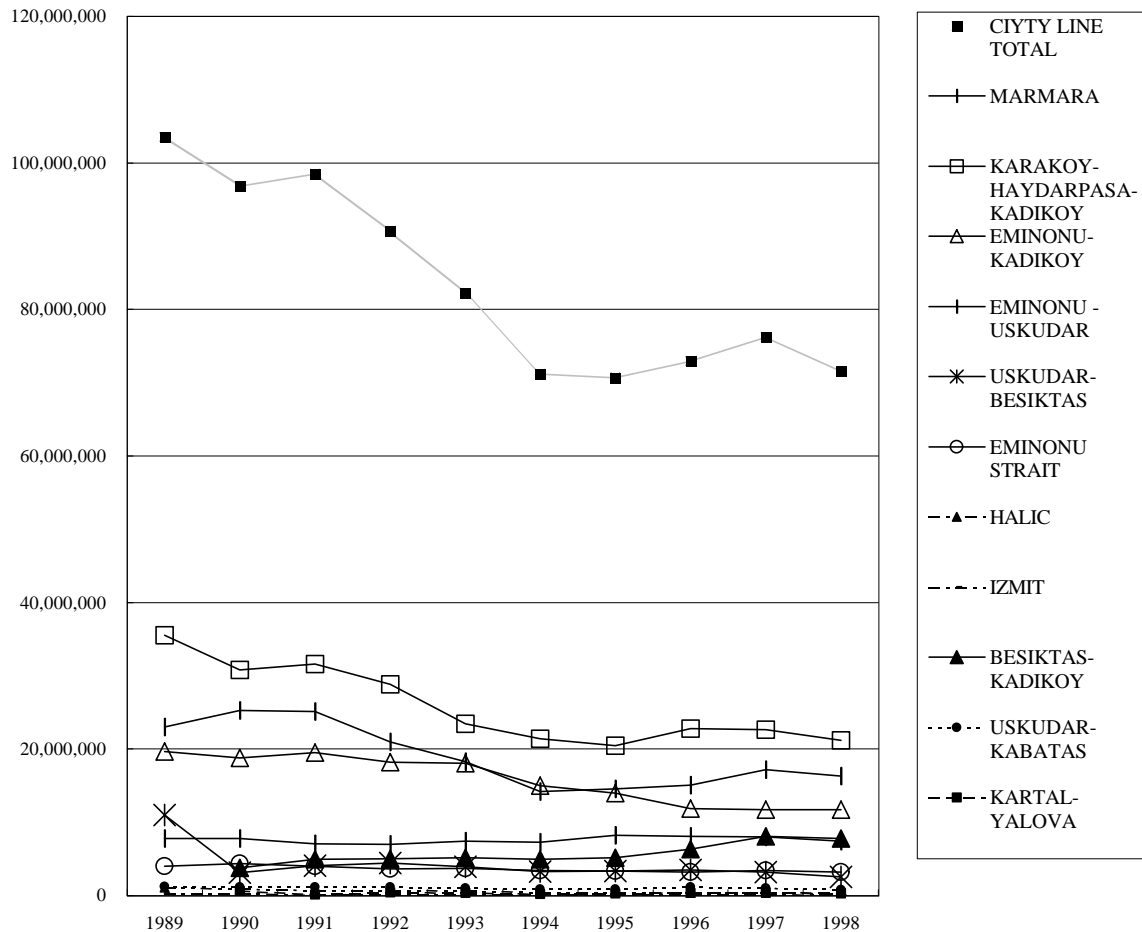


Figure A.6.5.3 City Lines Passenger 1989-1998 (TDI)

Table A.6.5.4 Ferry Lines Passenger 1989-1999 (TDI)

YEARS	SIRKECI-HAREM	CANAKKALE-ECEABAT	GELIBOLU-LAPSEKI	ODUN ISK.-BOZCAADA	ESKIHISAR-TOPCULAR	Ferry TOTAL
1989	5,116,000	1,793,265	1,065,035	83,000	100,000	8,157,300
1990	5,817,000	1,832,811	1,122,432	67,000	176,000	9,015,243
1991	4,765,000	1,488,953	966,489	71,000	175,000	7,466,442
1992	4,513,000	1,547,402	967,000	73,000	153,000	7,253,402
1993	4,550,000	1,540,000	962,000	68,000	141,000	7,261,000
1994	4,722,000	1,544,081	980,000	78,000	132,000	7,456,081
1995	4,510,000	1,707,000	1,059,000	102,000	165,000	7,543,000
1996	4,471,000	1,769,000	1,109,000	107,000	194,000	7,650,000
1997	4,380,000	1,898,000	1,097,000	124,000	208,000	7,707,000
1998	4,121,000	1,823,000	1,107,000	139,000	196,000	7,386,000
Share(1998)	55.8%	24.7%	15.0%	1.9%	2.7%	100.0%

Source: TDI

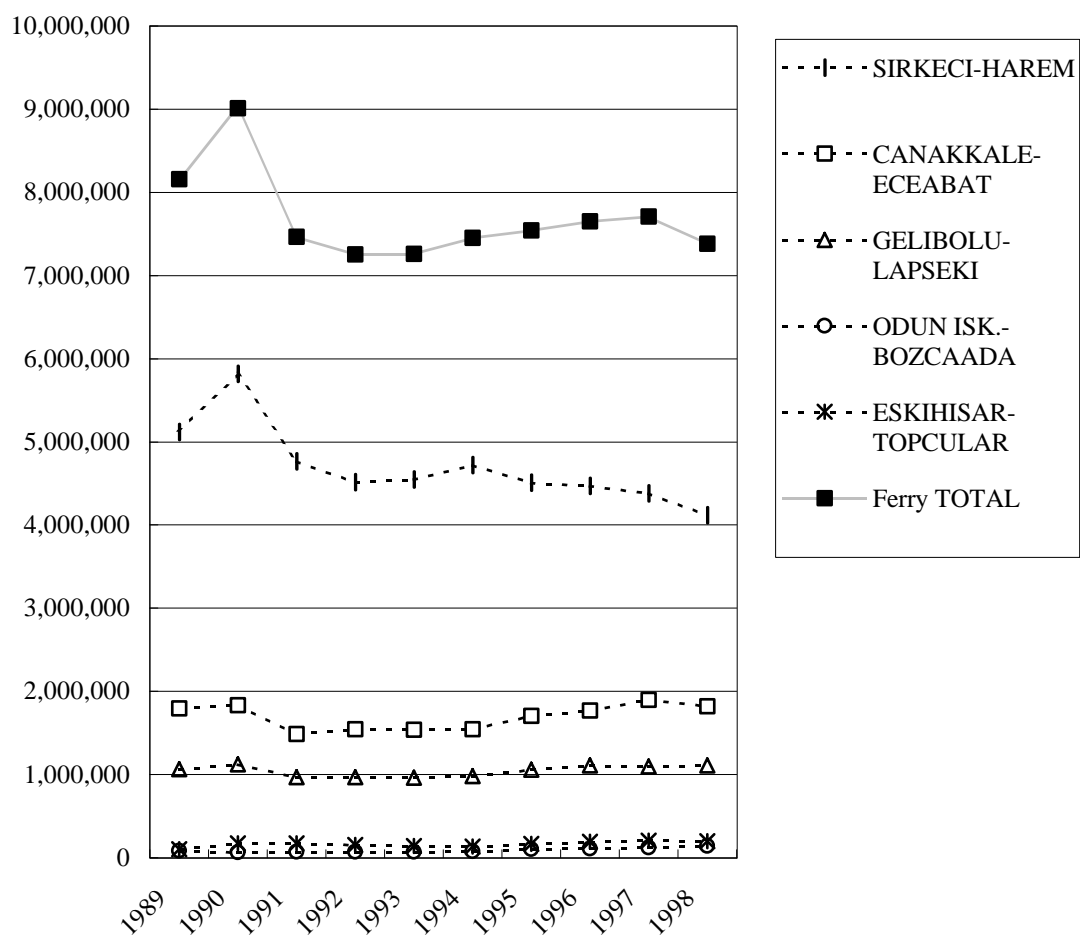


Figure A.6.5.4 Ferry Lines Passenger 1989-1998 (TDI)

Table A.8.2.1 List of Coastal Facilities						
	Name of port/berth, pier and fisherman shelter	Full name of the operator	Address	Telephone	Fax	Harbour Master
1	Çevlik Fisherman Shelter	S.S. Water Products Cooperative	S.S. Water Products	0326 5949214		Iskenderun
2	Samandag Fisherman Shelter	Aliaga Fishery Cooperative	Fisherman shelter Aliaga/Izmir	0232 6161268		Hatay
3	Isikli Konacik Fisherman Shelter					Iskenderun
4	Iskenderun Fisherman Shelter	S.S. Water Products Cooperative	S.S. Water Products Cooperative Fisherman Shelter iskenderun Hatay	0326 6176822		Iskenderun
5	Iskenderun Port	TCDD General Directorate	Iskenderun TCDD Port Operations Mersin	0324 6140047	0324 6132424	Iskenderun
6	Karayollari Asphalt Pier	Karayollari 5th Division Directorate	Karayollari 5th Division Directorate 3 Nolu Asphalt Santiyesi Iskenderun Hatay	0326 6261431	0326 6262278	Iskenderun
7	Yazici Pier	Yazici Iron and Steel Factory Inc.	Yazici Iron and Steel Factory Inc. Sariseki Iskenderun	0326 6562300 03266562811	0326 6562909	Iskenderun
8	O. Ekinci Port	O. Ekinciler Iron and Steel Factory Inc.	O. Ekinciler Iron and Steel Factory Inc. Sariseki Iskenderun	0326 6142809	0326 6562230	Iskenderun
9	Petrol Ofisi Buoys	Petrol Ofisi Inc. Division Directorate	Petrol Ofisi Inc. Division Directorate Iskenderun Hatay	0326 6142019	0326 61775594	Iskenderun
10	Sariseki Super Phosphat Pier	Sariseki Fertilizer Factory	Sariseki Fertilizer Factory Sariseki Iskenderun/Hatay	0326 6140056 0326 6140057	0326 6140055	Iskenderun
11	Isdemir Limani	Iron and Steel Factories Inc. General Directorate	Iron and Steel Factories Inc. General Directorate Payas/Dörtüyl/Hatay	0326 75883080 0326 7583180	0326 7553759	Iskenderun
12	Çekisan Buoys	Çekisan Storage Inc.	Çekisan Petroleum Facilities Iskenderun Hatay	0326 6261398 0326 6261399	0326 6137759	Iskenderun
13	Sasa Buoys	Sasa Petroleum Facilities Inc.	Sasa Petroleum Facilities Iskenderun Hatay	0326 626 2114 0326 6262115	0326 6262113	Iskenderun
14	Dörtüyl Fisherman Shelter					Hatay
15	Aygaz Buoy System	Aygaz Inc.	Aygaz Inc. Dörtüyl Hatay	0326 7341601	0326 7241600	Hatay
16	Botas Dörtüyl Pier	Botas Inc.	Dörtüyl Botas Directorate Dörtüyl Hatay	0326 7445577	0326 7445584	Botas(Hatay)
17	Delta Petroleum Buoy Systems	Delta Inc.	Delta Petroleum Products Inc. Dörtüyl Hatay	0326 7341620	0326 7341637	Hatay
18	BP Gas Buoy Systems	BP Gas Inc.	BP Gas Inc. Dörtüyl Hatay	0326 7342766	0326 7342781	Hatay
19	Milangaz Buoy Systems	Milangaz Inc.	Milangaz Inc. Dörtüyl Hatay	0326 734 2545	0326 7342553	Hatay
20	Toros Fertilizer Factory Pier	Toros Fertilizer and Chemicals Ind. Trade Inc.	Toros Fertilizer Factory Ceyhan Adana	0322 6135001	0322 6572517	Botas (Ceyhan)

21	Botas Pier	Botas Inc.	Dortyol Regional Directorate Ceyhan Adana	0322 6135859	0322 6131657	Botas (Ceyhan)
22	Karatas Fishermen Shelter		Adana			Adana
23	Karaduvar Fishermen Shelter	Karaduvar Water Products Fishery Cooperative	Karaduvar Water Products Fishery Cooperative Mersin	0324 2341103		Mersin
24	Mersin Spor Basın	Mersin Metropolitan Municipality MESKI General Directorate	Mersin Metropolitan Municipality MESKI General Directorate Mersin	0324 3370841		Mersin
25	Tasucu Seka Port	Seka Akdeniz Operations Directorate	Seka Akdeniz Operations Directorate Tasucu Mersin	0324 7412591 7 lines	0324 7414997	Tasucu Mersin
26	Tasucu Municipality Port	Tasucu Municipality	Municipality Tasucu Mersin	0324 741 4173	0324 7414255	Tasucu Mersin
27	Tasucu Fishermen Shelter	Tasucu Municipality	Municipality Tasucu Mersin	0324 741 41 73	0324 7414255	Tasucu Mersin
28	Yesilovacik Fishermen Shelter	Yesilova Municipality	Yesilova Municipality Silifke Mersin	0324 7475142		Tasucu Mersin
29	Hacishakli Fishermen Shelter		Silifke Mersin			Silifke Mersin
30	Anamur Pier	Municipality	Municipality Anamur Mersin	0324 5190300	0324 8142021	Anamur Mersin
31	Yogunduvur Fishermen Shelter		Anamur Mersin			Anamur Mersin
32	Bozyazi Fishermen Shelter	Bozyazi Municipality	Bozyazi Municipality Mersin	0324 8512218	0324 8513430	Anamur Mersin
33	Aydincik Fishermen Shelter	Aydincik Municipality	Aydincik Municipality Mersin	0324 8413050	0324 8412587	Anamur Mersin
34	Mersin Port	TCDD General Directorate	Mersin TCDD Port Operations Mersin	0324 2382530	0324 2382531	Mersin
35	Alanya Pier	TDI Inc.	TDI Alanya Operations Directorate Alanya Antalya	0242 5133996		Alanya
36	Alanya Fisherman Shelter					Alanya
37	Antalya Port	Ortadogu Antalya Port Operations Inc.	Ortadogu Antalya Port Operations Inc. Antalya	0242 2591380	0242 2591357	Antalya
38	Park Kemer Marina	Park Kemer Marina	Yali Cad. Kemer Antalya	0242 814 1490 3 lines	0242 8141552	Kemer
39	Finike Municipality Pier	Setur Marina	Finike Port Finike Antalya	0242 8554793	0242 8554793	Finike
40	Kas Municipality Berth	Kas Municipality	Municipality Kas Antalya	0242 8361020	0242 8361030	Kas
41	Kalkan Berth	Kalkan Municipality	Municipality Kalkan Kas Antalya	0242 8443131	0242 8442398	Kas
42	Kalkan Fisherman Shelter					Kalkan
43	Egirdir Fisherman Shelter					Isparta
44	Fethiye Municipality Pier	Fethiye Municipality	Fethiye/Mugla	0252 6141020	0252 6146792	Fethiye
45	Seka Pier	Seka Dalaman Directorate	Seka Dalaman Directorate/Mugla	0252 6975600		Fethiye
46	Marmaris Municipality Berth	Marmaris Municipality	Marmaris/Mugla	0252 4122868		Marmaris

47	Bozburun Fisherman Shelter		Marmaris/Mugla			Marmaris
48	Hayitbükü Fisherman Shelter		Dağca/Mugla			Dağca
49	Dağca Fisherman Shelter		Dağca/Mugla			Dağca
50	Palamutbükü Fisherman Shelter		Dağca/Mugla			Dağca
51	Köyceğiz Fisherman Shelter		Köyceğiz/Mugla			Köyceğiz
52	Yalıkavak Fisherman Shelter	Yalıkavak Water Products Cooperative	Yalıkavak Bodrum/Mugla	0252 3854003		Güllük
53	Turgutreis Fisherman Shelter	Turgutreis Water Products Cooperative	Turgutreis Bodrum/Mugla	0252 3823019	0252 3822035	Güllük
54	Gündogan Fisherman Shelter	Gündogan Water Products Cooperative	Gündogan Bodrum/Mugla	0252 3877141		Güllük
55	Türkbükü Fisherman Shelter	Türkbükü Water Products Cooperative	Gündogan Bodrum/Mugla	0252 3863356		Güllük
56	Torba Fisherman Shelter	Torba Water Products Cooperative	Torba Bodrum/Mugla	0252 3162183		Güllük
57	Kiyıkisilacık Fisherman Shelter	Kiyıkisilacık Water Products Cooperative	Kiyıkisilacık Milas/Mugla	0252 5377052		Güllük
58	Yalıkavak Municipality Pier	Yalıkavak Municipality	Yalıkavak Bodrum/Mugla	0252 3854922	0252 3854465	Güllük
59	Güllük Pier	TDI Inc.	TDI Güllük Port Operation Chief Office Güllük/Mugla	0252 5222220	0252 5222669	Güllük
60	Güllük Fisherman Shelter	Güllük Water Products Cooperative	Güllük Milas/Mugla	0252 5222040		Güllük
61	Bodrum Municipality Berth	Bodrum Municipality Foodstuff Tourism Inc.	Bodrum/Mugla	0252 3139067	0252 3139067	Bodrum
62	Bodrum Marina Berth	Bodrum Municipality Foodstuff Tourism Inc.	Bodrum/Mugla	0252 3139067 0252 3161019	0252 3139067	Bodrum
63	Kemerköy TEK Pier	Kemerköy Electric Production Inc.	Milas/Mugla	0252 5322667	0252 5322660	Bodrum
64	Akyarlar Fisherman Shelter		Akyarlar Bodrum/Mugla			Bodrum
65	Kusadasi Port	TDI Inc.	TDI Çesme Port Operation Chief Office Kusadasi/Aydin	0256 6141581	0256 6141310	Kusadasi
66	Kusadasi Fisherman Shelter	Kusadasi Municipality	Municipality Kusadasi/Aydin	0256 6142389	0256 6142389	Kusadasi
67	Güzelçamlı Fisherman Shelter	Güzelçamlı Municipality	Municipality Güzelçamlı/Aydin	0256 6461001	0256 6461303	Kusadasi
68	Akköy Fisherman Shelter		Söke/Aydin			Aydin
70	TDI Pier	TDI Inc.	TDI Çesme Port Chief Office Çesme/Izmir	0232 7128749	0232 7120427	Çesme
71	Çesme Municipality Pier	Çesme Municipality	Municipality Çesme/Izmir	0232 7127158	0232 7126457	Çesme

72	Dalyan Fisherman Shelter	Dalyan Water Products Coop.	Dalyan Çesme/Izmir	0232 7248123	0232 7248985	Çesme
73	Sigacik Fisherman Shelter	Seferihisar Municipality	Municipality Seferihisar/Izmir	0232 7457032		Çesme
74	Alağati Fisherman Shelter		Çesme/Izmir			Çesme
75	Ilica Fisherman Shelter		Çesme/Izmir			Çesme
76	Çesme Fisherman Shelter		Çesme/Izmir			Çesme
77	TCDD Alsancak Port Operations	TCDD	TCDD Izmir Port Op. Dir. Alsancak/Izmir	0232 463 1600 0232 4631900	0232 4632248	Izmir
78	Çamalti Pier	Tekel Salt Operation Direc.	Çamalti Sasalı/Izmir	0232 327 3284	0232 3273522	Izmir
79	Özdere Fisherman Shelter	Özdere Municipality	Municipality Özdere/Izmir	0232 7975121	0232 7975028	Izmir
80	Levent Marina	The Foundation for the Strengthening of Turkish Armed Forces	Çakalburun/Izmir	0232 277 8039	0232 3273522	Izmir
81	Balıktova Fisherman Shelter		Izmir			Izmir
82	Yenifoça Fisherman Shelter		Izmir			Izmir
83	Narlıdere Balıkçı Barınagi		Izmir			Izmir
84	Güzeldahçe Fisherman Shelter		Izmir			Izmir
85	Urla Fisherman Shelter		Izmir			Izmir
86	Özbekköy Fisherman Shelter		Izmir			Izmir
87	Mordogan Fisherman Shelter		Karaburun/Izmir			Izmir
88	Kaynarpinar Fisherman Shelter		Karaburun/Izmir			Izmir
89	Amberseki Fisherman Shelter		Karaburun/Izmir			Izmir
90	Saipköy Fisherman Shelter		Karaburun/Izmir			Izmir
91	Karaburun Fisherman Shelter		Karaburun/Izmir			Izmir
92	Yeni Liman Fisherman Shelter		Karaburun/Izmir			Izmir
93	Tüpras Pier and Berths	Izmir Refinery Directorate	Tüpras Aliaga/Izmir	0232 6161250	0232 6162383	Aliaga
94	Pekkim Port	Pekkim Petrochemical Inc.	Pekkim Aliaga/Izmir	0232 6161240	0232 6161248	Aliaga
95	Petrol Ofisi Pier	Petrol Ofisi Division Directorate	Petrol Ofisi Aliaga/Izmir	0232 6161722	0232 6161726	Aliaga
96	Ege Fertilizer Pier	Ege Fertilizer Inc.	Ege Fertilizer Inc. Aliaga/Izmir	0232 6251250	0232 6251245	Aliaga
97	Nemtas Pier	Nemrut Port Operations Inc.	Nemtas Nemrut Aliaga/Izmir	0232 6251310	0232 6251390	Aliaga
98	Limas Pier	Limas Port Operations Inc.	Limas Nemrut Aliaga/Izmir	0232 6251274	0232 6251272	Aliaga
99	Çukurova Pier	Çukurova Port Operations Inc.	Çukurova Nemrut Aliaga/Izmir	0232 6251300	0232 6251293	Aliaga

100	Habas Pier	Habas Industrial Gases Inc.	Habas Nemrut Aliaga/Izmir	0232 6251181	0232 6251380	Aliaga
101	Total Oil Pier	Total Oil Türkiye Inc.	Total Oil Inc. Aliaga/Izmir	0232 6167250	0232 6168305	Aliaga
102	Aliaga Fisherman Shelter	Aliaga Fishery Cooperative	Fisherman Shelter Aliaga/Izmir	0232 6161268		Aliaga
103	Dikili Pier	TDI Port Operations Chief Office	Atatürk Cad. No.11 Dikili Izmir	0232 6714400	0232 6712029	Dikili
104	Dikili Fisherman Shelter	Dikili Centrum Water Products Cooperative	Fisherman Shelter Dikili/Izmir	0232 6718425		Dikili
	Çandarlı Fisherman					
105	Shelter	Ataköy Marina BOT Inc.	Dikili/Izmir			Dikili
106	Ayvalık Ferry Pier	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
107	Ayvalık Motorboat Pier	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
	Alibey Island Motorboat					
108	Pier	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
109	Municipality Pier	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
110	Customs Pier	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
111	Alibey Fisherman Shelter	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
	Ayvalık Cumhuriyet					
112	Square Pier	Ayvalık Municipality	Municipality Ayvalık/Balıkesir	0266 3121023	0266 3123219	Ayvalık
			Setur Ayvalık Marina			
113	Ayvalık Marina	Setur Marina Operations	Ayvalık/Balıkesir	0266 3122696	0266 3122316	Ayvalık
	Karaağaç Fisherman					
114	Shelter		Gömeç/Balıkesir			Gömeç
				0266 3734424 0266		
115	Akçay Pier	Edremit Municipality	Municipality Edremit/Balıkesir	3732739	0266 3731097	Edremit
				0266 4221010 0266		
116	Burhaniye Marina	Burhaniye Municipality	Municipality Burhaniye/Balıkesir	4227700	0266 4221006	Edremit
	Alınoluk Fisherman					
117	Shelter		Edremit/Balıkesir			Edremit
118	Akçansa Pier	Akçansa Cement Inc.	Mahmudiye Village Ezine/Çanakkale	0286 6287200 20 lines	0286 6285852	Ezine
119	Bozcaada Port	Bozcaada Municipality	Municipality Bozcaada/Çanakkale	0286 6978081	0286 6978676	Bozcaada
120	Bozcaada South Berth	Bozcaada Municipality	Municipality Bozcaada/Çanakkale	0286 6978081	0286 6978676	Bozcaada
121	Çanakkale City Pier	TDI Inc.	Iskele Meydani Çanakkale	0286 2170191	0286 2175852	Çanakkale
122	Kabatepe Pier	TDI Inc.	Iskele Meydani Çanakkale	0286 2170191	0286 2175852	Çanakkale
123	Çanakkale Marina	Çanakkale Municipality	Municipality Çanakkale	0286 2171079	0286 2170848	Çanakkale
	Çanakkale Fisherman					
124	Shelter	Çanakkale Municipality	Municipality Çanakkale	0286 2171079	0286 2170848	Çanakkale
125	Geyikli Wine Pier	Geyikli Municipality	Municipality Geyikli/Çanakkale	0286 63885533	0286 6385533	Çanakkale
126	Geyikli Wood Pier	TDI Inc.	Iskele Meydani Çanakkale	0286 2170191	0286 2175855	Çanakkale
127	Yükyeri Pier	TDI Inc.	Iskele Meydani Çanakkale	0286 2170191	0286 2175855	Çanakkale
	Kiçikkuyu Fisherman		Kiçikkuyu Municipality			
128	Shelter	Kiçikkuyu Municipality	Ayvacı/Çanakkale	0286 7525054	0286 7526502	Çanakkale
	Behramkale Fisherman					
129	Shelter		Çanakkale			Çanakkale
130	Lapseki City Pier	TDI Inc.	Iskele Meydani Çanakkale	0286 2171188	0286 2175852	Lapseki

131	Çardak Pier	Çardak Municipality	Municipality Çardak-Lapseki/Çanakkale	0286 5325002	0286 5325071	Lapseki
132	Sevketiye Village Fisherman Shelter	Sevketiye Village Head office	Sevketiye Village Lapseki/Çanakkale	0286 5528032		Lapseki
133	Eceabat Fisherman Shelter	Eceabat Municipality	Municipality Eceabat/Çanakkale	0286 8141242	0286 8141036	Eceabat
134	Eceabat Pier	Eceabat Municipality	Municipality Eceabat/Çanakkale	0286 8141242	0286 8141036	Eceabat
135	Kilitbahir Village Fisherman Shelter	Kilitbahir Village Headman Office	Kilitbahir Eceabat/Çanakkale	0286 8245021		Eceabat
136	Seddülbahir Fisherman Shelter	Seddülbahir Village Headman Office	Seddülbahir Eceabat/Çanakkale	0286 8620160		Eceabat
137	Ariburnu Fisherman Shelter	TDI Inc.	Eceabat/Çanakkale			Eceabat
138	Gelibolu City Pier	Gelibolu Municipality	Municipality Gelibolu/Çanakkale	0286 5661011	0286 5662825	Gelibolu
139	Gelibolu Hamzaköy Pier	Gelibolu Battalion Commandership	Battalion Commandership Gelibolu/Çanakkale	0286 5661137	0286 5666898	Gelibolu
140	Gökçeada Kuzu Port	TDI Inc.	Iskele Meydanı Çanakkale	0286 2170191 0286 8873043	0286 8875852	Gökçeada
141	Kaleköy Fisherman Shelter	Gökçeada Municipality	Municipality Gökçeada/Çanakkale	0286 8873052	0286 8873019	Gökçeada
142	Uğurlu Ferry Pier	TDI Istanbul Port Operations	Uğurlu Gökçeada/Çanakkale	0286 8976227	0286 8976228	Gökçeada
143	Karabiga Port	Karabiga Municipality	Municipality Karabiga/Biga/Çanakkale	0286 3541146 0286 3541801	0286 3541013	Karabiga
144	Karabiga Fisherman Shelter	Water Products Cooperative	Yalı Mah. Balıklar Lokali Karabiga/Biga/Çanakkale	0286 3541186		Karabiga
145	Aksaz Village Fisherman Shelter	Aksaz Village Headman Office	Aksaz Village Biga/Çanakkale	0286 3645686		Karabiga
146	Degirmencik Village Fisherman Shelter	Degirmencik Village Headman Office	Degirmencik Village Biga/Çanakkale	0286 3645504		Karabiga
147	Kemer Village Fisherman Shelter	Water Products Cooperative	Kemer Village Biga/Çanakkale	0286 3345139		Karabiga
148						
149	Çakıl Village Fisherman Shelter	Çakıl Village Headman Office	Çakıl village Erdek/Balıkesir	0266 8485059		Erdek
150	Kestanelik Village Fisherman Shelter	Kestanelik Village Headman Office	Kestanelik Village Erdek/Balıkesir	0266 8418656		Erdek
151	Sahinburgaz Village Fisherman Shelter	Sahinburgaz Village Headman Office	Sahinburgaz village Erdek/Balıkesir	0266 8418797		Erdek
152	Tatlısu Fisherman Shelter	Tatlısu Village Headman Office	Tatlısu village Erdek/Balıkesir	0266 8382405		Erdek
153	Erdek City Pier	Erdek Municipality	Municipality Erdek/Balıkesir	0266 8351295		Erdek
154	Erdek Fisherman Shelter	Erdek Municipality	Municipality Erdek/Balıkesir	0266 8351295	0266 8353072	Erdek
155	Erdek Marina Pier	Erdek Municipality	Municipality Erdek/Balıkesir	0266 8351295	0266 8353072	Erdek
156	Balıpinar Fisherman Shelter	Balıpinar Village Headman Office	Balıpinar Village Erdek/Balıkesir	0266 8491002		Erdek

157	Musakça Fisherman Shelter	Musakça Village Headman Office	Musakça Village Erdek/Balikesir	0266 8491002		Erdek
158	Çayagazi Fisherman Shelter	Çayagazi Village Headman Office	Çayagazi Village Erdek/Balikesir	0266 8418552		Erdek
159	Narli Village Pier	Narli Village Headman Office	Narli Village Erdek/Balikesir	0266 8371169		Erdek
160	Poyrazli Village Pier	Poyrazli Village Headman Office	Poyrazli Village Erdek/Balikesir	0266 8511205		Erdek
161	Harmanli Village Pier	Harmanli Village Headman Office	Harmanli Village Erdek/Balikesir	0266 8511086		Erdek
162	Balikli Village Pier	Balikli Village Headman Office	Balikli Village Erdek/Balikesir	0266 8521076		Erdek
163	Ocaklar Village Pier	Ocaklar Village Headman Office	Ocaklar Village Erdek/Balikesir	0266 8475252		Erdek
164	Ilhanlar Village Pier	Ilhanlar Village Headman Office	Ilhanlar Village Erdek/Balikesir	0266 8371113		Erdek
165	Bandirma TCDD Port	TCDD General Directorate	TCDD Port Operations Directorate	0266 7153050	0266 7136011	Bandirma
166	Bandirma Municipality	Bandirma Municipality	Bandirma Municipality	0266 7142500	0266 7136055	Bandirma
167	Dut Port Fisherman Shelter	Dut Port Fisherman Office	Dutlimani Village Bandirma/Balikesir	0266 7320943		Bandirma
168	Bagfas Pier	Bandirma Fertilizer Factory Inc.	Erdek Yolu Üzeri Bandirma/Balikesir	0266 7141000	0266 7141005	Bandirma
169	Marmara Island City Pier	Marmara Island Municipality	Municipality Marmara Island/Balikesir	0266 8855050	0266 8855145	Marmara Island
170	Türkeli-Avsa Pier	Türkeli Municipality	Municipality Türkeli/Balikesir	0266 8963300	0266 8963304	Marmara Island
171	Saraylar Fisherman Shelter	Saraylar Municipality	Municipality Saraylar/Balikesir	0266 8877151	0266 8877334	Marmara Island
172	Ekinlik Island Fisherman Shelter	Ekinlik Village Headman Office	Ekinlik Village/Balikesir	0266 8811052		Marmara Island
173	Topagaç Village Fisherman Shelter	Topagaç Village Headman Office	Topagaç Village/Balikesir	0266 8821024		Marmara Island
174	Karsiyaka Fisherman Shelter		Karsiyaka Village			Marmara Island
175	Marmara Island Fisherman Shelter		Marmara Adasi/Balikesir			Marmara Island
176	Yigitler Village Fisherman Shelter	Yigitler Village Headman Office	Yigitler Village/Balikesir	0266 8921004		Marmara Island
177	Bedelan Piers	Izzet Ahison	Marmara Adasi/Balikesir	0522 8104052 0212 2477000		Marmara Island
178	Bedelan Piers	Aset Ali Torun	Marmara Adasi/Balikesir	0522 8132842		Marmara Island
179	Bedelan Piers	Grantil Mosaic Ind. Trade Co. Ltd.	Marmara Adasi/Balikesir	02122528011	0266 8856024	Marmara Island
180	Asmalı Village Fisherman Shelter		Asmalı Köyü Marmara Adasi/Balikesir			Marmara Island
181	Çınarli Fisherman Shelter					Marmara Island
182	Mudanya Bel-Sehir Pier	Mudanya Municipality	Municipality Mudanya/Bursa	0224 5441650	0224 5441657	Mudanya
183	Zeytinbagi Fisherman Shelter	Zeytinbagi Municipality	Municipality Zeytinbagi Mudanya/Bursa	0224 5632015 0224 5632151	0224 5632017	Mudanya

184	Mudanya Güzelyali Fisherman Shelter						Mudanya
185	Kumkaya Fisherman Shelter	Kumkaya Village Headman Office		Kumkaya Village Mudanya/Bursa	0224 5652359		Mudanya
186	Petrol Ofisi Pier	Petrol Ofisi Inc.		Petrol Ofisi Dolum Tesisleri Mudanya/Bursa	0224 5441203	0224 5443350	Mudanya
187	Amavutköy Fisherman Shelter	Mudanya Municipality		Municipality Mudanya/Bursa	0224 5441650	0224 5441657	Mudanya
188	Bayrandedere Fisherman Shelter			Mudanya/Bursa			Mudanya
189	Petrol Ofisi Pier	Petrol Ofisi Inc.		Petrol Ofisi Dolum Tesisleri Mudanya/Bursa	0224 5441203	0224 5443350	Mudanya
190	Amavutköy Fisherman Shelter	Mudanya Municipality		Municipality Mudanya/Bursa	0224 5441650	0224 5441657 0224 5441650	Mudanya
191	Gemlik Municipality Port	Gemlik Municipality		Municipality Gemlik/Bursa	0224 5134521	0224 5134528	Gemlik
192	Gemlik Fisherman Shelter	Gemlik Municipality		Municipality Gemlik/Bursa	0224 5134521	0224 5134528	Gemlik
193	BP Pier	BP Petroleum Inc.		Kiçikçukur mevki P.K.17 Gemlik/Bursa	0224 5248300	0224 5248305	Gemlik
194	Gemport Port	Gemport Inc.		Kocaçukur Mevkii P.K. 101 Gemlik/Bursa	0224 5248831	0224 5248830	Gemlik
195	Tiğsas Gemlik Fertilizer Factory Berth	Gemlik Fertilizer Ind. Inc. General Directorate		Gemlik Fertilizer Ind. Inc. General Directorate Gemlik/Bursa	0224 5190070	0224 5190085	Gemlik
196	Borusan Pier	Boru Transport Inc.		Gemsaz Mevkii Gemlik/Bursa	0224 5190150	0224 5190000	Gemlik
197	M.K.S Pier	Marmara Integrated Chemistry Inc.		Çömlektepe Mevkii PK:12 Gemlik/Bursa	0224 5190300	0224 5190304	Gemlik

199	Küçükcumla Pier	Küçükcumla Municipality	Municipality Küçükcumla-Gemlik/Bursa	0224 5381602		Gemlik
200	Büyükcumla Village Pier	Büyükcumla Village Headman Office	Büyükcumla Village Gemlik/Bursa	0224 5381336		Gemlik
201	Narlı Village Pier-Fisherman Shelter	Narlı Village Headman Office	Narlı Village Gemlik/Bursa	0224 5345001		Gemlik
202	Karacaali Village Pier-Fisherman Shelter	Karacaali Village Headman Office	Karacaali Village Gemlik/Bursa	0224 5370300		Gemlik
203	Kursunlu Fisherman Shelter		Gemlik/Bursa			Gemlik
204	Karacabey Kursunlu Fisherman Shelter		Gemlik/Bursa			Gemlik
205	Kapaklı Village Pier	Kapaklı Village Headman Office	Kapaklı Village Armutlu/Yalova	0266 5333240		Yalova
206	Fistikli Village Pier-Fisherman Shelter	Fistikli Village Headman Office	Fistikli Village Armutlu/Yalova	0266 5356003		Yalova
207	Armutlu Pier	Armutlu Municipality	Municipality Armutlu/Yalova	0266 5314205	0266 5310818	Yalova
208	Edirne Enez Municipality Port	Edirne Municipality	Enez/Edirne	0284 8116009 0284 8116518	0284 8116151	Enez
209	Ibrice Fisherman Shelter	Ibrice Water Products Cooperative	Mecidiye-Kesan/Edirne	0284 7834311		Enez
210	Enez Municipality Pier	Enez Municipality	Enez/Edirne	0284 8116009 0284 8116418	0284 8116151	Enez
211	Enez Fisherman Shelter		Enez/Edirne			Enez
212	Sultaniçi Fisherman Shelter		Enez/Edirne			Enez
213	Yayla Village Fisherman Shelter		Kesan/Edirne			Kesan
214	Akport	Tekirdag Akport Port Operations Inc.	Barbaros Yolu Üzeri Liman/Tekirdag	0282 2610800	0282 2612346	Tekirdag
215	Marmas Marmara Ereğlisi Port Facilities	Marmas Marmara Ereğlisi Port Facilities Inc.	Kiremitlik Mevkii Vakıflar Kampi Yani M. Ereğlisi/Tekirdag	0282 6131422 0282 6131431	0282 6131879	Tekirdag
216	TMO Pier	TMO General Directorate Tekirdag Division Directorate	Barbaros Yolu Üzeri Liman/Tekirdag	0282 2612267 0282 2612292	0282 2611179	Tekirdag
217	Saraphane Pier	Tekirdag Wine and Beverage Factory	Anatürk Bulvarı Eski Sanayi Kavşagi/Tekirdag	0282 2612002	0282 2614285	Tekirdag
218	Müreffe Pier	Müreffe Municipality	Müreffe Sarköy/Tekirdag	0282 5188261	0282 5185658	Tekirdag
219	Müreffe Fisherman Shelter		Müreffe Sarköy/Tekirdag			Tekirdag
220	Sarköy Pier	Sarköy Municipality	Liman İçı Sarköy/Tekirdag	0282 5181021	0282 5189860	Tekirdag

221	Tekirdag Fisherman Shelter	Tekirdag Municipality	Atatürk Bulvarı Liman İçi Tekirdag	0282 2612322	0282 261 1069	Tekirdag
222	Barbaros Fisherman Shelter	Barbaros Municipality	Barbaros Municipality/Tekirdag	0282 2731097		Tekirdag
223	Kumbag Fisherman Shelter	Kumbag Fisherman Cooperative	Kumbag/Tekirdag	0282 2834006		Tekirdag
224	Sarköy Fisherman Shelter	Sarköy Fisherman Cooperative	Sarköy/Tekirdag	0282 5185658		Tekirdag
225	Hosköy Fisherman Shelter	Hosköy Water Products Cooperative	Liman İçin Hosköy Sarköy/Tekirdag	0282 5185658		Tekirdag
226	M. Eregli Military Port	Navy Forces Commandership	M. Ereglisi Akaryakıt Bölük	0282 6131035		Tekirdag
227	M. Ereglisi Botas LNG Terminal Pier	Botas Pipeline Petroleum Transport Inc.	Botas LNG Terminal Operations	0282 6130250	0282 6130258	Tekirdag
228	M. Ereglisi Fisherman Shelter	M. Ereglisi Municipality	M. Ereglisi/Tekirdag			Tekirdag
229	M. Ereglisi Karayollari Pier	General Directorate of Highways BITUM Storage Chief Office	M. Ereglisi Municipality Tekirdag	0282 6131250	0282 6131311	Tekirdag
230	Soyak Port	Soyak Port	General Directorate of Highways BITUM Storage Chief Office	0282 6131010	0282 6131010	Tekirdag
231	Mardas	Mardas Marmara Shipping Inc.	Soyak Port Angurya Çiftliği Mevkii	0212 8753203	0212 8753203	Ambarlı
232	Kumport	S.S. İst. Batı Yakası Sand Production and Marketing Cooperative	Ambarlı Port Facilities Mardas B.	0212 8752732	0212 8752738 0212 8752739	Ambarlı
233	Arnaport	Arnaport	Ambarlı Port Facilities Yakuplu Köyü	0212 8752761	0212 8752760	Ambarlı
234	Silivri Municipality Pier	Silivri Municipality	Angurya Çiftliği/İstanbul	0212 8754525	0212 8752760	Ambarlı
235	Silivri Fisherman Shelter	Silivri Municipality	Yakuplu Köyü, Angurya Çiftliği	0212 7271002	0212 7272488	Silivri
236	Çolakoglu	Çolakoglu Metallurgy	Silivri Belediyesi Silivri/İstanbul	0212 72721002	0212 7272488	Silivri
237	Kızılkaya	İstanbul Iron and Steel Factory Inc.	Çolakoglu Metallurgy Inc. Diliskelesi Gebze/Kocaeli	0262 6415030 5 lines	0262 7546653	İzmit
			Kaynarca Mevkii 41810	0262 7545167 0262 7545138	0262 7545155	İzmit

238	Total	Total Oil Türkiye Inc.	Limn Tepe Mevkii Tavsancil/Gebze/ Kocaeli	0262 7545153 0262 7547184	0262 7545153	Izmit
239	Sedef	Sedef Shipping Industry Inc.	İçmeler Mevkii Dilovası/Gebze/ Kocaeli	0262 6415050 4 lines	0262 6416730	Izmit
240	Alendrar	Alendrar Diliskelesi Port Operations Inc.	Alendrar Diliskelesi Port Operations Inc. Diliskelesi/Gebze/ Kocaeli	0262 7547600 6 lines	0262 7547606	Izmit
241	Solventas	Solventas Technical Storage Inc.	Kaynarca Mevkii Gebze/Kocaeli	0262 7547700 6 lines	0262 7545249	Izmit
242	Aslan Cement	Lafarge Aslan Çimento Inc.	Darıca Tas Liman Mevkii 41700 Gebze/Kocaeli	0262 7452990 0262 7453424	0262 7453427 0262 7453428	Izmit
243	Altinel	Altinel Melamin Industry Inc.	Altinel Melamin Industry Inc. Diliskelesi Gebze/Kocaeli	0262 7545168 0262 7545216	0262 6416438	Izmit
244	Polipor	Polipor Chemistry Indust. Trade Inc.	Polipor Chemistry Indust. Trade Inc. 41455 Diliskelesi Gebze/Kocaeli	0262 7545160 0262 7546631 10 lines	0262 6412649	Izmit
245	Shelter	Eski Hisar Fisherman	Eski Hisar Fisherman Shelter Eski Hisar Village Gebze/Kocaeli			Izmit
246	Shelter	Tavsancil Fisherman	Tavsancil Fisherman Shelter Tavsancil Gebze/Kocaeli			Izmit
247	Nuh Cement	Nuh Cement Industry Inc.	Nuh Çimento Sanayi Inc. Hereke/Körfez/Kocaeli	0262 5113975 19 lines	0262 5114121 0262 5113994	Izmit
248	Turcas	Turcas Petroleum Inc.	Turcas Petroleum Inc. Körfez/Kocaeli	0262 5274700 0262 5284700	0262 5275063 0262 5285141	Izmit
249	Rota Cement	Rota Shipping Inc.	Rota Shipping Inc. Körfez/Kocaeli	0262 5285087 0262 5285029	0262 5284539	Izmit
250	Aygaz	Aygaz Yarımcı Facilities	Aygaz Yarımcı Facilities Körfez/Kocaeli	0262 5270361 3 lines	0262 5270364	Izmit
251	Peline	Peline Transport and Warehouse Inc.	Peline Transport and Warehouse Inc. Körfez/Kocaeli	0262 5277592 2 lines	0262 5277593	Izmit
252	Transtürk	Transtürk Chemical Inc.	Transtürk Chemical Inc. Çiftlik Mevkii Körfez/Kocaeli	0262 2395143 2 lines	0262 2395142	Izmit
253	Melas	Adapazarı Sugar Factories Inc.	Kaynarca Mevkii Yarımcı Körfez/Kocaeli	0262 5282103		Izmit
254	İgssas	İstanbul Fertilizer Industry Inc.	İstanbul Fertilizer Industry Inc. 41784 Körfez/Kocaeli	0262 5275460 9 lines	0262 5274692 0262 5274698	Izmit
255	Diler	Ok Shipping Trade Inc.	Ok Shipping Trade Inc. Hereke Körfez/Kocaeli	0262 5112649 0262 5114449	0262 5113222	Izmit
256	Gübretaş	Gübretaş Fertilizer Factories Inc.	Gübretaş Fertilizer Factories Inc. Körfez/Kocaeli	0262 5284640 0262 5284721	0262 5284645 0262 5282131	Izmit
257	Pier	Yarımcı Municipality	Yarımcı Municipality Pier Körfez/Kocaeli	0262 5282302	0262 5285422	Izmit
258	Pekim	Pekim Petrochemical Inc.	Pekim Petrochemical Inc. Körfez/Kocaeli	0262 5281450 20 lines	0262 5281400 0262 5281738	Izmit
259	Tipras	Turkish Petroleum Refineries İzmit Refinery Directorate	Turkish Petroleum Refineries İzmit Refinery Directorate Körfez/Kocaeli	0262 5270660 24 lines	0262 5274724	Izmit
260	Hereke Fisherman Shelter		Hereke Fisherman Shelter Hereke/Körfez/Kocaeli			Izmit

261	Karayollari (Highways)	Karayollari Asphalt Facilities	Karayollari Asfalt Tesisleri Tavsancil Hereke/Körfez/Kocaeli	0262 7530378		Izmit
262	Cholorin Alkaline	Cholorin Alkaline Industrial Products Trade Inc.	Cholorin Alkaline Industrial Products Trade Inc. Derince/Izmit/Kocaeli	0262 2392270 3 lines	0262 2395142	Izmit
263	Shell	The Shell Comp. Of Turkey Ltd.	Shell Derince Facilities PK:45 Derince/Kocaeli	0262 2396300 10 lines	0262 2396310	Izmit
264	Derince	TCDD Derince Port Operations	TCDD Derince Port Operations Derince/Izmit/Kocaeli	0262 2233990 0262 2231540	0262 2234278	Izmit
265	Limas	UM Shipping Industry and Trade Inc.	UM Shipping Industry and Trade Inc. Gölcük/Kocaeli	0262 3412540 0262 3412483	0262 3412500 0262 3412483	Izmit
266	Petrol Ofisi	Petrol Ofisi Inc.	Petrol Ofisi Inc. Izmit/Kocaeli	0262 2231370 0262 2290660	0262 2290774 0262 2290699	Izmit
267	Seka	Izmit Cellulose and Paper Industry Directorate	Izmit Cellulose and Paper Industry Directorate Izmit/Kocaeli	0262 3213110 10 lines	0262 3213645 02623216834	Izmit
268	Ereyli Fisherman Shelter		Eregli Fisherman Shelter Eregli Village Karamürsel/Kocaeli			Izmit
269	Erenit	Out of operation				Izmit
270	Kefken Fisherman Pier	Kefken Water Products Cooperative	Kefken Village Kandira/Izmit	0262 5668990	0262 5668990 0262 5636004	Kefken
271	Kefken Island Pier	TKE Tahlisiye Division Directorate	Kefken Village Kandira/Izmit	0262 5668990	0262 5636004	Kefken
272						
273	Bagirganli Fisherman Shelter		Kandira/Izmit			Kefken
274	Elyaf	Yalova Yarn and Fiber Industry and Trade Inc.	Yalova Yarn and Fiber Industry and Trade Inc. Yalova	0226 3532838	0226 3233255	Yalova
275	Aksa	Aksa Acrylic Chemical Industry Inc.	Aksa Acrylic Chemical Industry Inc. Yalova	0226 3532545	0226 3141855	Yalova
276	Küçük Tekne Fisherman Shelter		Yalova			Yalova
277	Samanlidere Fisherman Shelter		Yalova			Yalova
278	Çınarcık Fisherman Shelter		Yalova			Yalova
279	Erenköy Fisherman Shelter		Yalova			Yalova
280	Fistikli Fisherman Shelter		Yalova			Yalova
281	Akçakoca Fisherman Shelter	Water Products Cooperative	Water Products Cooperative Akçakoca/Bolu	0374 6113521	0374 6113238	Bolu
282	Akçansa	Akçansa Cement Trade Inc.	Ambarlı Port Facilities Akçansa Iskele Ambarlı/Istanbul	0212 8752700	0212 8752722	Istanbul
283	Haydarpasa Port	TCDD Haydarpasa Port Operations	TCDD Haydarpasa Port Operations Haydarpasa/Istanbul	0216 3379245	0216 3451705	Istanbul
284	Salıpaazari Berth	TDI Port Operations Directorate	TDI Port Operations Directorate Salıpaazari/Istanbul	0212 2522100	0212 2497415	Istanbul

285	Zeyport	Zeytinburnu Port Operations Ind. And Trade	Zeytinburnu Port Operations Ind. And Trade Zeytinburnu/Istanbul	0212 6799006	0212 6799000	Istanbul
286	Mimar Sinan Fisherman Shelter	Mimar Sinan Fisherman Shelter	Mimar Sinan Fisherman Shelter B.çeknece/Istanbul	0212 8837218	0212 8835564	Istanbul
287	Setur Amiral Fahri Korutürk F.Bahçe M.	TEK-ART Kalamis F.Bahçe Marmara Tourism Facilities Inc.	Fenerbahçe/Istanbul	0216 2461477	0216 3461656	Istanbul
288	Ataköy Marina	Ataköy Marina BOT Inc.	Sahilyolu Ataköy Istanbul	0212 5604270	0212 5627270	Istanbul
289	Zeytinburnu Fisherman Shelter	Fisherman Cooperative	Zeytinburnu Fisherman Cooperative Zeytinburnu/Istanbul	0212 5583186		Istanbul
290	Rumeli Feneri Fisherman Shelter	Rumeli Feneri Fisherman Cooperative	Rumeli Feneri Fisherman Shelter Istanbul	0212 2281375		Istanbul
291	Poyrazköy Fisherman Shelter		Beykoz/Istanbul			Istanbul
292	Kumkapı Fisherman Shelter		Eminönü/Istanbul			Istanbul
293	Sivriada Fisherman Shelter		Adalar/Istanbul			Istanbul
294	Büyükdada Fisherman Shelter		Adalar/Istanbul			Istanbul
295	Selimpasa Fisherman Shelter	Selimpasa Municipality	Selimpasa Municipality Selimpasa Silivri Istanbul	0212 7316004	0212 7316005	Istanbul
296	İgneada Fisherman Shelter	İgneada Municipality	Cumhuriyet Meydanı İgneada/Kirklareli	0288 6922185	0288 6922185	İgneada
297	Kiyıköy Fisherman Shelter	Kiyıköy Municipality	Kiyıköy Municipality Vize/Kirklareli	0288 3886160	0288 3886007	İgneada
298	Karaburun Fisherman Shelter	Karaburun Village Headman Office	Karaburun Village Headman Office Çataca/Kirklareli	0288 7622023	0288 7622243	İgneada
299	Sile Port	Sile Municipality	Sile Municipality Sile/Istanbul	0216 7111275	0216 7113585	Sile
300	Agva Fisherman Shelter	Sile Municipality	Sile Municipality Sile/Istanbul	0216 7111275	0216 7113585	Sile
301	Sile Fisherman Shelter		Sile/Istanbul			Sile
302	Uzunkum Port	Eregli Iron and Steel Factories Inc.	General Directorate of Eregli Iron and Steel Factories Inc. Eregli/Zonguldak	0372 3232500	0372 3163969	Karadeniz Ereglisi
303	Karadeniz Ereglisi Eski Port	Türkiye Hard Coal Institution	Türkiye Hard Coal Institution Karadeniz Ereglisi/Zonguldak	0372 3233770 0372 3233771	0372 3233770	Karadeniz Ereglisi
304	Barınak Berth	Treasury of The Ministry of Finance	Orhanlar Mah. Atatürk Bulvarı Karadeniz Ereglisi/Zonguldak	0372 3165695	0372 3162169	Karadeniz Ereglisi
305	Amaç Shipping Berth/Pier	Amaç Shipping Petroleum Products Inc.	Bahtköyü Karadeniz Ereglisi/Zonguldak	0372 3239870 0372 3239871	0372 3236044	Karadeniz Ereglisi
306	Eregli Fisherman Shelter		Karadeniz Ereglisi/Zonguldak			Karadeniz Ereglisi
307	Zonguldak Port	Türkiye Hard Coal Institution General Directorate	Türkiye Hard Coal Institution Zonguldak	0372 2524000	0372 2511900	Zonguldak
308	Kozlu Fisherman Shelter		Merkez/Zonguldak			Zonguldak

309	Kilimli Fisherman Shelter		Merkez/Zonguldak			Zonguldak
310	Hisarönü Fisherman Shelter		Çaycuma/Zonguldak			Zonguldak
311	Filyos Port	Karabük Iron and Steel Ind. And Trade	Merkez/Karabük	0370 4182227	0370 4243741	Karabük
312	Anasra Port	Anasra Municipality	Municipality Anasra/Bartin	0378 3151081	0378 3151986	Bartin
313	Tarlaagzı Fisherman Shelter		Anasra/Bartin			Bartin
314	Kurucasile Port	Kurucasile Municipality	Municipality Kurucasile/Bartin	0378 5181158	0378 5181891	Bartin
315	Tekkeönü Fisherman Shelter	Hisar Village Headman Office	Hisar Village Headman Office Kurucasile/Bartin			Bartin
316	Bartin Port	Bartin Municipality	Municipality/Bartin	0378 2385851	0378 2385851	Bartin
317	Kurucasile Fisherman Shelter		Kurucasile/Bartin			Bartin
318	Cide Fisherman Shelter	Cide Municipality	Municipality Cide/Kastamonu	0366 8661004	0366 8661169	Cide
319	Ilyasbey Fisherman Shelter		Cide/Kastamonu			Cide
320	Doganyurt Fisherman Shelter	Doganyurt Municipality	Municipality Doganyurt/Kastamonu	0366 8431260	0366 8431262	Doganyurt
321	Inebolu Port	Inebolu Municipality	Municipality Inebolu/Kastamonu	0366 8114500	0366 8113232	Inebolu
322	Gemiciler Evrenye Fisherman Shelter		Inebolu/Kastamonu			Inebolu
323	Özlüce Fisherman Shelter		Inebolu/Kastamonu			Inebolu
324	Doganyurt Fisherman Shelter		Inebolu/Kastamonu			Inebolu
325	İlisi Yakaören Fisherman Shelter		Bozkurt/Kastamonu			Bozkurt
326	Abana Fisherman Shelter	Abana Municipality	Municipality Abana/Kastamonu	0366 5641017	0366 5642241	Abana
327	Çatalzeytin (Ginolu) Fisherman Shelter	Çatalzeytin Municipality	Municipality Çatalzeytin/ Kastamonu	0366 5161022	0366 5161017	Çatalzeytin
328	Türkeli Güzelkent Fisherman Shelter		Türkeli/Sinop			Türkeli
329	Türkeli Fisherman Shelter		Türkeli/Sinop			Türkeli
330	Ayancık Municipality Pier	Ayancık Municipality	Municipality Ayancık/Sinop	0368 6131073	0368 6131333	Ayancık
331	Ayancık Ustaburnu Fisherman Shelter	Ayancık Municipality	Municipality Ayancık/Sinop	0368 6131073	0368 6131333	Ayancık
332	Sinop Pier	Çakiroğlu Sinop Port Operations Inc.	Meydankapi Mah. Iskele Cad. Deniz Polisi Karşısı Sinop	0368 2614122	0368 2614122	Sinop
333	Sinop Fisherman Shelter	Sinop Municipality	Atatürk Cad. Sinop	0368 2611844 0368 2611845	0368 2614506	Sinop
334	Gerze Fisherman Shelter		Gerze/Samsun			Gerze
335	Gerze Pier	Gerze Municipality	Gerze Municipality Gerze/Samsun	0362 7181547	0362 7181547	Gerze

336	Yakakent Fisherman Shelter	Yakakent Municipality	Yakakent Municipality Yakakent/Samsun	0362 6112104	0362 6112454	Yakakent
337	Samsun Nitrogen Pier	Samsun Fertilizer Industry Inc.	Sanayi Mahallesi Tekkeköy/Samsun	0362 2560980 5 lines	0362 2560956	Tekkeköy
338	Samsun Port	TCDD Port Operation Directorate	Samsun	0362 2332293	0362 4451626	Samsun
339	Samsun Fisherman Shelter		Samsun			Samsun
340	Dereköy Fisherman Shelter		Samsun			Samsun
341	Yalı Mahallesi Fisherman Shelter		Terne/Samsun			Terne
342	Ünye Municipality Pier	Ünye Municipality	Ünye Municipality Ünye/Ordu	0452 3231941	0452 3233333	Ünye
343	Ünye Port	Ünye Municipality	Ünye Municipality Ünye/Ordu	0452 3231941	0452 3233333	Ünye
344	Ünye Fisherman Shelter		Ünye /Ordu			Ünye
345	Fatsa Municipality Berth/Pier	Fatsa Municipality	M Kemal Pasa Mah. Fatsa/Ordu	0452 4236300 0452 4236309		Fatsa
346	Yalıköy Fisherman Shelter		Fatsa/Ordu			Fatsa
347	Bolanın Fisherman Shelter		Fatsa/Ordu			Fatsa
348	Fatsa Fisherman Shelter		Fatsa/Ordu			Fatsa
349	Kislaönü Fisherman Shelter	Perembe Municipality	Perembe Municipality Perembe/Ordu	0452 5171052	0452 5170150	Perembe
350	Mersin Village Fisherman Shelter	Mersin Village Fisherman Cooperative	Mersin Village Fisherman Cooperative Perembe/Ordu	0452 5170692		Perembe
351	Ordu Pier	Çakiroğlu Ordu Port Operations Inc.	Taşbasi Mah. Atatürk Bulvarı No.23 Ordu	0452 2231640	0452 2231642	Ordu
352	Gülyalı Fisherman Shelter		Gülyalı/Ordu			Gülyalı
353	Bulancak Municipality Pier	Bulancak Municipality	Municipality Bulancak/Giresun	0454 3182011 0454 3182013	0454 3182012	Giresun
354	Giresun Port	Çakiroğlu Giresun Port Operations	Sultan Selim Mah. Atatürk Bul. No.9 Giresun	0454 2121490	0454 2121734	Giresun
355	Bulancak Fisherman Shelter		Bulancak/Giresun			Giresun
356	Görece Municipality Berth and Pier	Görece Municipality	Municipality Görece/Giresun	0454 5131180	0454 5131535	Görece

357	Görece Fisherman Shelter		Görece/Giresun			Görece
358	Tirebolu Fisherman Shelter	Tirebolu Municipality	Belediye Cad. Tirebolu/Giresun			Tirebolu
	Yalılıköy Fisherman Shelter					
359	Boztepe Fisherman Shelter	Eynesil Municipality	Municipality Eynesil/Trabzon			Eynesil
360	Çesmeönü Fisherman Shelter and Harbour	Water Products Cooperative	Besikdüzü/Trabzon			Besikdüzü
361	Besikdüzü Fisherman Shelter		Besikdüzü/Trabzon			Besikdüzü
362	Vakfikebir Pier	Vakfikebir Municipality	Municipality Vakfikebir/Trabzon	0462 8415031 0462 8415799		Vakfikebir
363	Vakfikebir Fisherman Shelter		Vakfikebir/Trabzon			Vakfikebir
364	Çarsıbası Fisherman Harbour	Çarsıbası Municipality	Municipality Çarsıbası/Trabzon	0462 8213004 0462 8213084		Çarsıbası
365	Yoroz Fisherman Shelter	Fener Village Juridical Body	Fener Village Çarsıbası/Trabzon			Çarsıbası
366	Akçaabat Pier	Akçaabat Municipality	Akçaabat Municipality /Trabzon	0462 2281034	0462 2281034	Akçaabat
367	Akçaabat Fisherman Shelter	Akçaabat Fisherman Cooperative	Fisherman Cooperative Akçaabat/Trabzon	0462 2281645		Akçaabat
368	Faroz Fisherman Shelter	Faroz Fisherman Cooperative	Faroz Fisherman Cooperative Trabzon			Trabzon
369	Trabzon Port	TDI Inc.	Trabzon Port Operations Directorate Trabzon	0462 3211156 0462 3212257	0462 3221004	Trabzon
370	Araklı Fisherman Shelter	Araklı Fisherman Shelter	Araklı Fisherman Shelter Araklı/Trabzon			Araklı
371	Sürmene Pier	Sürmene Municipality	Municipality Sürmene/Trabzon	0462 7461065	0462 7461067	Sürmene
372	Yonro Fisherman Shelter	Limited Liability Fisherman Cooperative	Balıklı Mah. Sürmene/Trabzon	0462 7462011		Sürmene
373	Balıklı Fisherman Shelter	Sürmene Fisherman Cooperative	Balıklı Mah. Sürmene/Trabzon	0462 7462011		Sürmene
374	Çamburnu Port	Saç Ship Industry Cooperative	Saç Ship Industry Cooperative Çamburnu Sürmene/Trabzon	0462 7522024	0462 7522268	Sürmene
375	Of Fisherman Shelter		Of/Trabzon			Of
376	Rize İyidere Fisherman Shelter	İyidere Municipality	İyidere Municipality Rize	0464 3213515	0464 3212640	İyidere
377	Rize Port	Riport Rize Port Operation Inc.	Riport Rize Port Operation Inc. Rize	0464 2234568	0464 2234570	Rize
378	Portakallık Mah. Fisherman Shelter		Rize			Rize
379	Rize-Çayeli Fisherman Shelter and Pier	Çayeli Municipality	Çayeli Municipality Rize	0464 5325085	0464 5325083	Çayeli
380	Ünye Cement Çayeli Port	Ünye Cement	Limanköy Çayeli/Rize	0464 5328601		Çayeli

381	Hamuda Mevkii Fisherman Shelter		Cayeli/Rize			Cayeli
382	Ikiztepe (Lagos) Fisherman Shelter		Pazar/Rize			Pazar
383	Kirazlik Fisherman Shelter	S.S. Kirazlik Water Products Cooperative	Kirazlik Mah. Pazar Liman Baskanligi Yani Pazar/Rize	0464 6122417		Pazar
384	Ardesen Fisherman Shelter		Ardesen/Rize			Ardesen
385	Findikli Pier	Findikli Municipality	Municipality Findikli/Rize	0464 5113010	0464 5113961	Findikli
386	Findikli Kiyicik Slipway	Rize Peculiar Administration	Kiyicik Village Findikli/Rize	0464 2143267	0464 2130564	Findikli
387	Findikli Aksu Mah. Slipway	Rize Peculiar Administration	Aksu Mah. Findikli/Rize	0464 2143267	0464 2130564	Findikli
388	Findikli Torosi Slipway	Rize Peculiar Administration	Torosi Mah. Findikli/Rize	0464 2143267	0464 2130564	Findikli
389	Findikli Mekiskir Slipway	Has not been transferred yet	Findikli Mekiskir Slipway Findikli/Rize			Findikli
390	Balikçilar Village Fisherman Shelter		Gündoğdu/Rize			Gündoğdu
391	Arhavi Fisherman Shelter	Arhavi Fisherman Cooperative	Arhavi Fisherman Cooperative Arhavi/Artvin	0466 3122138	4663123457	Arhavi
392	Kemalpaşa Fisherman Shelter	Has not been transferred yet	Kemalpaşa Fisherman Shelter Hopa/Artvin			Hopa
393	Hopa Port	Park Shipping and Hopa Port Operations Inc.	Hopa Port Hopa/Artvin	0466 3512259	4663514791	Hopa

Table A8.3.1(1) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PIERS WHICH ARE OPERATED BY TDI

Ports	Berth length (m)	Depth (m)	Annual Handling Capacity (thousand ton/year)	Ship Acceptance Capacity	Capacity of Storage (thousand ton/year)	
Alanya	239.00	(-6,-10)	-	240	-	
Antalya	1,900.00	(-4,-10)	3.338	2.975		
Marmaris	462.00	(-12)	-	1.460	4.714	PRIVATIZED
Gulluk	358.90	(-10,-12)	336	170	-	
Kusadasi	920.12	(-10)	-	1.741	-	
Cesme	480.00	(-7.5,-10)	-	1.060	-	
Dikili	168.41	(-6,-8)	193	175	-	
Gokceada	500.00	(5,-7)	-	-	-	
Darica	25.00	(4-5)	-	-	-	
Canakkale	100.00	(5-8)	-	-	-	
Lapseki	200.00	(4-10,5)	-	-	-	
Tekirdag	1,014.00	(-4,-9)	2.900	1.050	361	PRIVATIZED
Istanbul	1,120.00	(-6.5,-10)	-	5.250	-	
Kabatepe	349.00	-	-	-	-	
Sinop	197.20	(-6.4,-11.95)	-	250	400	PRIVATIZED
Ordu	269.00	(-8,-9)	865	350	1.300	PRIVATIZED
Giresun	1,022.00	(-8,-10)	1.394	1.575	1.375	PRIVATIZED
Trabzon	1,525.00	(-2.5,-10)	3.839	2.839	3.193	PRIVATIZED
Rize	130.00	(-5)	529	140	-	PRIVATIZED
Hopa	1,145.00	(-4.5,-10)	1.394	1.425	1.228	PRIVATIZED
TOTAL	12,124.63		14.788	20.700	12.571	

Source: Maritime Affairs

Table A8.3.1 (2) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE TCDD PORTS

Ports	Berth length (m)	Depth (m)	Annual Handling Capacity (thousand ton/year)	Ship Acceptance Capacity	Capacity of Storage (thousand ton/year)		Container holding Capacity (TEU/YEAR)
					Open	Closed	
Haydarpasa	2,765	(-6,-12)	6,488,300	2.651	471.36	362.384	264.000
Derince	1,132	(-4,5-15)	1,910,900	567	2,951,760	200.000	-
Samsun	1,756	(-6,-12)	2,284,100	1.130	8,556,720	192.304	-
Mersin	3,180	(-6,-14,5)	5,510,800	3.052	8,109,024	562.992	203.376
Iskenderun	1,427	(-10,-12)	3,223,600	640	8,991,120	294.320	-
Bandirma	2,788	(-10,-12)	2,636,100	4.277	1,868,280	144.000	-
Izmir	2,959	(-4,-12)	4,931,600	3.635	565.920	377.648	265.728
TOTAL	16,007		29,985,400	15.952	31,514,184	2,133,648	733.104

Source: Maritime Affairs

Table A8.3.1 (3) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PEERS (EXCEPT TCDD AND TDI)

Name of Ports/piers	Piers/Berth length (m)	Water Depth (m)	Annual Handling Capacity (ton/year)	Storage area (m ²)	
				closed	open
Hopa Municipality Pier	167	6	182.500	500	-
Hopa-Findikli Mun. Br. Pier	131	6	182.500	500	-
Hopa-Kemalpasa Mun. Shel. Berth	50	1.5	-	-	-
Hopa Arhavi Mun. Shel. Berth	100	3	-	-	-
Pazar Mun. Pier	89	5	365.000	-	-
Pazar-kirazlik Shel. Berth	115	4	730.000	-	6800
Pazar -Kirazlik Berth	110	3	-	-	-
Rize-Iyidere Fisherman.Shel. Berth	120	2	-	-	-
Rize-Cayeli Fish.Shel. Berth and Pier	60	4	91.250	-	-
Vakfikebir- Mun. Pier	238	6	146.000	-	-
Vakfikebir-Besikduzu Fish. Shelter	-	-	-	-	distribution of park place
Vakfikebir-Carsibasi	-	-	-	-	under construction
Surmene Mun.Pier	90	2	-	-	-
Trabzon-Akcaabat Mun. Pier	150	6	109.500	-	-
Gorele Mun. Berth and Pier	173	5	146.000	-	-
Tirebolu Mun. Berth	70	3	-	-	-
Giresun-Bulancak Mun Pier	262	5	182.500	-	-
Ordu-Persembe Fish. Shel.Berth and Pier	390	(3 adet) 2-4	-	-	-
Fatsa Mun. Berth and Pier	438	4-5	1.241.000	4000	-
Unye Mun. Pier	149	3	-	-	-
Unye Fish. Shel. Berth	120	7	365.000	-	-
Samsun Nitrogen Pier	617	10-19	715.400	-	-
Gerze Mun. Pier	150	3	146.000	-	-

Source: Maritime Affairs

Table A8.3.1 (4) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PEERS (EXCEPT TCDD AND TDI)

Name of Ports/Piers	Piers/Berth Length (m)	Water Depth (m)	Annual Handling Capacity (Ton/year)	Storage area (m ²)	
				Closed	Open
Gerze-Yakakent Fish.Shel.Berth	125	5	-	-	-
Sinop Mun.Pier	180	4-11	620.500	-	3000
Ayancik Mun.Pier	119	4	146.000	-	-
Inebolu Mun.Berth	396	3-5 (3 adet)	766.500	--	-
Inebolu Etibank Berth	200	8	-	-	30000
Cide Mun. Berth	100	7	36.500	-	-
Amasra Mun. Berth	154	5	419.750	-	-
Amasra Nato Pier	600	10	-	-	-
Bartın Mun. Berth	493	8	511.000	3000	15000
Bartın Army Berth	60	6	-	-	-
Bartın River Mun. Berth	40	4	-	-	-
Bartın Petrol Office Berth	80	4	-	4800m ²	-
Bartın Cement Fac. Berth	170	3	-	-	-
Zonguldak TTK Berth	1,000	8.5	3.248.500	1626	32225
Zonguldak Mun. Pier	75	4	-	-	-
Filyos Karabuk Iron-Steel Pier	250	6	-	-	-
Karadeniz Ereğli EKI Berth	625	10	1.825.000	-	23500
Erdemir Uzunkum Berth	733	(3 adet)11-11.5	3.467.500	1100	4000
Sile Fisherman Shel. Berth	525	4	-	-	-
Sile-Agva Mun. Berth	100	3	-	-	-
Kumkapi Fisherman Shel. Berth	387	4	-	-	-
İğneada Fisher.Shel. Berth	210	5	-	-	-
Karaburun Fisher. Shel. Berth	417	3	-	-	-
Kiyıkoy Fisher.Shel. Berth	300	2.5	-	-	-

Source: Maritime Affairs

Table A8.3.1 (5) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PEERS (EXCEPT TCDD AND TDI)

Name of Ports/Piers	Piers/Berth Length (m)	Water Depth (m)	Annual Handling Capacity (Ton/year)	Storage area (m ²)	
				Closed	Open
Izmit Turkish Petrol Pier	30	11	-	-	210
Izmit Marmara Dock Pier	30	5	-	-	-
Korfez (gulf) Mun. Port/Berth	407	4-5	365.000	-	15.140,50
Izmir Altintel M. Ind. Pier	220	7-12,5	-	-	3.515
Kizilkaya Iron-Steel Pier	215	9-25	-	-	19.124
Izmit Aslan Cement Fac. Pier	248	8-25	438.000	-	-
Izmit Chemical Pier	100	11	365.000	5000	35.000
Colakoglu Metalurgy Inc.co	1078	8-25	2.200.000	5.300	16.700
Sedef Ship Ind. Inc. Co.	407	8-16	50.000	2.400	52.788
Alemdar Dil Pier	700	7-16	3.000.000	8.000	25.000
Solventas Technical Storage	-	10	430.000	500	-
Highway Tavsancilik Adm. Pier	64.5	8-10	-	450	750
Upet Inc.Co.Tavsancilik Adm.Pier	72	10-16	-	-	992
Nuh Cement Inc.Co.	314	7-17	-	720	3.250
Diler Uron-Steel Inc.Co.	448	6-15	1.000.000	5.571	20.000
Yarimca Gubretas Pier	100.7	9	-	-	-
Izmit Hereke Berth	142	8-10	219.000	-	4.500
Izmit Yarimca Mun. Berth	344	6-10	912.500	-	5.000
Izmit Yarimca Manure Berth	100	9	273.750	-	10.008
Izmit Melas Pier	67	10	-	-	-
Izmit Petkim Pier and Berth	733 adet)	5-12	547.500	-	40.250
Izmit Aygaz Pier	7.25	2	365.000	-	-
Izmit Aygaz Platform	43	8,5	-	156m ²	-
Izmit Igsas Pier and Berth	579	8-18	817.600	-	-
Izmit Tupras Pier and Berth	1511 adet)	7-29	58.765.000	-	-
Izmit Petroloffic Pier	150	6-12	2.555.000	-	-
Izmit Shell Derince Pier	280 adet)	3,5-9,5	365.000	24.000	24.000
Izmit Protec. Agri. Inc.Co. Pier	42	4	1.095.000	-	430
Izmit Transturk Chemicals Inc.Co.	87.6	6,50-7,10	165.000	-	-
Izmit Seka Pier	215 adet)	6-10	136.875	-	-
Izmit Pursan Inc.Co. Pier and Berth	170	1,5-9,5	730.000	1000	20.000
Izmit Eternit Pier and Berth	115.5	2-3,5	27.375	-	580

Source: Maritime Affairs

Table A8.3.1 (6) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PEERS (EXCEPT TCDD AND TDI)

Name of Ports/Piers	Piers/Berth Length (m)	Water Depth (m)	Annual Handling Capacity (Ton/year)	Storage area (m ²)	
				Closed	Open
Izmit Elyaf Inc.Co.Pier	265.25	6	-	-	-
Izmit Aksa Pier and Berth	306	4,5-6	1.095.000	-	-
Gemlik Mun. Pier	164	2-10	1.200.000	-	-
Gemlik Fish. Shel. Berth	100	3-5	-	-	8.000
Gemlik Nitrogen Berth	300	9-14	-	7.000	-
Gemlik BP pier	55	5-7	-	-	-
Gemlik Gempport Berth	430	7-12	1.460.000	2.400	98.000
Gemlik Borusan Pier	165	5-8	-	1.800	3.700
Gemlik Armutlu Mun. Pier	84	10	-	-	-
Gemlik Artificial Silk Mun. Berth	15	5	-	-	-
Gemlik Kucukumlu Mun.Pier	25	6	-	-	-
Mudanya Mun. Pier	184	13	2.000.000	-	-
Bandirma Bagfas Pier	100	10	400.000	-	-
Erdek Mun. Pier	60	7	-	-	-
Erdek Yacht Adm. Pier	60	8	-	-	-
Karabiga Mun. Berth and Pier	405	3-5	-	-	10.000
Silivri Mun. Pier	160	4	-	-	-
Silivri Fisherman Shelter Berths	300	0,5-3 adet)	-	-	-
Silivri Military Pier	80	4	-	-	-
Tekirdag T.M.O. Pier	620	10,5	2.600.000	70.000tons	-
Tekirdag Tekel Wine house Pier	102	3-5	-	-	-
Tekirdag Murefte Mun. Pier	210	3-6	-	-	-
Tekirdag Sarkkoy Mun. Pier	300	2-4	-	-	-
Gelibolu Mun. Pier	125	7	-	-	-
Gelibolu Mun. Lapseki Pier	193	8	182.500	-	-
Canakkale Cement	459	10-12	3.102.500	-	1000
Canakkale Enez Mun. Berth	350	3	-	-	-
Canakkale Enez Ibrice Fish.Shel.Berth	190	2-4	-	-	-
Canakkale Enez Mun. Port	310	3-6	-	-	-
Akcaay Ilica Pier	60	5	730.000	-	34.000
Ayvalik Mun. Motor Pier	25	4,5	127.750	-	-
Ayvalik Alibey Pier	47	5	-	-	-

Source: Maritime Affairs

Table A8.3.1 (7) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PEERS (EXCEPT TCDD AND TDI)

Name of Ports/Piers	Piers/Berth Length (m)	Water Depth (m)	Annual Handling Capacity (Ton/year)	Storage area (m ²)	
				Closed	Open
Aliaga Cargo Berth	114	7	-	-	-
T.P.A.O. Aliaga Fuel Pier	530	18-19	4.380.000	-	-
Tupras Aliaga Pier	450	20-22	-	-	-
Aygaz Aliaga Pier	10	7	-	-	-
Tupras Aliaga Trailer Pier	120	6	-	-	-
Pekkim Nemrut Bay Berth	1093	5-20	-	54.000m ³	154.000
Petrol Office Nemrut Bay Pier	37	12-14	-	-	-
Aegean Manure Nemrut Bay Pier	123	18-20	1.020.000	10.565	20.000
Nemtas Pier	250	7-14	1.200.000	1.125m ³	110.000
Metas (Limas) Pier	154	10-20	730.000	-	10.000
Nemrut Bay Cukurova Pier	371	12-25	1.460.000	-	23.000
Nemrut Bay Habas Pier	250	16-17	1.100.000	-	55.000
Gokova Pier	150	15	-	-	-
Cesme Mun. Pier	88	5	-	-	-
Setur Inc. Co. Altinyunus Marine Berth and Pier	350	4	-	-	-
Kusadasi Yacht Berth	317	4-5	-	-	-
Bodrum Mun. Berth	340	4	-	-	-
Bodrum Yacht Berth	184	4	-	-	-
Bodrum Turban Marine Pier	220	2-5	-	-	-
Marmaris Mun. Pier	61	10	365.000	-	-
Fethiye Mun. Pier	193.75	9	1.095.000	-	-
Fethiye Seka Berth	200	12	-	-	-
Kalkan Mun. Berth	395	2-6	-	-	-
Kas Mun. Berth	515.8	2-6	-	-	-
Finike Mun. Pier	50	3-4,5	146.000	-	2000
Anamur Mun. Pier	183	5	292.000	-	60.000
Bozyazi Mun. Yogundunar Fish.Shel.Berth	440	5,5	-	-	-
Aydincik Fish.Shel. Berth	70	3	-	-	-
Tasucu Mun.Pier	163	6	803.000	-	-
Tasucu Seka Berth	606	10-6	511.000	9.000	210.000
Botas Pier	1900	-	54.750.000	750.000m ³	-
Toros Manure Fac. Pier	2850	14	23.068.000	182.500m ³	423.500

Source: Maritime Affairs

Table A8.3.1 (8) THE PROPERTIES AND PHYSICAL CAPACITIES OF THE PORTS/ PEERS (EXCEPT TCDD AND TDI)

Name of Ports/Piers	Piers/Berth Length (m)	Water Depth (m)	Annual Handling Capacity (Ton/year)	Storage area (m ²)	
				Closed	Open
Dortyol Port	1320	14,5	3.832.500	160.000m ²	-
Ekinciler Pier	850	13-19	1.822.500	450	8.000
Sariseki SuperPhospate Pier	812,58	6-18	27.922.500	17.646	6.000
Isdemir Port	1,395	8-18,5	21.900.000	-	90.000
Iskenderun Highways Pier	60.1	4-5	525.600	8.160m ²	-
Unye Cement	150	7	1200	-	-
Amac Maritime Inc.Co.	255	5,5-12	400.000	120m ²	-
Ambarli Port	3240	4-14	10.000.000	8.320	221.415
Yalova Elyaf	320	2-6	18.000	-	-
Rota Maritime	150	12	1.000.000	-	-
Poliport Chemical Ind. And Commerce Inc. Co.	358	12-13	1.250.000	2.000	34.877
Istanbul Iron-Steel	475	5-16	1.250.000	1.000	10.000
Total (Except TCDD and TDI)	48,562				

Source: Maritime Affairs

NOTE: Total Handling Capacity is 141.400.000 Tons/Year

NOTE: The ports hanling the petrol and petrol products are not included. The handling capacity of petrol and petrol products is 160 Million Tons/Year.

ISKENDERUN PORT

Table A8.3.2 (1) Iskenderun Port (Berth and VESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1	mixed goods	170	10	81	1
2	mixed goods	170	10	81	1
3-4	mixed goods	353.23	10	162	2
7	poured solid	200	10	79	1
8	poured solid	166.70	12	79	1
9	poured solid	166.70	12	79	1
10	poured solid	200	10	79	1
sum		1,426.63		640	8

note: The berths with number 7 and 10 are arranged so that vehicle ferrys can berth using doors.

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
mixed goods	693.23	-10	324	4
poured dry	733.40	-10, -12	316	4
sum	1,426.63		640	8

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing at the same time capacity (vessel)
1-2-3-4-7-10	-10	1093.23	482	6
8-9	-12	333.40	158	2
sum		1426.63	640	8

Source: TCDD

ISKENDERUN PORT

Table A8.3.2 (2) Iskenderun Port (OPEN STOCKING AREAS and the Storage Capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
1	33,132	27,590	662,160	55,180
2	7,875	7,875	189,000	15,750
3	11,200	9,980.00	239,520	19,960
4	110,220	108,695	2,608,680	217,390
5	33,040	26,900.00	645,600	53,800
6	32,680	32,070.00	769,680	64,140
7	62,850	59,350	1,424,400	118,700
8	16,940	16,940	406,560	33,880
9	18,060	18,060	433,440	36,120
10	26,840	26,290	630,960	52,580
11 (ore area)	94,660	40,880	981,120	81,760
	447,497	374,630	8,991,120	749,260

Source: TCDD

note: Areas 1 and 2 are arranged to be used as container terminals. Since the necessary changes on berth no 1 are not established and container crane is not built, it is used as mixed good stocking area.

container holding capacity is 63,168 TEU / year

ISKENDERUN PORT

Table A8.3.2 (3) Iskenderun Port (CLOSED STOCKING AREAS and the Storage Capacity)

warehouse no	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1 (A2)	720	11,520	960
no 2 (A3)	720	11,520	960
no 3 (A4)	1,806	28,896	2,408
no 4 (A5)	1,824	29,184	2,432
se no 2 (B1)	3,470	55,520	4,626
se no 3 (B2)	3,470	55,520	4,626
se no 4 (B3)	3,470	55,520	4,626
no 9 (A1)	458	7,328	610
no 10 (C)	2,457	39,312	3,276
sum	18,395	294,320	24,524

OPEN REVISED STOCKING AREA

berth no	length of berth (m)	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
3-4	353	4,589	165,204	13,767

Source: TCDD

MERSIN PORT

Table A8.3.3 (1) Mersin Port (Berth and VESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1	passenger berth	150	10	623	1
2-3	mixed goods	275	10	162	2
4	mixed goods	160	10	81	1
5-6	mixed goods	213	10	162	2
7-8	container	270	14	300	1
9	container	225	12	300	1
10	container	175	10	300	1
11	vehicle ferry (ro-ro)	40	10		
12-13	container	310	12	300	1
14	poured dry (grain)	275	11	158	2
15	poured dry (grain)	275	14.5	158	2
16	mixed goods	69	6	81	1
17-18-19	mixed goods	480	6	486	6
20-21	mixed goods	253	12	162	2
sum		3,170		3,273	23

note: The berth 11 is a vehicle ferry (ro-ro) berth having 40 m. length. Containers are not accepted to the berth when there is vehicle ferry berthed.

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
passenger berth	150	-10	623	1
mixed goods	1,450	-6, -12	1,134	14
container	980	-10, -14	1,200	4
poured dry	550	-11, -14.5	316	4
vehicle ferry (ro-ro)	40	-10		
sum	3,170		3,273	23

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
16-17-18-19	-6	549	567	7
1-2-3-4-5-6-10-11	-10	1013	1,328	7
14	-11	275	158	2
9-12-13-20-21	-12	788	762	4
7-8	-14	270	300	1
15	-14.5	275	158	2
sum		3170	3,273	23

Source: TCDD

MERSIN PORT

Table A8.3.3 (2) Mersin Port (OPEN STOCKING AREAS, Container Yard and the Storage Capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1	20,000	18,550	445,200	37,100
no 2	54,824	53,874	1,292,976	107,748
no 8	21,600	18,580	445,920	37,160
no 9	8,000	8,000	192,000	16,000
no 10	9,000	9,000	216,000	18,000
no 11	7,000	7,000	168,000	14,000
no 12	10,000	10,000	240,000	20,000
no 13	2,250	2,250	54,000	4,500
no 14	1,800	1,800	43,200	3,600
no 15	20,000	19,350	464,400	38,700
no 16	30,400	29,975	719,400	59,950
no 17	33,540	33,540	804,960	67,080
no 18	55,670	55,645	1,335,480	111,290
no 19	33,600	30,280	726,720	60,560
no 20	44,144	40,032	960,768	80,064
sum	351,828	337,876	8,109,024	675,752

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton/year)
container loading area number 3	35,700	34,920	82,416 TEU /year	3,434 TEU (2,250 full, 1,184 empty)
heavy load berth stocking area no 4	55,750	55,750	48,384 TEU / year	2,016 TEU (1,152 full, 864 empty, 80 in cooler)
air area container stoking area number 5	71,380	71,380	95 units of 20 feet 56 units of 40 feet	
CFS container unloading area no 6	33,100	32,200	72,576 TEU / year	3,024 TEU (full)
new container stocking area no 7	70,200	57,096		
sum	266,130	251,346	203,376 TEU / year	8,474 TEU

Source:TCDD

Total open stocking net area: 337,880 + 251,350 = 589,230 m²

MERSIN PORT

Table A8.3.3 (3) Mersin Port (CLOSED STOCKING AREAS and the Storage Capacities)

warehouse no	area (m ²)	stocking area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1	2,400	2,400	38,400	3,200
no 2	4,500	4,498	71,968	5,997
no 3	4,500	4,498	71,968	5,997
no 4	3,232	3,232	51,712	4,309
no 5	2,806	5,612	89,792	7,482
no 6	2,100	2,100	33,600	2,800
cold warehouse	1,362	2,383	38,128	3,177
CFS 1	1,800	1,309	20,944	1,745
CFS 2	9,155	9,000	146,480	12,206
sum	31,855	35,032	562,992	46,913

note: The warehouse number 5 has two floors, and it is totally used for stocking.

The total of first floor and 3/4 of the second floor of the cold warehouse is used for stocking.

OPEN REVISED STOCKING AREA

berth no	length of berth (m)	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
2-3	125	437	15,732	1,311
5-6-7	493	1,380	49,680	4,140
sum		1,817	65,412	5,451

Source: TCDD

IZMIR PORT

Table A8.3.4 (1) Izmir Port (Berth and VESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1	passenger berth	140	-8	623	1
2	passenger berth	190	-10.5	623	1
3	poured dry	150	-10.5	79	1
4-5	mixed goods	270	-10.5	162	2
6	mixed goods	75	-10.5	81	1
7-8-9	mixed goods	372	-10.5	162	2
10-11-12	mixed goods	348	-7	243	3
13-14-15-16	container	600	-13	900	3
17-18-19	container	450	-13	600	2
20-21-22	mixed goods	364	-13	162	2
sum		2,959		3,635	18
				vehicle ferry	3

note:

Berht no 9 is also used as grain berth.

vessel receiving capacity as grain berth is 79 vessel / year.

Vehicle ferry can berth to berths 3, 16, 17 (there is no vehicle ferry ramp).

Passenger boat can berth to berth no 3 on specific months.

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
passenger berth	330	-8, -10.5	1,246	2
mixed goods	1,429	-7, -10.5	810	10
container	1,050	-13	1,500	5
poured dry	150	-10.5	79	1
sum	2,959		3,635	18

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
10-11-12	-7	348	243	3
1	-8	140	623	1
2-3-4-5-6-7-8-9	-10.5	1,057	1,107	7
13-14-15-6-17-18-19-20-21-22	-13	1,414	1,662	7
sum		2,959	3,635	18

IZMIR PORT

Table A8.3.4 (2) Izmir Port (OPEN STOCKING AREAS, Container Yard and the Storage capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (t)	holding capacity (ton)
no 1	28,125	14,490	347,760	28,980
no 2	9,520	9,090	218,160	18,180
sum	37,645	23,580	565,920	47,160

area no	gross area (m ²)	net area (m ²)	stocking capacity (t)	holding capacity (ton/year)
container stock area	171,286	152,629	217,728 TEU /year 48,000 TEU / year	9,072 TEU (full) 2,000 TEU (empty)
container loading-unloading area no 1	23,950	23,950		
container loading-unloading area no 2	12,416	12,416		
trailer parking lot	3,365	3,365		
sum	211,017	192,360	265,728 TEU / year	11,072 TEU

Total open stocking net area: $23,580 + 192,360 = 215,940 \text{ m}^2$

Table A8.3.4 (3) Izmir Port (CLOSED STOCKING AREAS and the Storage capacities)

warehouse no	area (m ²)	stocking capacity (t)	holding capacity (ton)
transit warehouse no 1	3,549	56,784	4,732
transit warehouse no 2	3,718	59,488	4,957
transit warehouse no 3	3,211	51,376	4,281
bonded warehouse	12,000	192,000	16,000
flammable warehouse	600	9,600	800
internal trade warehouse	525	8,400	700
sum	23,603	377,648	31,470

note: Bonded house is built on $3,000 \text{ m}^2$ area and has 4 floor and $12,000 \text{ m}^2$ closed stockage area.

BANDIRMA PORT

Table A8.3.5 (1) Bandirma Port (Berth and VESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1	passenger berth	130	-8.25	3,240	1
2-3	mixed goods	284	-10	162	2
4-5	mixed goods	324	-10	162	2
6	mixed goods	130	-10	81	1
7	mixed goods	189.35	-12	79	1
8	mixed goods	190	-10	79	1
9	poured dry	203.77	-10	79	1
10	poured dry	100	-10	79	1
11	poured dry	190	-10	79	1
12	poured dry (Etibank)	182.22	-10	79	1
13	poured dry (Etibank)	79.88	-10	79	1
14	poured dry (Etibank)	180	-8.25	79	1
15	motor berth	140	-4		2
16	motor berth	130	-4		1
17	motor berth	120	-4		1
18	motor berth	215.04	-4		2
sum		2,788.26		4,277	20

note: Door location for vehicle ferrys are available on berth no 1.

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
passenger berth	130	-8.25	3,240	1
mixed goods	738	-10	405	5
poured dry	1,315.22	-8.25, -12	632	8
motor berth	605.04	-4		6
sum	2,788.26		4,277	20

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
15-16-17-18	-4	605.04		6
1-14	-8.25	310	3,319	2
2-3-4-5-6-8-9-10-11-12-13	-10	1683.87	879	11
7	-12	189.35	79	1
sum		2788.26	4,277	20

Source: TCDD

BANDIRMA PORT

Table A8.3.5 (2) Bandirma Port (OPEN STOCKING AREAS and the Storage Capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
1	5,880	5,320	127,680	10,640
2	38,900	30,365	728,760	60,730
3 (T)	5,600	5,150	123,600	10,300
4	8,360	7,460	179,040	14,920
5	11,080	8,840	212,160	17,680
6 (T)	10,332	8,760	210,240	17,520
7 (T)	6,000	6,000	144,000	12,000
8 (T)	3,440	3,290	78,960	6,580
9 (T)	2,660	2,660	63,840	5,320
sum	92,252	77,845	1,868,280	155,690

(T): earth area

Table A8.3.5 (3) Bandirma Port (CLOSED STOCKING AREAS and the Storage Capacities)

warehouse no	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
transit warehouse no 1	3,500	56,000	4,666
transit warehouse no 2	3,500	56,000	4,666
transit warehouse no 3	2,000	32,000	2,666
sum	9,000	144,000	11,998

OPEN REVISED STOCKING AREA

berth no	length of berth (m)	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
2-3	208	1,311	47,196	3,933

DERINCE PORT

Table A8.3.6 (1) Derince Port (Berth and VESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1	---	110	-4.5	---	
2	mixed goods	82	-7	81	1
3-4	mixed goods	440	-15	162	2
5	vehicle ferry (ro-ro)	140	-14	238	1
5	container	200	-14	300	1
6	mixed goods	220	-12	162	2
7	mixed goods	160	-10	81	1
8	mixed goods	120	-6	81	1
sum		1,472		1,105	9

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
mixed goods	1,132	-16, -15	567	7
container	200	-14	300	1
vehicle ferry (ro-ro)	140	-14	238	1
sum	1,472		1,105	9

note: berth 1 is not available for berthing.
35 m. of berth no 6 is used for vehicle ferry berthing.

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1	-4.5	110	---	---
8	-6	120	81	1
2	-7	82	81	1
7	-10	162	81	1
6	-12	220	162	2
5	-14	340	538	2
3-4	-15	440	162	2
sum		1132	567	7 (7 in the original, however the real sum is 9)

Source: TCDD

1,105

DERINCE PORT

Table A8.3.6 (2) Derince Port (OPEN STOCKING AREAS and the Storage Capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1	8,140	7,250	174,000	14,500
no 2	6,200	5,070	121,680	10,140
no 3	20,400	14,360	344,640	28,720
no 4	20,690	16,840	404,160	33,680
no 5	14,000	11,500	276,000	23,000
no 6	16,500	14,000	336,000	28,000
no 7	18,074	14,600	350,400	29,200
no 8	2,535	2,160	51,840	4,320
no 9	13,460	13,330	319,920	26,660
no 10	10,090	9,560	229,440	19,120
no 11	3,000	3,000	72,000	6,000
no 12	2,760	2,760	66,240	5,520
no 13	1,626	1,620	38,880	3,240
no 14	1,740	1,740	41,760	3,480
no 15	5,200	5,200	124,800	10,400
sum	144,415	122,990	2,951,760	245,980

note: Institution no 2 includes 4,500 ton/year capacity IMCO institution and carenage area.

Table A8.3.6 (3) Derince port (CLOSED STOCKING AREAS and the Storage Capacities)

warehouse no	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1	750	12,000	1,000
no 2	750	12,000	1,000
no 3	1,800	28,800	2,400
warehouse	3,600	57,600	4,800
warehouse	3,600	57,600	4,800
warehouse no 2 (port. ?)	2,000	32,000	2,666
sum	12,500	200,000	16,666

OPEN REVISED STOCKING AREA

berth no	length of berth (m)	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
6	220	2,455	88,380	7,365
7	160	1,600	57,600	4,800
sum		4,055	145,980	12,165

HAYDARPASA PORT

Table A8.3.7 (1) Haydarpasa Port (Berth andVESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
2	mixed goods	220	-6	243	3
3	poured dry (grain)	190	-10	79	1
4-5	mixed goods	334	-10	162	2
6	mixed goods	220	-10	162	2
7-8	mixed goods	246	-10	162	2
9	mixed goods	153	-8.2	81	1
10-11	container	350	-10	600	2
12	container	300	-12	600	2
13-14	mixed goods	295	-10	162	2
15	mixed goods	220	-8	162	2
16		96	-8		
17	vehicle ferry	141	-8	238	1

sum	2,765		2,651	20
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note: Berth no 16 is not convenient for berthing.

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
mixed goods	1,688	-6, -10	1,134	14
container	650	-12	1,200	4
poured dry (grain)	190	-10	79	1
vehicle ferry (ro-ro)	141	-8	238	1
sum	2,669		2,651	20

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
2	-6	220	243	3
9-15-17	-8	514	481	4
3-4-5-6-7-8-10-11-13-14	-10	1,635	1,327	11
12	-12	300	600	2
sum		2,669	2,651	20

Source: TCDD

HAYDARPASA PORT

Table A8.3.7 (2) Haydarpasa Port (OPEN STOCKING AREAS, Container Yard and the Storage Capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1	1,920	1,920	46,080	3,840
no 2	2,965	2,965	71,160	5,930
no 3	4,320	3,785	90,840	7,570
no 4	4,940	4,940	118,560	9,880
no 5	1,500	1,500	36,000	3,000
no 6	2,280	2,280	54,720	4,560
sum	17,925	17,390	417,360	34,780

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton/year)
(unloading container)	25,490	25,490		
area no 8 (container stock area)	84,680	70,000	144,000 TEU / year	6,000 TEU (4,077 full, 2,000 empty)
area no 9 (CFS load unload)	5,030	5,030		
area no 10 (container load)	8,840	8,840		
area no 11	55,000	55,000	67,200 TEU / year	2,800 (full)
sum	179,040	164,360	211,200 TEU / year	8,800 TEU

Container ground terminal	55,000	55,000	52,800 TEU / year	2,200 TEU
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Source: TCDD

Total open stocking net area (excluding container ground terminal): $17,390 + 164,360 = 181,750 \text{ m}^2$
including container ground terminal = $236,750 \text{ m}^2$

HAYDARPASA PORT

Table A8.3.7 (3) Haydarpasa Port (CLOSED STOCKING AREAS and the Storage Capacities)

warehouse no	area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
E1 warehouse	1,845	29,520	2,460
E2 warehouse	2,077	33,232	2,769
warehouse no 1	3,072	49,152	4,096
warehouse no 2	3,475	55,600	4,633
warehouse no 3	3,475	55,600	4,633
warehouse no 4	3,475	55,600	4,633
warehouse no 5	3,475	55,600	4,633
CFS	3,600	57,600	4,800
sum	24,494	362,384	30,197

Source: TCDD

(exact sum of clm. is 391,904)

exact sum of clm. is 32,657)

SAMSUN PORT

Table A8.3.8 (1) Samsun Port (Berth and VESSEL RECEIVING CAPACITY)

berth no	berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
1-2	poured solid	326	-10.5	158	2
3	mixed goods	150	-10.5	81	1
4-5	mixed goods	300	-10.5	162	2
6-7	mixed goods	400	-12	162	2
8	vehicle and train ferry				
9	mixed goods	400	-6.5	405	5
10	mixed goods	180	-6	162	2
sum		1,756		1,130	14

note: 155 m. part of the berth no 5 can also be used to berth passenger vessel.

berth group	length (m)	depth (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
mixed goods	1,430	-6, -12	972	12
poured dry	326	-10.5	158	2
vehicle and train ferry				
sum	1,756		1,130	14

berth no	depth (m)	length (m)	vessel receiving capacity (vessel / year)	berthing capacity at the same time (vessel)
9-10	-6, -6.5	580	567	7
1-2-3-4-5	-10.5	776	401	5
6-7	-12	400	162	2
sum		1756	1,130	14

Source: TCDD

SAMSUN PORT

Table A8.3.8 (2) Samsun Port (OPEN STOCKING AREAS and the storage Capacities)

area no	gross area (m ²)	net area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1 (concrete)	20,200	20,200	484,800	40,400
no 2 (earth)	41,520	38,560	925,440	77,120
no 3 (earth)	20,320	19,570	469,680	39,140
no 4 (concrete)	53,360	48,160	1,155,840	96,320
no 5	88,600	76,130	1,827,120	152,260
no 6 (concrete)	14,400	10,800	259,200	21,600
no 7	6,400	6,150	147,600	12,300
no 8	7,420	6,520	156,480	13,040
no 9	14,000	13,220	317,280	26,440
no 10 (concrete)	41,040	38,770	930,480	77,540
no 11 (earth)	80,240	78,450	1,882,800	156,900
sum	387,500	356,530	8,556,720	713,060

Table A8.3.8 (3) Samsun Port (CLOSED STOCKING AREAS and the Storage Capacities)

warehouse no	area (m ²)	net stocking area (m ²)	stocking capacity (ton/year)	holding capacity (ton)
no 1	3,500	3,348	53,568	4,464
no 2	3,500	3,249	51,984	4,332
no 3	3,500	3,249	51,984	4,332
no 4	3,500	2,173	34,768	2,897
sum	14,000	12,019	192,304	16,025

Table A8.3.9 Number of Cargo Handling Equipment on TCDD Operating Ports

Berth	Equipment	Capacity	Haydarpasa	Mersin	Iskenderun	Samsun	Derince	Bandırma	Izmir	Total
Container Berth	Gantry crane	40ton	4	3	0	0	0	0	5	12
	Transtainer	40ton	9	11	0	0	0	0	9	29
	Reach stacker	40 to 42ton	15	8	1	0	4	0	19	47
	Container forklift	40 to 42ton	1	0	0	2	1	1	3	8
		8 to 25ton	20	7	7	0	1	0	25	60
	Trailer	40ton	56	59	6	3	8	2	57	191
Chassis		15 to 20ton	10	14	8	6	10	8	5	61
		20/40'	32	38	4	2	5	2	36	119
Grain Berth	Pneumatic unloader	160t/h	0	2	0	0	0	0	0	2
		50t/h	0	5	1	0	0	4	0	10
Bulk Berth	Shore crane (Bucket)	5 to 10ton	0	1	8	7	0	6	0	22
General Cargo Berth	Shore crane (Hook)	25 to 35ton	1	2	1	1	2	1	0	8
		3 to 15ton	19	14	10	9	7	8	8	75
	Forklift	1.5-5ton	70	51	29	16	26	14	62	268
Mobil crane			18	12	16	11	9	8	12	86

Source: TCDD

Table A8.4.1 (1) Existing Relevant Capacity on Nationwide Ports/Port Facilities

No	Name of Port and Group Port	Respective Port/ Port Facility	Existing ,expansion and planned included capacity*									Remark		
			Total	Dry bulk			Liquid bulk							
				Container	General	Grain	Ore	Coal	Other dry bulk	Crude oil	Other liquid b.			
			(tons/year)	(TEUs/year	(tons/year)	(tons/year)	(tons/year)	(tons/year)	(tons/year)	(tons/year)	(tons/year)			
(Grand total)			562,576,421	8,310,631	78,353,630	81,117,222	27,920,505	49,288,811	14,810,792	22,860,612	126,518,125	161,706,725		
(Mediterranean)			184,627,258	1,868,646	20,112,943	14,115,300	9,120,915	21,496,731	470,769	10,147,000	61,582,500	47,581,100		
1	Iskendern TCDD		8,741,999	363,163	4,679,002	1,693,600	839,396	1,059,231	470,769	0	0	0	Including TMO Expansion(BOT)	
	Iskendern Port		4,741,999	63,163	679,002	1,693,600	839,396	1,059,231	470,769					
	** Iskenderun Port Container Terminal		4,000,000	300,000	4,000,000									
2	Iskenderun		55,917,000	0	0	5,206,400	0	20,437,500	0	1,642,500	0	28,630,600		
	(1 Karayollari Asphalt Pier		525,600									525,600		
	(2 Yazic Pier		0									-		
	(3 O Ekinici Port		5,568,900			3,746,400		1,822,500				-		
	(4 Petrol Ofisi Buoys		0									-		
	(5 Sariseki Phosphate Pier		27,922,500						1,642,500		26,280,000			
	(6 Isdemir Port		21,900,000			1,460,000		18,615,000			1,825,000			
	(7 Cekisan buoys		0									-		
	(8 Sasa Buoys		0									-		
3	Botas		82,800,783	0	0	1,000,000	150,283	0	0	7,300,000	58,582,500	15,768,000		
	(1 Botas Dortyol Peir		3,832,500								3,832,500			
	(2 Aygaz Buoy System		0										-	
	(3 Delta Petroleum Buoy Systems		0										-	
	(4 BP Gas Buoy Systems		0			1,000,000	150,283						-	
	(5 Milangaz Buoy Systems		0											-
	(6 Toros Fertilizer Factory Pier		23,068,000							7,300,000		15,768,000		
	(7 Botas Pier		54,750,000								54,750,000			
4	Mersin		32,077,876	1,380,460	14,089,941	4,304,700	7,683,235	0	0	0	3,000,000	3,000,000	Include.TMO,Container prod.	
	Mersin Port		10,174,227	203,376	2,186,292	2,304,700	5,683,235						10.75t/TEU 442,709	
	** Mersin Port Container Berth		1,903,649	177,084	1,903,649								Expansion	
	** Mersin Container Port		20,000,000	1,000,000	10,000,000	2,000,000	2,000,000				3,000,000	3,000,000	Planned	
5	Tasucu		1,314,000	0	0	182,500	0	0	0	949,000	0	182,500		
	(1 Tasucu Seka Port		511,000							511,000				
	(2 Tasucu Municipality Port		803,000			182,500				438,000		182,500		
6	Anamur	Anamur Municipality Pier	292,000	0	0	109,500	0	0	0	182,500	0	0		
7	Alanya	Alanya Pier	0	0	0	0	0	0	0	0	0	0		
8	Antalya	Antalya Port	3,337,600	125,023	1,344,000	1,545,600	448,000	0	0	0	0	0		
9	Finike	Finke Municipality Pier	146,000	0	0	73,000	0	0	0	73,000	0	0		
(Aegean)			142,374,082	2,046,029	19,644,387	16,750,619	4,523,159	4,052,916	410,000	219,000	14,883,750	81,890,250		
10	Fethiye		1,095,000	0	0	365,000	0	365,000	0	0	0	365,000		
	(1 Fethiye Municipality Pier		1,095,000			365,000		365,000				365,000		
	(2 Seka Pier		0											
11	Marmaris	Marmaris Municipality Berth	365,000	0	0	146,000	0	0	0	219,000	0	0		
12	Bodrum		150,283	0	0	150,283	0	0	0	0	0	0		
	(1 Bodrum Municipality Berth		150,283			150,283								
	(2 Kemer koy TEK Pier		0										-	

Table A8.4.1 (3) Existing Relevant Capacity on Nationwide Ports/Port Facilities

No	Name of Port and Group Port	Respective Port/ Port Facility	Existing ,expansion and planned included capacity*									Remark
			Total (tons/year)	Container (TEUs/year)	General (tons/year)	Dry bulk Grain (tons/year)	Ore (tons/year)	Coal (tons/year)	Other dry bulk (tons/year)	Liquid bulk Crude oil (tons/year)	Other liquid b. (tons/year)	
24	Gelibolu	** Gelibolu City Pier	3,000,000	0	0	1,800,000	1,200,000	0	0	0	0	Including Planned
25	Karabiga	Karabiga Port	260,000	0	0	260,000	0	0	0	0	0	
26	Bandirma		6,931,954	180,000	2,000,000	1,359,092	1,004,313	1,355,855	399,948	484,247	0	
		(1 Bandirma Port	4,530,454			1,322,592	1,004,313	1,355,855	399,948	447,747		Include. TMO/ Eti Bank Planned by JICA
		** Bandirma Port Container berth	2,000,000	180,000	2,000,000							
		(2 Begfas Pier	401,500			36,500				36,500		
27	Mudanya		2,007,500	0	0	182,500	0	304,167	60,833	0	0	1,460,000
		(1 Mudanya Bel-Sehir Pier	2,007,500			182,500		304,167	60,833			1,460,000
		(2 Petro Ofisi Pier	0									-
28	Gemlik		19,025,800	84,000	730,800	2,600,000	0	6,059,000	9,088,500	0	0	547,500
		(1 Gemlik Municipality Port	1,204,500			292,000		146,000	219,000			547,500
		(2 BP Pier	0									-
		(3 Gempport	15,600,750	84,000	730,800	87,450		5,913,000	8,869,500			-
		(4 Gemlik Fertilizer Factory Berth	0									-
		(5 Borusan Pier	0									-
		(6 M.K.S. Pier	2,220,550			2,220,550						-
		(7 Kursunlu Pier	0									-
		(8 Kucukkumla Pier	0									-
		(9 Buyukkumla Village Pier	0									-
29	Yalova		0	0	0	0	0	0	0	0	0	0
		(1 Elyaf	0									
		(2 Aksa	0									
30	Izmit		96,337,887	1,587,084	15,107,627	3,259,800	5,332,635	3,190,000	0	2,647,975	50,051,875	16,747,975
		(1 Colakoglu	2,190,000					2,190,000				
		(2 Kizilkaya	0									
		(3 Total	0									
		(4 Sedef	485,000	50,000	435,000	50,000						
		(5 Alemdar	3,000,000			386,400						2,613,600
		(6 Solventas	430,000									430,000
		(7 Aslan Cement	438,000							438,000		
		(8 Altinel	0									
		(9 Poliport	1,250,000									1,250,000
		(10 Nuh Cement	0									
		(11 Turcus	0									
		(12 Rota Cement	1,000,000							1,000,000		
		(13 Aygaz	365,000									365,000
		(14 Petline	0									
		(15 Trunsturk	164,250							164,250		
		(16 Melas	0									
		(17 Igsas	817,600							817,600		
		(18 Diler	1,000,000					1,000,000				
		** Belde	3,132,000	360,000	3,132,000							Planned

Source: Marumara report

Table A8.4.1 (4) Existing Relevant Capacity on Nationwide Ports/Port Facilities

[illegible]

Table A8.4.1 (5) Existing Relevant Capacity on Nationwide Ports/Port Facilities

No	Name of Port and Group Port	Respective Port/ Port Facility	Existing ,expansion and planned included capacity*									Remark
			Total (tons/year)	Container (TEUs/year)	General (tons/year)	Dry bulk Grain (tons/year)	Ore (tons/year)	Coal (tons/year)	Other dry bulk (tons/year)	Liquid bulk Crude oil (tons/year)	Other liquid b. (tons/year)	
40	Eregli	** Sakarya karasu Port	2,500,000		2,500,000							Expansion
			5,442,783	0	0	912,500	150,283	1,825,000	1,095,000	0	0	
		(1 Erdemir Port(Uzunkun)	3,467,500			182,500		1,825,000				
		(2 Erdemir Port(EKI)	1,975,283			730,000	150,283		1,095,000			
		(3 Barinak Berth	0									
		(4 Amac Shipping Berth/Pier	0									-
41	Zonguldak	Zonguldak Port	3,248,500	0	0	620,500	0	2,190,000	0	0	0	438,000
42	Bartın		26,747,502	800,000	5,200,000	7,889,577	225,142	3,075,142	2,075,142	0	0	8,282,500
		** Filyos Port	25,680,000	800,000	5,200,000	7,230,000	150,000	3,000,000	2,000,000			8,100,000
		Bartın Port	1,067,502			659,577	75,142	75,142				182,500
43	Amasura	Amasra Port	419,750	0	0	54,750	0	0	0	365,000	0	0
44	Cide	Kurucasile Port	0	0	0	0	0	0	0	0	0	0
45	Inebolu		2,612,500	0	0	577,500	0	1,870,000	0	165,000	0	0
		Inebolu Port	1,312,500			277,500		870,000		165,000		
		** Inebolu Port	1,300,000			300,000		1,000,000				
46	Ayancik	Ayancik Municipality Pier	146,000	0	0	0	0	0	0	73,000	0	73,000
47	Sinop		3,620,500	0	0	1,146,000	1,182,500	0	0	0	0	1,292,000
		Sinop Pier	620,500			146,000	182,500					292,000
		** Sinop Port	3,000,000			1,000,000	1,000,000					1,000,000
48	Gerze	Gerze Pier	146,000	0	0	73,000	0	0	0	0	0	73,000
49	Samsun		7,183,886	200,000	1,740,000	2,901,600	444,386	1,000,000	382,500	365,000	0	350,400
		(1 Samsun Port	2,728,486			901,600	444,386	1,000,000	382,500			
		** Samsun Port	3,740,000	200,000	1,740,000	2,000,000						
		(2 Samsun Nitrogen Pier	715,400							365,000		350,400
50	Unye	Unye Port	0	0	0	0	0	0	0	0	0	0
51	Fatsa	Fatsa Municipality Berth/ Pier	1,241,000	0	0	511,000	0	730,000	0	0	0	0
52	Ordu		3,865,200	0	0	1,193,200	0	1,672,000	0	0	0	1,000,000
		Ordu Pier	865,200			193,200		672,000				
		** Ordu Port	3,000,000			1,000,000		1,000,000				1,000,000
53	Giresun		2,079,162	23,922	257,162	1,486,000	230,400	48,000	57,600	0	0	0
		Giresun Port	979,162	23,922	257,162	386,000	230,400	48,000	57,600			
		** Giresun port General cargo Berth	1,100,000			1,100,000						
54	Vakfikebir	Vakfikebir Pier	146,000	0	0	73,000	0	0	0	73,000	0	0
55	Akcaabat	Akcaabat Pier	109,500	0	0	109,500	0	0	0	0	0	0
56	Trabzon	*** Trabzon Port	2,686,478	70,705	760,078	1,590,400	0	0	336,000	0	0	0
57	Rise	** Rize Port	1,394,400	62,512	672,000	386,400	0	252,000	84,000	0	0	0
58	Cayeli	Unye Cement Cayeli Port	1,200	0	0	0	0	0	0	1,200	0	0
59	Pazar		365,000	0	0	182,500	0	0	182,500	0	0	0
60	Hopa	Hopa Port	1,012,650	27,000	290,250	386,400	0	168,000	168,000	0	0	0

Note) * : It includes capacities of existing, on-going construction, resolved planned and study stage port facilities and cargo handling equipment procurement. ** : Capacities of Expansion and/or Planned terminal

*** Trabzon Port: If the port has enough inland storage area, the container capacity of the port will be equivalent to the productivity (180,763TEUs/year).

Source: Prepared by JICA Study team based on date of Marime Affairs, TCDD and 9th Transportation Council

Table A8.4.2 (1) BERTH EQUIPMENT CAPACITY FOR ONE SHIFT WORK (TONS/YEAR)

PORT NAME	MIXED GOOD			MOLDED GOOD	CONTAINER	TOTAL
	BERTH S.	MOBILE S.	TOTAL			
H.PASA	797,100	272,500	1,069,600	--	1,162,700	2,232,300
MERSIN	802,600	193,300	995,900	-	1,077,500	2,073,400
IZMIR	387,300	216,200	603,500	-	1,540,300	2,143,800
SAMSUN	645,500	72,100	717,600	108,300		825,900
DERINCE	617,400	103,700	721,100			721,100
BANDIRMA	561,300	96,700	658,000	336,800		994,800
ISKENDERUN	510,800	128,300	639,100	577,400		1,216,500

Total: 10,207,800

Table A8.4.2 (2) BERTH EQUIPMENT CAPACITY FOR TWO SHIFTS WORK (TONS/YEAR)

PORT NAME	MIXED GOOD			MOLDED GOOD	CONTAINER	TOTAL
	BERTH S.	MOBILE S.	TOTAL			
H.PASA	1,514,400	517,600	2,032,000		2,208,900	4,240,900
MERSIN	1,525,000	367,400	1,892,400		2,047,300	3,939,700
IZMIR	735,900	410,800	1,146,700		2,926,600	4,073,300
SAMSUN	1,226,500	136,900	1,363,400	205,700		1,569,100
DERINCE	1,173,000	197,000	1,370,000			1,370,000
BANDIRMA	1,066,500	183,700	1,250,200	639,900		1,890,100
ISKENDERUN	970,500	243,800	1,214,300	1,097,000		2,311,300

Total: 19,394,400

Table A8.4.2 (3) BERTH EQUIPMENT CAPACITY FOR THREE SHIFTS WORK (TONS/YEAR)

PORT NAME	MIXED GOOD			MOLDED GOOD	CONTAINER	TOTAL
	BERTH S.	MOBILE S.	TOTAL			
H.PASA	2,112,200	722,000	2,834,200		3,081,500	5,915,700
MERSIN	2,127,000	512,400	2,639,400		2,855,500	5,494,900
IZMIR	1,026,400	572,900	1,599,300		4,081,800	5,681,100
SAMSUN	1,710,600	191,000	1,901,600	286,900		2,188,500
DERINCE	1,636,100	274,800	1,910,900			1,910,900
BANDIRMA	1,487,400	256,200	1,743,600	892,500		2,636,100
ISKENDERUN	1,353,600	340,000	1,693,600	1,530,000		3,223,600

Source: TCDD

Total: 27,050,800

Table A8.4.3 (1) POTENTIAL BERTH EQUIPMENT CAPACITY FOR ONE SHIFT WORK
(TON/YEAR)

PORT NAME	MIXED GOOD	CONTAINER	MOLDED SOLID	ANNUAL CAPACITY
H.PASA	1,860,600	1,368,900	-	3,229,500
SAMSUN	936,900	-	684,400	1,621,300
DERINCE	1,126,500	421,200	-	1,547,700
BANDIRMA	813,500	-	1,830,800	2,644,300
MERSIN	1,598,300	2,540,200	-	4,138,500
ISKENDERUN	763,900	-	1,536,800	2,300,700
IZMIR	1,492,400	2,381,400	314,900	4,188,700
TOTAL	8,726,500	5,590,600	4,698,600	19,670,700

Table A8.4.3 (2) POTENTIAL BERTH EQUIPMENT CAPACITY FOR TWO SHIFTS WORK
(TON/YEAR)

PORT NAME	MIXED GOOD	CONTAINER	MOLDED SOLID	ANNUAL CAPACITY
H.PASA	3,535,100	2,600,900	-	6,136,000
SAMSUN	1,780,100	-	1,300,400	3,080,500
DERINCE	2,140,400	800,300	-	2,940,700
BANDIRMA	1,545,700	-	3,478,500	5,024,200
MERSIN	3,036,800	4,826,400	-	7,863,200
ISKENDERUN	1,451,400	-	2,920,000	4,371,400
IZMIR	2,835,600	4,524,700	598,300	7,958,600
TOTAL	16,580,400	10,622,200	8,927,400	37,374,600

Table A8.4.3 (3) POTENTIAL BERTH EQUIPMENT CAPACITY FOR THREE SHIFTS
WORK (TON/YEAR)

PORT NAME	MIXED GOOD	CONTAINER	MOLDED SOLID	ANNUAL CAPACITY
H.PASA	4,930,600	3,627,600	-	8,558,200
SAMSUN	2,482,800	-	1,813,700	4,296,500
DERINCE	2,985,200	1,116,200	-	4,101,400
BANDIRMA	2,155,800	-	4,851,600	7,007,400
MERSIN	4,235,500	6,731,500	-	10,967,000
ISKENDERUN	2,024,300	-	4,072,600	6,096,900
IZMIR	3,955,000	6,310,700	834,500	11,100,200
TOTAL	23,125,400	14,815,100	12,451,400	52,127,600

Source: TCDD

Not:In the calculation of the capacity, the berth lengths are considered.

Table 8.5.1 Rough Cost of Iskenderun Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	913,422	1,873,686,160
2 Concrete area	sq.m	885,000	13,615,390
3 Building			
a) Port administration directorate bul	sq.m	1,020	231,000
b) Conveyor system	sq.m		3,080,000
c) Machine maintenance building	sq.m	650	187,000
d) Workshop building	sq.m	1,500	431,000
e) Social association building	sq.m	741	947,000
f) Department building	sq.m	500	113,000
g) Warehouse	sq.m	21,500	6,178,000
h) Entrance control building	set	3	76,970
i) Scale	set	5	103,000
j) Transformer	set	5	359,000
k) Cleaning system			154,000
l) Marine life Establishment			2,053,000
4 Quay	m	1,427	21,967,000
5 Breakwater	m	1,400	17,241,000
6 Railway	m	25,000	3,079,000
7 Crane road			
a) 49'luk	m	3,550	3,623,080
8 Other systems (Surrouding, Infrastructure, Institution, Small building, Illumination etc.)			5,132,000
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			25,660,000
10 investment price			3,280,000
Total			1,981,196,600

Source: TCDD

Table 8.5.2 Rough Cost of Mersin Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	1,001,658	3,284,124,590
2 Concrete area	sq.m	865,000	13,471,312
3 Building			
a) Port administration directorate bul	sq.m	9,025	2,050,598
b) Passenger hall	sq.m	4,662	1,348,159
c) Machine maintenance building	sq.m	650	187,967
d) Workshop building	sq.m	1,850	534,984
e) Social association building	sq.m	13,500	278,852
f) Department building	sq.m	480	138,806
g) Garage building	sq.m	450	130,131
h) Warehouse	sq.m	31,851	9,210,683
i) Entrance control building	set	4	103,278
j) Scale	set	5	122,950
k) Transformer	set	7	344,262
l) Cleaning system			163,934
4 Quay	m	3,435	53,214,344
5 Breakwater	m	4,275	52,981,967
6 Railway	m	21,717	2,691,484
7 Crane road			
a) MRS 87	m	1,650	426,025
b) 49'luk	m	1,115	172,734
8 Other systems (Surrounding, Infrastructure, Institution, Small building, Illumination etc.)			7,745,900
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			2,459,000
10 investment price			2,196,720
Total			3,434,098,680

Source: TCDD

Table 8.5.3 Rough Cost of Izmir Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	901,500	5,547,692,308
2 Concrete area	sq.m	870,000	13,384,615
3 Building			
a) Port administration directorate bul	sq.m	6,161	1,272,600
b) Passenger hall	sq.m	5,000	1,445,900
c) Stoll+Machine maintenance building	sq.m	12600	6,643,672
d) Workshop + Depart. Building	sq.m	5,000	1,445,900
e) Social association+Central heat. building	sq.m	1,875	387,295
f) CFS building	sq.m	3,400	520,525
g) Container washing building	sq.m	750	216,885
h) Warehouse	sq.m	11,600	3,354,492
i) Entrance control building	set	3	77,460
j) Scale	set	2	41,311
k) Transformer	set	3	154,920
l) Cleaning system			258,197
4 Quay	m	2,959	45,840,245
5 Breakwater	m	350	4,337,705
6 Railway	m	8,500	1,053,443
7 Crane road			
a) MRS 87	m	1,900	490,575
b) 49'luk	m	2,100	325,328
8 Other systems (Surrounding, Infrastructure, Institution, Small building, Illumination etc.)			6,200,000
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			2,580,000
10 investment price			327,870
Total			5,638,051,246

Source: TCDD

Table 8.5.4 Rough Cost of Bandirma Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	184,240	379,000,000
2 Concrete area	sq.m	150,000	2,310,000
3 Building			
a) Port administration directorate bul	sq.m	3,000	680,000
b) Machine maintenance building	sq.m	600	200,000
c) Workshop building	sq.m	1,000	300,000
d) Social association building	sq.m	675	150,000
e) Warehouse	sq.m	7,000	2,015,000
f) Entrance control building	set	2	60,000
g) Scale+Building	set	2	45,000
h) Transformer	set	2	310,000
i) Cleaning system			155,000
4 Quay	m	2,788	45,000,000
5 Breakwater	m	1,300	16,000,000
6 Railway	m	8,750	1,100,000
7 Crane road			
a) 49'luk	m	5,200	800,000
8 Other systems (Surrounding, Infrastructure, Institution, Small building, Illumination etc.)			5,150,000
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			2,600,000
10 investment price			215,000
Total			456,090,000

Source: TCDD

Table 8.5.5 Rough Cost of Derince Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	315,000	981,147,541
2 Concrete area	sq.m	270,000	4,204,918
3 Building			
a) Port admini. Directorate+Workshop buld.	sq.m	5,570	1,369,672
b) Marine life place	sq.m		3,278,688
c) Machine maintenance building	sq.m	552	158,361
d) Social association building	sq.m	1,800	368,852
e) Department+Joiner building	sq.m	1050	258,197
f) Warehouse	sq.m	11,000	3,155,738
g) Entrance control building	set	2	22,950
h) Scale	set	3	73,770
i) Transformer	set	2	385,246
j) Cleaning system			163,934
4 Quay	m	1,400	21,803,279
5			
6 Railway	m	18,000	2,213,115
7 Crane road			
a) MRS 87	m	800	196,720
b) 49'luk	m	1,900	280,328
8 Other systems (Surrouding, Infrastructure, Institution, Small building, Illumination etc.)			3,278,688
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			2,459,016
10 investment price			3,491,803
Total			1,028,310,816

Source: TCDD

Table 8.5.6 Rough Cost of Haydarpasa Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	333,500	2,055,672,131
2 Concrete area	sq.m	292,400	4,501,043
3 Building			
a) Port administration directorate bul	sq.m	5,570	1,257,540
b) Central hearting building	sq.m	415	85,180
c) Machine maintenance building	sq.m	650	183,900
d) Social association building	sq.m	3,240	665,000
e) Department building	sq.m	480	137,935
f) Warehouse	sq.m	29,808	8,433,213
g) Entrance control building	set	3	76,967
h) Scale	set	4	82,098
i) Transformer	set	6	307,870
j) Cleaning system			155,738
4 Quay	m	2,925	45,553,280
5 Breakwater	m	2,500	30,737,700
6 Railway	m	7,000	4,200,000
7 Crane road			
a) MRS 87	m	1,400	359,180
b) 49'luk	m	4,450	685,016
8 Other systems (Surrounding, Infrastructure, Institution, Small building, Illumination etc.)			5,131,147
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			2,565,575
10 investment price			1,967,213
Total			2,162,757,726

Source: TCDD

Table 8.5.7 Rough Cost of Samsun Port Construction

Item	Unit	Quantity	Cost(US\$: 1997 Price)
1 Port land (Open + Closed area)	sq.m	620,000	1,271,794,872
2 Concrete area	sq.m	450,000	6,924,000
3 Building			
a) Port administration directorate bul	sq.m	1,965	71,000
b) Conveyer system	sq.m		330,000
c) Machine maintenance building	sq.m	800	37,000
d) Workshop building	sq.m	1,650	54,000
e) Social association building	sq.m	2,620	86,000
f) Marine life place	sq.m		164,000
g) Dizel generator terminal	sq.m		14,000
h) Warehouse	sq.m	14,000	643,000
i) Entrance control building	set	4	10,000
j) Scale	set	3	10,000
k) Transformer	set	6	50,000
l) Cleaning system			25,000
m) Admini. buld. of industrial quay	sq.m	825	30,000
4 Quay	m	1,750	4,305,000
5 Breakwater+Fortification	m	2,500	4,920,000
6 Railway	m	18,000	354,000
7 Crane road			
a) 49'luk	m	3,500	86,000
8 Other systems (Surrounding, Infrastructure, Institution, Small building, Illumination etc.)			492,000
9 Machine maintenance/Workshop/Administration Buld/Social Association: Equipment price			410,000
10 investment price			395,000
Total			1,291,204,872

Source: TCDD

Appendix 12.1.1 Privatization

1. Privatization Program

The privatization process began in Turkey almost 15 years ago in order to relieve the burdens of inefficient and over-manned state industries, as well as provide an important source of funds for the government. Although the task has not been easy, numerous state companies have now passed to private sectors. Privatization is one of the most essential policies for the development of the Turkish economy.

1.1 The Legal Framework

The principles, procedures, authorized agencies and other issues regarding privatization are set out in the privatization Law No: 4046 of 1994.

The essential elements of the Privatization Law are;

- * to expand the scope of assets to be privatized
- * to provide adequate framework/funds/mechanism to speed up privatization and restructuring
- * to establish a social safety net for workers who lose their jobs as result of privatization
- * to establish Privatization High Council and Privatization Administration to facilitate the decision making and process of privatization of related companies

In some specific fields, government bodies other than the PA are authorized. For example, the Ministry of Energy and Natural Resources carries out privatization in the power sector by implementing different models based on Law No.3096.

1.2 Bodies of Privatization

Privatization is administered by three bodies: Privatization High Council (PHC), Privatization Administration (PA) and Privatization Fund (PF).

Privatization High Council is the ultimate decision-making body for privatization in Turkey. The Council, under the chairmanship of the Prime Minister, is composed of five members; Deputy Prime Minister, 2 State Ministers, the Minister of Finance and the Minister of Industry and Trade.

PHC nominate organizations for privatization and is responsible for determining

methods and deadlines and decides to buy and sell shares and all commercial papers of state-owned enterprises in the privatization portfolio. In addition the Council approves privatization transactions, the budgets of the Privatization Fund and Privatization Administration, and evaluates privatization implementations and programs. PHC also decides to take state-owned enterprises out of the privatization portfolio if the need arises.

The Privatization Administration is the executive body for privatization. It has an exclusive budget and public legal entity character and reports directly to the Prime Minister.

PA's main duties are to execute the decisions of PHC, to advise the PHC in matters related to the transfer of SOEs into or out of privatization portfolio and for the need of restructuring and rehabilitation of SOEs, to direct SOEs to prepare for privatization.

Privatization Fund is managed by the PA. All privatization proceeds obtained from the sales of securities and other negotiable instruments, are allocated to the PF. Privatization Fund to be used for restructuring/rehabilitation and capital increase of state-owned enterprises, privatization expenses, social safety net and budget of PA. The Fund can not be used in the general budget.

Privatization receipts subject to specific acts of Parliament will enter directly into consolidated budget revenue. Other receipts will accrue to the Privatization Administration and will continue to be returned to the Treasury, after charges for restructuring, retaining, severance pay and administration costs are deducted.

1.3 Privatization Mechanisms

Companies in the privatization portfolio are privatized through the use of one or more of the methods mentioned below;

* Sales: Transfer of the ownership of goods and services units in the assets of companies in full or partially for consideration, or transfer of all or some of the shares of these companies through domestic or international public offerings, block sales to actual persons and/or legal entities, block sales including deferred public offerings, sales on the stock exchanged by standard or special orders, sales to securities investment funds and/or securities investment partnerships by taking into consideration the prevailing conditions of the companies.

- * Lease: Grant of the right of use of all or some of the assets of the companies for a period of time.
- * Grant of Operational Rights
- * Establishment of Property Rights other than Ownership
- * Profit Sharing Model and other Legal Dispositions Depending on the Nature of the Business.

Privatization tendering methods are set out by Law 4046 as follows:

- * Closed bidding
- * Bargaining
- * Public auction
- * Closed bidding amongst designated bidders

The Administration may decide to employ one or more of the tendering methods listed. The process is directed by Tendering Commissions consisting of at least five members of the PA.

1.4 Organizations under the scope of privatization

Organizations under the scope of privatization are as follows;

- State Economic Enterprises (SEEs), their enterprises, associated corporations, operations, operational units and assets, as well as the public shares in their participations, e.g. Etibank, Sumer Holding and Turban,
- Public shares and shares in commercial organizations that are not SEE's but which are more than 50% by the state owned,
- Public shares and shares that belong to the Treasury in participants of the State,
- Properties and the goods and services of organizations with national and supplement budgets and assets (dams, lagoons, highways, hospitals, ports and similar) of organizations with revolving capital.

1.5 Privatization of TDI ports and TCDD ports

Seven ports of TDI ports have been privatized from 1997 to 1998 and Anatolya port has been also privatized in 1998. Trabzon port is on schedule of privatization program.

Seaports of TCDD are planned to be taken into the privatization portfolio in the near future but are not part of the privatization program this year.

Privatization of TDI ports has been implemented by the transfer contract of the operation right, which was signed between the Prime Ministry Directorate of Privatization Division, Turkish Maritime Administration and a Private Operator Company with a contract period of 30 years.

Appendix 12.2.1 BOT Bidding Procedure

GOVERNMENT OF THE REPUBLIC OF TURKEY
MINISTRY OF TRANSPORT
GENERAL DIRECTORATE OF RAILWAYS, PORTS
AND AIRPORTS CONSTRUCTION
(DLH)

-IMPLEMENTATION OF CONTAINER TERMINAL OF DERINCE PORT WORK
-IMPLEMENTATION OF CONTAINER TERMINAL OF ISKENDERUN PORT WORK

Will be opened to bidding under the scope of the law of “Application of the model called as BUILD, OPERATE, TRANSFER for some investments and services” by Ministry of Transport. General Directorate of Railways, Ports and Airports Construction.

1-Tenders will be held by means of sealed tender.

2-For these works, Local Private Companies established in Turkey can give the proposals as themselves or with another Turkish Private Company or, with a Foreign Private Company as a joint venture, if they fulfill the requirements of 4105 numbered law (Item 2a).

3-Foreign Private Companies can give their proposals with another Turkish Private Company as joint venture, if they fulfill the requirements of item 2.

4-If the companies which give the proposals as themselves, have to bring their certificates approved by notary public which will prove that the companies finished any work of infrastructures like railways, port, airport, state ways, dam, water supply, sewage system subway system with at least 1,000,000,000,000.\$.(one trillion \$.) by 1997 unit prices for the public with the cost of at least 1,000,000,000,000.\$.(one trillion \$.)by 1996 unit prices in the years between 1993 and 1996.

If the companies give their proposals as joint venture, one of the partners has to finish at least one of the works mentioned at item 4 in the past.

5-The bidders must prove that they have no tax dept during the years 1991-1995 by furnishing the approval document of Ministry of Finance or tax offices.

6-The bidders must prove that they have no stoppage of V.A.T tax belongs to 1996 by furnishing the approval document of Ministry of Finance or tax offices.

7-The bidders must prove that they have no dept to Social Insurance Establishment.

8-The amount of bid security for every work is 50,000,000,000.\$.(50 billion \$).

9-The bid documents related to these works can be seen at General Directorate of Railways, Ports and Airports Construction, Ministry of Transport, D Block, Emek-Ankara since 28.05.1997 (Wednesday) These documents can be also obtained by formal application and paying 100,000,000.\$(100.million \$.)for every document to Directorate of Central Accounting Office in Ministry of Transport.

10-The last date for the bidding is given in “Instruction to the bidders”.

11-Applications by mail will not be taken into consideration.

Appendix 12.2.2 BOT Tender Document

DERINCE PORT CONTAINER TERMINAL LIST OF CONDITIONS OF THE BIDDING ABOUT CONSTRUCTION, OPERATION AND TRANSFER WORKS

ARTICLE 1 – PROPERTIES AND THE CONTENTS OF THE JOB

According to decree Higher Board Ministry, dated 11.3.1997 and numbered 97/T – 10, Ministry of Transport, The General Directorate for the Construction of Railways, Harbours and Airports, Ministry of Transport, here in after will be referred to as administration by DLH. The Derince port Container Terminal will be bided according to “Law 3996” and Decree 94/5907 of Cabinet. The title of the work is defined as; bringing the container loading capacity up to the total of 1 million TEU per year in two steps of 500,000 TEU per year, preparing the implementery projects of infrastructure and the superstructure, constructing, supplying the necessary equipment, caring and repairing, operating and transferring to administration free from all debts and in a well – cared form.

ARTICLE 2 – BIDDING TYPE AND PERIOD

Derince Port Container Terminal bidding which will occur according to Law 3996 and Decree 94/5907 of cabinet will be applied as a closed type of bidding. Minor conditions are defined by the administration. A meeting may be held before the bidding with the attendance of bidders, to give general information about Derince Port Container Terminal. The period for submitting the bids ends on 18.09.1997 at 12.30 p.m.

ARTICLE 3- THE PLACE, DATE AND TIME OF THE BIDDING

The bidding will take place in the meeting hall that is located in Ankara, DLH General Directorate of Ministry of Transport building on 18.09.1997 at 2 p.m.

ARTICLE 4 - CONDITIONS FOR BEING ELIGIBLE FOR BIDDING

4.1. Not only the Turkish incorporated companies may attempt the bidding on their own, but they may also attempt the bidding with other Turkish incorporated companies or they may bid together with foreign incorporated companies on the condition that they apply under article 2-a of Decree 4105 .

4.2. Foreign incorporated companies are eligible for bidding as long as they satisfy conditions defined in the article 4.1.

4.3. On the condition that the bidders aspire to work on their own; they have toget one of the (Rail way, port, Airport, Highway, Barrage, Drinkable water,Canalisation, Tube railway) works done with a minimum estimate cost of 1,000,000,000,000) I trillion over 1997’s unit price or they must have done production, investment or endorsement in one of the years 1993 – 1994 – 1995 1996 with a price of 1,000,000,000,000 (1 Trillion) over 1996’s unit price.The original or the notary – approved copies must be submitted to The administration. They will be companies attendencies while calculating the endorsement.

4.4 . On the condition that the bidders aspire for a joint venture with partners; the pilot

partner must have at least one of the conditions defined in article

4.5. The job the companies such as which one is constructor, project maker, operator or financier in the joint venture will be clearly defined in the joint Venture Manifestation and Company Establishment Enterprise with their share in the establishment stock.

4.6 .The bidders must prove their activity titled works with the documents taken from the related foundations and associations.

4.7. For the activities that will take place out of the country, the documents that are taken from the foundations and associations must be approved by Turkish Embassy and Head Consul.

4.8. The determination of 1997's prices will be based on Ministry of Public Work's coefficients.

4.9. The calculation of the foreign companies's endorsements, investment and production will be based on Central Bank's foreign currency rate of 02.01.1997.

4.10. The endorsement of the domestic companies must be approved by the financial consultants bounded by oath and the endorsement of the foreign companies must be approved by internationally accepted independent proven companies. Both the domestic and the foreign companies endorsements must be approved by Turkish Embassy and Consul. The following documents are necessary for being eligible for the bidding.

4.11.1. Announcing the central office address

Each of the partners, who attempt to establish a company for this job, must announce their administrative centre's address, phone and fax number and the names of the authorised staff.

4.11.2. Having an address in Turkey to ease the communication

The companies which oblige to attempt the bidding by establishing a company must have an address in Turkey for communication. The letters that are given by hand with signature or posted as registered letter receipt of which is returned to the sender and the faxes that are sent to this address and number will be accepted as delivered.

4.11.3. The document of Chamber of Commerce and Industry

Each of the firms who oblige to establish a company must take documents from The Chamber of Commerce and Industry or from a foundation which does the same duty in their country. These documents must be taken in the year of the bidding and must show that they are registered to the chamber and still valid. These documents will be included in their bids.

4.11.4. Each person that make up the joint venture whether real or official will be given signature circuits.

4.11.5. Power of Attorney

The persons who are authorized to bid or sign documents in the name of the company will be given notary approved signature circuits.

4.11.6. Company Establishing Enterprise

For being eligible the company whose bid title should include “The Project of Derince Port Container Terminal’s construction, Repairing, Operating and Transferring “must give a document that they will establish a company according to 3996 numbered law and 94/5907 numbered decree of Cabinet if and only if they do not change their partners and quotas in the period bidding. The firm’s that take place in the establishment of the company being project maker, operator or financier and their share in the funds will be clearly identified. In a situation that the technically sufficient partner changes its share in the fund without taking permission from the higher Board of planning, the administration is allowed to abolish the application.

4.11.7. Bank Reference Letters

The foreign and domestic firms which oblige to bid must give documented financial situation report with the bank reference letters that are taken from the banks which are accepted as valid by The Ministry of Finance

4.11.8. Manifestation of Joint Venture

The bidders who obligate to bid as a joint venture must give The Sharing Contracts which are signed by the partner and the joint venture manifestation which is suitable formed and approved by the notary. (This contract will be approved by the notary in the period of bidding)

4.11.9. Temporary assurance

The temporary assurance for this work is determined as 50,000,000,000 (fifty Billion) and it must be paid by the bidders while submitting their bids.

4.11.10. Temporary Assurance

The foreign firms must submit notary approved documents which show that they are allowed to work in Turkey according to 6224 numbered law of Encouragement of Foreign Capital and they will establish suitable companies.

4.11.11. Bidding Letter

The bidders must submit their Bidding letters which are prepared according to the sample that is included in this list of conditions.

4.11.12.

The bidder firms must submit documents that is taken from the Division of Taxes or from The Ministry of Finance, that shows they do not have tax debts in the last five years. (1991-1995)

ARTICLE 5-THE ONES THAT ARE NOT ELIGIBLE FOR BIDDING

Persons that are determined as the following are noteligible for bidding.

5.1. The ones whose job title is preparing the procedure about the work, conducting, conducting, concluding, approving or examining and those one’s husbands or wives and firms which their relatives till second generation are cooperated. The ones whom are prohibited for bidding permanently or temporarily as in the 2886 numbered Government Bidding Laws articles or other articles.

5.2. The ones whom have taken credits from public banks and had faced obstinacy in paying back.

5.3. On the condition that someone who is illegal gets the duty after bidding by, as soon as it is found out to be illegal the bidding will be broke down and temporary assurance will be cancelled, if there had made any contract it will be invalid.

ARTICLE 6-THE RATES AND THE CONDITIONS OF TEMPORARY AND DEFINITE COLLATERAL

6.1. Temporary assurance

The temporary assurance for this work is determined as 50,000,000,000 (fifty Billion) and must be paid by the bidders while submitting their bids.

6.1.1 The given temporary assurance will be valid unit the bidding's resulting and the implementation of decision. On the condition that the temporary assurance is given as the latter of guarantee, it has to be issued within the limit and for good. This subject will be defined in the letter of guarantee.

6.1.2 In a situation that bidder's bids are found insufficient and invalid their temporary assurance will be immediately paid back. After the technical evaluation, if the bidder's bids are found technically insufficient, insurance will be paid back after doing their transmission. The temporary assurance of the bidders whose bids are eligible will be given to bidders whom are out of the bidding after the approval of the authorized official.

6.1.3 The administration may cancel the acceptance of the bidding without the necessity of an extra procedure, on the condition that the bidders reject to make contract although they are invited or on the condition that they delay invitation writing about the signing and registering of the contract. In this situation the temporary assurance will be commandeered and situation will be reported to the Treasure.

6.1.4 The letters of guarantee must be addressed to The Ministry of Railways, Ports, Airports Construction.

6.1.5 The bids whose temporary assurances have not been submitted as it is defined above will be accepted invalid and be cancelled by the administration.

6.2 Definite Assurance

The calculation will be done by using following information and will be defined in the contract; for the first 100.000,000 \$ part of investment price in the contract % 1 . For the 100,000,000 – 500,000,000 \$ part of the investment price in the contract % 0.5 . For the 500,000,000 – 1,000,000,000 \$ part of the investment price in the contract % 0.3. For over 1,000,000,000 \$ part of the investment price in the contract % 0,01

6.2.2 The submitted definite collateral will be valid the whole contract period, including the duration of investment and operating.

6.2.3 On the condition that the definite collateral is paid as current Turkish Liras or stocks such as Government Conversion or Income Cooperation, this price will be recalculated every year based on USA \$ investment price will be paid to the administration from the date of 1st of January in the same year over Central. Bank's foreign currency rate.

6.2.4. The temporary assurance will be paid back to the bidder, after the submission of the bidder's definite assurance as it is mentioned above.

6.2.5. The definite collateral will be paid back to the bidders in a one month time following the submission of the documents which shows that the firm does not have any tax or premium debts to the Social Insurance Foundation or to related Tax Division.

6.2.6. Values that can be taken as collateral

- a) Current Turkish Liras,
- b) Time-free Letters of Guarantee taken from the banks which are determined by The Ministry of Finance.
- c) Government Conversions, Treasure Cheques that is accepted as an assurance in bidding, stocks which can be exchange to cash money immediately like written proof of transaction of income partnerships belonging to the government.

6.4. The submission place of the collateral

6.4.1. The assurances except letters of guarantee must be submitted to Ministry of Transport Central Counter Pay-office by the bidders, these assurances can not be accepted by Bidding Commissions in outer envelopes.

6.4.2. The temporary letters of guarantee which belongs to the winning bidder, will be given back to them after their submission of the definite letter of guarantee to The ministry of Transport Central Counter Pay-office.

6.4.3. Whatever happens the temporary or the definite assurances that are taken by the administration can not be sequestrated and can not be considered as a measure in case of necessity.

ARTICLE 7- WORK PLACE, THE TYPE AND THE CONDITIONS OF SUBMISSION AND DELIVERY

The work place is the area that is located in the city Kocaeli and is defined in the list of condition. The place reserved for the bidders whom will do the job will be given to them with a council report after the result of the bidding, signing the contracts and approval of the 1/000 scaled general plan.

ARTICLE 8-THE TITLE OF THE JOB, STARTING AND ENDING DATES AND THE SANCTIONS FOR THE DELAY OF THE WORK

8.1. The period for investment and operating of this job is determined as 49(forty-nine)

years including the force-majeur. The operating period starts with the acceptance of the administration and starting of the completed foundation's operation.

8.2. Bidders must submit their schedule that shows the dates of the start of the job, end of the job and its starting day of operating within their bids.

8.3. The winner bidders must submit their work schedule to the administration for approval within 15 days following the submission of the place. On the condition that the winner bidders can start their work and do their duty within the 45 days following the submission of place, the 27th article of the contract will be applied to them.

On the condition that the work is not finished by the time of it is operating date determined in the contract without any force-majeur, the delayed time will be cut off from its operating period and the money loss of hiring will be paid by the firm.

8.4. ON the condition that the work is finished and prepared ready to be operated before defined the date, the gained time by the firm will be added to the operation period unless it exceed the 49 years limit.

8.5. All kinds of loss of the government caused because of delay of the finishing of the work and the operation of the foundation will be paid by the firm that is work.

ARTICLE 9- EXPENSES ABOUT THE BIDDING

9.1. All expenses which come out while visiting and seeing the work place and its environment collecting the data, preparing of the bidding, submitting the bidding to the administration belong to the bidders. The administration will not any pays or indemnities about this work.

9.2. The procedures of approval of the general plan and taking construction permit will be done by the administration. The preparation and the payments will be done by the firm. The administration dose not have the right to claim in a situation that the work is not finished because of the firm's not being able to get the permits and authorizations.

9.3. All kinds of expenses due to the contract, decree stamps, the taxes, tuition fees and pictures expenses belong to the firm, except the exceptions that are determined with 94/5907 numbered Cabinet decree and 6224 numbered Foreign Stock Encouragement Law's articles.

ARTICLE 10- SEEING THE WORK PLACE< EXAMINING THE BIDDING DOCUMENTS

10.1. Before the submission of the bids, the bidder should see the work place, its environment and related places to get exact information about the physical conditions(including ground type, hydraulic conditions, climate), type and the properties of the work place, type and amount of labor, transporting conditions to the work place, construction sites and houses that can be necessary, deport areas and of the problems that can occur.

10.2.

10.3. The bidders will also submit their questions and further information requirements in at least 30 days of time before the submission of the bids, after they examine the project they are given by the administration, the technical list of conditions, the contract and the conditions of the contract.

The explanations will be given to the bidders written as it is defined in Article-27

10.3 on the condition that the bidders do not visit the work place and the other places that some part of the work takes place or they do not collect the necessary data, any of their requirements from the administration will not be accepted.

ARTICLE 11-EXPROPRIATION

As it is seen on the Status Plan that is located in the bidding document, some part of the land that the work will take place belongs to the Treasure, and also there Are some Private Occupants.

The private land which is included in the work place, will be expropriated as its worth will be paid by the bidder firm.

ARTICLE 12- USAGE FEE

12.1. The yearly usage fee of the land which is allocated to the bidder firm in the contract period, will be defined by the bidder firm and will be acknowledged in US \$ in the bid letter.

The bidder firm will pay this price totally as cash every year from the date that the institution starts to operate.

12.2. In the calculation of the usage fee, first year's usage price will be a base and each year from that there will be a definite rate of increase. The rate of increase will be calculated as the followings;

$$T=K_1 + \sum_{i=1}^{n-1} K_i(1+a) = [K_1 + K_1 \times (1+a)] + [K_2 \times (1+a)] + [K_2 \times (1+a)] + \dots + [K_{n-1} \times (1+a)]$$

K_1 =The usage price that is to be paid in the first operation year (US \$)

$K_2=K_1 \times (1+a)$ The usage price that is to be paid in the second operation year (US \$)

$K_n=K_{n-1} \times (1+a)$ The usage price that is to be paid in the n^{th} operation year (US \$)

a - The offered rate price that is to be paid during the operation period
(US \$)

n =The operating period

In case the increase rate of the yearly usage price becomes less than whole sale price increase rate that is determined by the State Institute of Statistics, the difference between the prices will be paid by the bidder firm to the administration.(In the calculation of the differences between the prices, Turkish Liras will be considered as a base.)

The bidder firm will not pay any expropriation price for the land that will be allocated for the investment about the work. However they will pay the price to the Treasure over US dollars that they manifested in their bid letter each year from the date that the institution starts to operate. The payments will be paid as the Central Bank's foreign currency rate that is valid on the payment day.

The yearly usage price will be prepaid totally at the beginning of each operating year in 10 days time, on the condition that the years be a fraction,

Then 1/12 of the yearly usage price will be multiplied with the fraction year to find that year's usage price.

Together with the usage price, usage rights over the land will be allocated to the bidder firm by the administration according to the 94/5907 numbered Cabinet decree. This usage rights that is allocated by the administration can not be transferred to third persons without the approval of the administration.

In case bidder firm does not pay the usage price on time, an increase rate will be added to the price as it is defined in the 6183 numbered Law and it will be paid to the Treasury by the bidder firm.

In the condition that the bidder firm delays the payment more than 90 days, the contract will be canceled by the administration. In this case the institution will start to be operated without a necessity of acknowledging.

In this case the bidder firm can not claim for any right or an indemnity from the administration.

ARTICLE 13-PRICE DEFINING METHODS

The price tariffs of Derince Port Container Terminal will be defined by the bidder firm according to the current regulations.

ARTICLE 14-INCOMES WHICH WILL BE ALLOCATED FOR THE PROJECT

The institution will be established according to 3996 numbered Law and 94/5907 numbered Cabinet decree.

All the incomes of the institution's employment that the bidder firm provides as in the law, belong to the bidder firm.

ARTICLE 15-DEPRECIATION

The operator firm must save the depreciation of the institution and the systems, and this depreciation will be used for investment, repairing and restoration works by the bidder firm.

ARTICLE 16- DOCUMENTS THAT WILL BE TAKEN FROM THE BIDDERS TO MAKE EVALUATION

16.1. DOCUMENTS THAT WILL BE TAKEN FOR TECHNICAL EVALUATION

Premier Project

Coordinated Status Plan; which shows the whole infrastructure and super structure productions, the sounding lead curves and all existing marks and constructions.

The section of the infrastructure institutions; Berth, fortifications, excavation etc.

If necessary the improvement methodology of ground.

Port Operating Plan; which shows the site usage of the establishing institution.

Electricity, Water. And Fire installations Project

Technical Information about the equipment; Berth winches site winches, care and repairing institutions, bilge of ships, fuel stations...etc.

The connection of the terminal with highway-railway project

Overhead Junction Project (The necessary connection road for the first and the second step and the junction arrangements)

2-Table of measurements in meters

(The financial details will not be included.)

Construction works

Installation

Administrative-Financial Evaluation Documents

Feasibility Study Report

The feasibility report which includes the incomes, expenses, table of the cash flow that contains the period of investment and operating of the establishing Terminal.

The old feasibility report that is done by the administration, the Environmental Impact Assessment's study report and the study report of Marmara Port prepared by JICA can be seen at the administration to give an option.

The schedule that shows the starting, ending and the operating date of the work

The bidders will advertise the time they request clearly for each work such as preparing the work schedule and the investment project, construction and the making the systems.

The first step construction duration which is defined as 500.000TEU per year in the first article of the list of conditions of bidding, will not exceed 3 years limit. Otherwise the bids will be rejected.

After the completion of the first step the institution can start operating, however as a criteria for evaluation, the period which is starting with the beginning of the first step and ending with the completion date of the whole investment, will be considered.

The following blanks will be filled by the bidder

Stock Composition on a condition of Joint Venture (The partners and their shares will defined.).....(%)

Total Investment Price.....(\$)

Self Stock Price which will be allocated to the investment.....(\$)

Foreign Stock Price(Foreign Credits)(If there is any).....

The name and the country of the institution which will give the credit.....

The type and amount of the credit and the currency type.....

Requested time for construction.....month/year

Requested time for operation.....month/year

(In the calculation of these values, the Central Bank's exchange rates will be considered as base.)

ARTICLE 17- Preparation and submission of the bid envelopes Preparation of bids.

The bids will be prepared depending on the principles in the list of conditions and the appendix.

The bidders can present improved preliminary project if necessary, without ignoring the area that is shown in the Status Plan which is arranged by the administration and is included in the bidding document.

The bidder firm is in charge of financing the investment price that they recommended for the work to be done.

At least 20% of the total investment price must be paid by the bidder firm form the Stock, and the increase rate which will be added to the this price will be clearly identified and documented with the decision of the authorized staff of the firm.

For the residue finance needs, all financial responsibilities that is put in order by the banks or credit associations, the conditions of guarantee and guarantor will be identified in the bid letter.

The bidder do not have the right to claim for changing the conditions or delaying the period of operation by the reason of the increase of the taxes and the validation of the new taxes which occur because of the delay of work period or the force-majeur.

The contract will be activated by the time it is signed and will last 49 years following submission of place and including the investment and operation period.

The pay-back period of the credits that the bidders allocate in the investment and operation periods can not exceed the operation period.

17.2. Preparation of the bidding envelope

The inner envelope

The inner envelope must include the following documents;

- 1- The documents wanted in Article 16.2/a
- 2- Filled copy of the table which included in 16.2/c
- 3- Priced estimated summary table

The bid letter which includes the recommended usage price

These documents will be prepared according to the sample in the appendix.

The bid letter will be signed by the bidder so that it will mean all the conditions are accepted. There will not be any remarks or changing on the letter. On the condition that the bidders give an objection or an alternative bid their bid will be invalid and if they do not apply the principles their bids will be rejected and be considered as never submitted.

17.3 Closing of the inner envelope

The documents which must be included in the inner envelope must be prepared, put into the envelope after each pages is signed by the bidders (by each partner in case a joint venture) after sticking official amount of stamps. The closed envelope must be sealed. On the envelope the name, surname, trade name and open address will be written under the expression "Proposal letter".

Outer Envelope

The outer letter will include the following contents and be set in the following order;

- 1- Inner Envelope
- 2- Temporary Letter of Guarantee or the paper that shows it is taken
- 3- For foreign firms; notary approved paper which proves that they are allowed to operate in Turkey by 6224 numbered Law ,Encourage of Foreign Currency, and they will establish a suitable company
- 4- Manifestation of Joint-Venture and Contract of Partnership
- 5- Self-Stock enterprising paper
- 6- The registry documents of The Chamber of Trade and Industry, The gazette of commercial registry
- 7- Power of attorney and signature circuits
- 8- Bank reference letters
- 9- Enterprising letter of establishing a company
- 10- The balance sheets of the each partner bidders which are submitted as shown in

Article 4.3.

- 11- The documents approved by the authorized people which show that the firm has done similar activities to the job
- 12- The list of the staff and the scheme of organization which shows the Jobs and Names of the staff.
- 13- The Technical Evaluation Documents which is included in Article 16.1.(The Project and The table of non-priced measurements in meters)
- 14- The summary work program
- 15- The document about seeing the place(this document will be taken by the Directorate of 4th division (Istanbul) of DLH)
- 16- The credit intention letters that are taken from the banks
- 17- The paper that shows that the price of the bidding document is paid
- 18- The whole of the bidding document that is given by the administration, all of the projects and reports
- 19- Appendixes(About corrections, changing and explanations)
- 20- The office and communication addresses of the firms
- 21- The document which shows that the firm does not have any tax debts in the last 5 years (1991-1995)

After the bidders sign each of the papers of the documents taken from the administration ,all the documents including the inner envelope will be put into the outer envelope and the envelope will be sealed after closing. On the envelope the following expression will be written;

“ATTENTION ! This is the bidding letter belonging to ‘The Construction, Caring, Operating and Transferring works of Derince Port Container Terminal’. The opening of this letter by people except the Authorized Committee of Bidding is illegal.

ARTICLE 18- SUBMISSION OF THE BIDS

18.1. The bidders will submit their bids, the list of conditions of the bidding and its appendixes(including the applicable contract)to the administration after signing these documents.

The bids will be submitted to the Directorate of Bidding Committee until the date and time which is defined in Article 2.After their submission they will take number ordered paper that shows the bids are taken.

Each bid will be taken after registering their date and sequence of submission. The bidders will take registered and dated document as they submit their bid.

In the adjustment of the time (hour) the TRT time will be a base. The administration can expand the time of giving proposal by advertising the change. In a case like this ,after the expansion, all the rights and responsibilities of the administration and the bidders which are limited with the premier date will be valid according to the new date.

The bids submitted to the Directorate of the Committee can not be taken back for any reason.

ARTICLE 19- OPENING AND EVALUATION OF THE BIDS

19.1.Opening of the bid letter

The bids will be opened by the Bidding Committee in front of the bidders or their official

representatives who are mentioned in the notary approved power of attorney. Received bids will be opened according to their sequence of submission.

After opening their outer envelope, in case the documents written in the list of conditions and the assurance are not eligible, then their inner envelope which holds their bids will not be opened. These bids will be given back to their or representatives without considering them at all. Their bids will not be included in the bidding.

The bidders who does not be ready on the time of the bidding or who does not send representative to be ready on the time of the bidding can not make any objection to the type and the result of the bidding.

The Bidding Committee has the right to permit correcting or completing the uncompleted parts unless it is related to the principles or accept the ones which are eligible to the conditions.

The inner envelopes of the bidders whose outer envelopes are found eligible after opening will be held without opening and the bidding will have a break. The inner envelopes will be held in a way which is approved by the Directorate of the Committee until the evaluation of technical bids ends.

Evaluation of the bids

The technical bids of the bidders whose bids are taken for evaluation will be examined by a sub-commission which will come together.

In case the Technical Commission finds necessary, they can call for any of the bid's owner for getting further information about the bid.

The evaluation of the bids will be made in the steps.

Technical Evaluation

The bids will be examined and graded by the sub-commission which is included in the first step, in a way that the technical evaluation criteria will be considered as a base.

The sub-commission has the full right for evaluation and grading of the bids.

The bids which have taken 70 points or over will be taken into the technical grade sequence which is starting with the highest grade. This document including the sequence will be submitted to the Ministry for approval.

The bids which have taken less than 70 points and are not included in the technical grade sequence will not be able to attend the rest of the bidding. The bidding document of those will be submitted back to them in 15 days without opening the inner envelope.

In technical evaluation the providing of the following conditions are recommended.

Functional features (35 points)

In the proposal project;

It should operate with its all functions with a loading-unloading container capacity of 1 million TEU per year (500.000 TEU per year in the first step, 500.000 TEU per year in the second step) as it is defined in the 1st article of list of conditions of giving proposal, (The calculations which show that it can work with 1 million loading-unloading capacity will be defined by considering stacking activities and the using equipment)

The ships should safely reach the berth, maneuver and be moored in an organized order.

It should include all the equipment and superstructure installation that a modern port operation require (open and closed sites, Board Units, Care and Repairmen Units, Loading-unloading equipment...etc.)

The sufficiency of the road connection and the overhead junction to be able to serve the capacity of the port.

Physical Features (35 points)

- Applicability of the chosen sea constructions(berth, excavation, arbitration ... etc.)construction type and the engineering design from the point of the area's ground, bathymetry ...etc, its physical features.

Modification methodology designed by considering the ground conditions.

Economical Consistency (10 points)

Evaluation of the proposal project in optimum scale.

Environmental Cautions (20 points)

Explanations about Initial Environmental Impact Evaluations for providing that the construction and the operation of the port will not pollute its environment.

Financial evaluation

Following the technical evaluation, the inner envelopes of the bidders whose technical proposals are found sufficient will be opened and their financial proposals will be taken into evaluation by Bidding Commission.

In the financial evaluation, according to the importance sequence; the usage price which is said to be paid during the operation period, the requested total investment period, the experience and financial sufficiency of the firm will be considered with the other documents in the inner envelope.

The technical proposals has 40% and the financial proposals has 60% of the grade and their grades will be calculated by Bidding Commission.

The highest graded bid will be accepted as the most suitable one.

In case there are more than one bid with the "highest grade", the one whose Financial Evaluation Grade is higher will be accepted as the most suitable one.

In case their Financial Evaluation Grade are equal, the bid that is taken in the draw of lots will be accepted as the most suitable one.

ARTICLE 20- THE PERIOD OF APPROVAL OR CANCELLATION OF THE WINNING BIDDER'S UNDERTAKINGS AS OF THE DATE OF THE WINNING

The decision of giving the duty to the bidder by the administration will be submitted to the Ministry of Transport in 7 days after the date of the decision, according to 3996 numbered law and 94/5907 numbered decree of the Cabinet. The Ministry of Transport whether approve the decision or cancel the decision.

After the approval of the decision by the Ministry of Transport, the administration and the bidder firm signs the application contract and its appendixes after taking the approval of Higher Board of Planning and the Council of States according to the decision of Constitution Court, in the frame of 94/5907 numbered decree of Cabinet.

ARTICLE 21- THE CONDITIONS OF INVALID BIDS,PROHIBITIONS ON MAKING CHANGE IN THE BIDS

The administration is not dependent on the 2886 numbered Government Bidding Law and

the other articles related to this. The bidding will be operated as in the 3996 numbered Law and related articles. In this case the administration is free on determining the suitable bid doing or canceling the bidding or doing the bidding to whom the wish. Because of the free choice of the administration, the bidders will not question the administration in any circumstances.

The administration can make investigations about the reliability of the bidders. After this investigation, in case the bidder is found unsuitable, their bid will be invalid by the administration. Whether these bidders have won the bidding, the bidding will be canceled and their temporary assurances, if the contract is signed then their definite assurance will be given back to them.

ARTICLE 22- GENERAL PRINCIPLES OF THE PROJECT AND THE BIDDING DOCUMENT

The general principles about the project is defined in the technical list of conditions that is located in appendix of the list of conditions. The bidders will prepare their initial and applicable project according to this list of conditions and the other data that is given by the administration.

The projects prepared by the bidders, will be included in the appendix of the application contract by they are approved by the administration.

Before the approval of the projects the administration has the right to make changes suitable for the job, without changing the basic principles about the investment and the job.

The followings are the documents which will be given to bidders by the administration and which will make up the appendix the contract;

- 1- Premier projects
- 2- The most basic information about the ground characteristics of the Port area
- 3- List of conditions of drilling
- 4- Special list of conditions
- 5- General technical list of conditions belonging to Port and Sea works
- 6- General list of conditions of Public Works
- 7- The list of conditions of giving proposal and appendixes
- 8- Application contract
- 9- Appendixes

ARTICLE 23- THE CONTROL OF THE WORK

The administration is responsible for controlling whether the work is being done appropriate to the bidden project and submitted work program and arranging the ones which are not appropriate to the project and systems.

The controls after the institution starts operating will be made by the related foundations which is mentioned current laws.

ARTICLE 24- RESPONSIBILITY

The bidder firm is responsible for making investment about the job, constructing, allocating the necessary equipment and the spare parts, financing, operating, maintenance works. The firm is also responsible for transferring the institution to the administration in a well-cared and usable form and free from all kind of debts, by the end of operating period, appropriate to 3996 numbered Law and 94/5907 numbered Decree of the Cabinet.

ARTICLE 25- FORCE-MAJEURE

In order to be accepted as a force-majeure of an event it must be unavoidable, inevitable

or impossible to be solved by the impacted firm although they have worked efficiently, carefully and have taken all the measures.

Any kind of this events which cause the delay of work or increase in the price or impact the work negatively ,then these events will be accepted as force-majeur

The events which will be accepted as force-majeurs are as the followings, however they are not limited as the followings. The force-majeures must be documented by the related national or international institutions.

- 1- General or local mobilization advertisement
- 2- Strike
- 3- The results of sabotage, nuclear explosion or leakage
- 4- Fire, flood, earthquake or other natural disasters and epidemic diseases
- 5- Extraordinary situation because of the hard economic conditions
- 6- The transport and technical accidents which can impact the investment and terminal operation

On the condition that any of these force-majeure occurs during the period of the work, the impacted bidder firm will must inform the other side about its starting date,feature,its period and the estimated period in which is approved by the national or international institutions,in 10 days of time after the force-majeure occurs. In 30 days of time after the force-majeure ends the impacted bidder firm must inform the other side about its starting and ending date, its features, the harm it caused and the increase and the delay in the prime cost by showing proofs about them.

On the condition that one of the force-majeures which is mentioned to occur in the investment period, occurs in the operating period, in case the investment goes down and the institution becomes unable to be operated, the operating period and the payment of the usage price can be stopped and another investment period can be given to the firm in order to finish the construction and take the institution to operation. The bidder firm will finish the construction and start to operate the institution in the new period, all the prime cost and the financial will be paid by the firm itself.

The force-majeure and its results will be discussed by the bidder firm and the administration and the impact of the delay in the investment and operating program and the increase in prime costs and the harm caused by these will be determined .A report which covers all these will be submitted to the administration for approval. After the approval the work schedule or operation program, the increase in the prime costs, investment prices and the investment and operation period will be rearranged.

In the situation that the institution becomes destroyed or is partially or completely transferred because of the force-majeure and is given an insurance price for all these factors, the insurance price will be used for its reconstruction and taking to operation. The use of the insurance price will be controlled by the administration.

ARTICLE 26- THE LANGUAGE OF THE BIDDING

The bidding will be submitted in Turkish. The technical documents which are in the proposal appendix will be submitted in Turkish or Turkish and English, however the Turkish writing will be valid. All of the written contracts will be in Turkish.

ARTICLE 27- MODIFICATIONS, CHANGES AND EXPLANATIONS (APPENDIXES)

The administration is authorized to make modifications, changes and explanations about the list of conditions and its appendixes. The modifications, changes or explanations will be made by the administration to the bidder firm which has bought the bidder document until the last 20 days until the bidding date. (Changes in the bidding place or the postpone in the date and hour of the bidding will be advertised to the bidders.)

The appendixes will be send by the administration to the bidders who have bought the bidder document. The bidders must deliver and examine the appendixes before they give their proposal and they have to prepare and give their proposal by considering the new appendixes. Except the ones who are officially advertised by the administration, none of the administration staff is authorized to make corrections, changes or explanation about the bidding documents. The administration is not responsible for any kind of event like this.

The bidders who have bought the bidding document can submit questions to the administration before 30 days until the bidding date, about the doing of the work, the unclear, incomplete and the mistaken parts of the documents and the parts which they request to be explained.

ARTICLE 28- ACCORDANCE WITH THE LAWS AND REGULARITIES

The bidder must be in accordance with all the in forced Laws, Decrees which are set by The Republic of Turkey and must be informed about all the articles about them, The bidder firm must also apply all the decrees of the judgment authorities.

ARTICLE 29- APPLICABLE LAW AND SETTLEMENTS OF DISPUTES

The legal disputes which can occur during the application of the application contract and its appendixes or the contracts which are signed between the bidder firm and other public foundations and institutions will be solved in the Turkish Republic Courts, according to the Laws and Decrees of Turkish Republic.

In the settlements of the disputes the sides will accept the authority of Ankara Court and the Division of Executive.

SAMPLE

SAMPLE OF THE PROPOSAL LETTER

I have read and accepted list of conditions of giving proposal, application contract, the technical list of conditions, the contents of the bidding documents and all the other documents related to the Derince Port Container Terminal's construction, operation, caring, repairing and transferring works which will be bided on .../.../19... and preparing these projects, and allocating necessary equipment.

I have made a detailed investigation about the work place and the conditions of the area. I manifest that I will do this job in accordance with 3996 numbered Law and 94/5907 numbered Decree of the Cabinet and the list of conditions for giving proposal, all the technical and special lists of conditions and international standards. I will pay the following amount to the Treasure as the land usage price every year starting from the operation date and I pledge that I will transfer the institution in a well-cared, usable form free from all kinds of debts.

$$T = K_1 + \sum_{i=1}^{N-1} K_i(1+a) = K_1 + [K_1 \times (1+a)] + [K_2 \times (1+a) + \dots + [K_{N-1} \times (1+a)]]$$

K_1 = The usage price that is to be paid in the first operation year (US \$)

$K_2 = K_1 \times (1+a)$ The usage price that is to be paid in the second operation year (US \$)

$K_n = K_{n-1} \times (1+a)$ The usage price that is to be paid in the n^{th} operation year (US \$)

K_i = The usage price for years (US \$)

a - The offered rate of increase in the rents

T = The total usage price that is to be paid during the operation period (US \$)

n = The operation period

Operation years

Usage prices (US \$)

1st year

K_1

2nd year

K_2

3rd year

K_3

n^{th} year

K_n

TOTAL

NOTE: In case the increase rate of the yearly usage price becomes less than whole sale price increase rate that is determined by the State Institute of Statistics, the difference between the prices will be paid by the bidder firm to the administration. (In the calculation of the differences between the prices, Turkish Liras will be considered as a base.)

NAME :

SIGNATURE

PLACE OF RESIDENCE :

STAMP

SAMPLE

WRITTEN CONTRACT FOR ESTABLISHMENT OF A COMPANY

.....and.....Will establish an incorporated company in the aim of doing Derince Port Container Terminal's construction, operation and transferring works after signing the application contracts and its appendixes and they will transfer all the rights and duties came out after signing the contract and its appendixes to this company.

The established company will be responsible for all the rights and duties which is given by the contract and its appendixes with is signed by.....and.....

The bidder has accepted and manifested to do the job in accordance with the contract and its appendixes by signing this contract.

SAMPLE

JOINT VENTURE MANIFEST

We have made up a special partnership in order to do and finish the job of Derince Port Container Terminal's construction and operation works in case we win the bidding and be responsible for doing the job which is bided by the Ministry of Transport General Directorate of Construction of Railways, Ports and Airports according to 3996 numbered Law and 94/5907 numbered Decree of Cabinet. On the condition that we win the bidding the sharing contract will be submitted to the administration after it is approved by the notary and passed through all kinds of procedures and the partnership becomes official. The sharing contract will be submitted to the administration before signing the contract with the administration.

The pilot firm of the joint venture will be referred as until the end of the work.

On the condition that we win the bidding with the given common proposal we manifest and accept that the contract will be signed by each of the partners, and the pilot firm which we will announce is authorized to act in the name of our partnership however each of the partners are in charge of doing their dutx which is determined by the partners. We manifest that we will not destroy our partnership until the work is completed otherwise the contract will be canceled. The joint venture firms will be responsible for all the official communications that the
...firm done. In case the partnership becomes destroyed because of reason that any of the partners except the pilot partner go bankrupt, die or be arrested the pilot and the other firms will take all the responsibilities and the duties and finish the job. In case the job is transferred to another bidder firm according to the articles of the contracts about the job we accept our responsibilities and duties are valid until the end of our contract.

FIRM NAME : OFFICIAL PLACE OF
RESIDENT :

.....
.....
.....
.....
.....
.....

PILOT PARTNER SPECIAL PARTNER SPECIAL
PARTNER
(SIGNATURE) (SIGNATURE)
(SIGNATURE)
(NOTARY APPROVAL)

Appendix 12.2. 3 BOT Construction Procedure

THE PROCEDURE WHICH IS TO BE FOLLOWED BY THE INVESTORS IN COASTAL STRUCTURES

The Following procedure has been agreed upon as a result of a series of meetings which had been held in the Ministry of Transportation, General Directorate of DLH starting from 5 July 1995 with the participation of the representatives from the Ministry of Public Works and Settlement (General Directorate of Technical Research and Implementation), Ministry of Tourism (General Directorate of Investments), Ministry of Finance (General Directorate of National Estates), Ministry of Transport (DLH General Directorate), Undersecretariat of Maritime (General Directorate of Maritime, General Directorate of Ship Building and Ship Building Plants), Ministry of Environment (General Directorate of Environmental Impact Assessment and Planning) in order for the works which are to be carried out by our organizations on the buildings which are to be constructed by the investors on the coast line (seaward side of the coast line).

A. DESCRIPTIONS

- 1. Investor:** All Private Institutions, Organizations and Persons who construct the structurea which are mentioned in this minute or who have them constructed on the coasts
- 2. Building:** The infrastructure and facilities which are used for the benefit of the public and for the preservation of the coasts namely berth, port, shelter mooring facility, pier, breakwater, bridge, hole, retaining wall, lighthouse, boat building plant, salt mine, crawl, discharge and pumping stations, and the facilities that are compulsorily to be constructed on the coasts such as ship building plant, ship disassembling plant and water products production and growing facilities; miscellaneous infrastructure which are used for land, sea and air transport; and fair, picnic, and entertainment sites which include restaurant, tea house, exhibition units and administrative buildings 3% of whose height is lower than 5.50 meters, which can be constructed by using collapsible material; and parks, playgrounds, open sports areas are described as building.
- 3. Landfill:** Any kind of permanent structure which is considered within the coverage of the description of “building” which is given in Article A-2 and which occupies space on the seaward side of the coast line (on the coast or on the sea).
- 4. Settlement Plan:** It is the 1/1000 scale implementation settlement plan which is approved by the authority which is introduced by the Coastal Law.
- 5. Ministry:** Ministry of Public Works and Settlement (General Directorate of Technical Research and Implementation)
- 6. DLH:** Ministry of Transport, General Directorate for the Construction of Railways, Harbours and Airports
- 7. DUGM:** Undersecretariat of Maritime, General Directorate of Maritime Transport
- 8. TGM:** Undersecretariat of Maritime, General Directorate of Ship Building and Ship Building Plants
- 9. TBYGM:** Tourism Ministry, General Directorate of Investments
- 10. MEGM:** Ministry of Finance, General Directorate of National Estate
- 11. CEDPGM:** Ministry of Environment, General Directorate of Environmental Impact Assessment and Planning

12. EIA Report: Environmental Impact Assessment Report

B-LEGAL BASE:

Coastal Law numbered 3830/3621 (which came into force being issued in the official gazette dated 17 April 1990 and numbered 20495, and dated 11 July 1992 and numbered 21281)

- The Regulation on the implementation of The coastal Law and the additions and amendments to the regulation
- Settlement Law numbered 3194
- Port Law numbered 618
- The Law numbered 3348 on The Organization and Duties of The Ministry of Transportation
- Environmental Law numbered 2872 and the amendments to it
- The Law numbered 2634 on the encouragement of tourism
- Water Products Law numbered 1380
- The Establishment Law of Special Environmental Protection Organization numbered 383
- EIA regulation (which came into force being issued in the official gazette dated 7.2.1993 and numbered 21489)

C-THE PROCEDURE WHICH IS TO BE FOLLOWED BY THE INVESTOR

1. The investor is to provide the associated governorate (Directorate of Public Works and Settlement) with the 1/500, 1/1000 or 1/5000 scale Bid Status Plan (including the key plan) which gives a general display of the structure in term of its proportions and features, and with the report which includes the necessary explanations about the structure to be constructed and the local information. Following the submission of the report and the plan (in the number of copies which is required by the governorate) the investor is to make his initial application.
2. The Governorate examines the application for the landfill and forwards it to the Ministry including the review of the governorate after preparing the other information and documents which includes the following items:
 - a- Displaying the ownership, building and cadastral status of the existing areas or parcels which have previously been allocated or owned on the seaward side or landward side of the coast line in the area which is associated with the landfill (if any) and displaying the coast line on the existing 1/1000 scale approved maps.
 - b- Consideration of the settlement plans in force, if any
 - c- The coordinated sketch which is derived from the environmental order settlement plan
 - d- Preparation of the sketch which determines the service area of the proposed landfill area (which structure, which region or settlement unit)
3. The Ministry examines the bid in terms of the general and regional planning principles, and general settlement plan decisions. In case the bid is deemed appropriate;
 - a- The ministry ask the opinion of Undersecretariat of Maritime (DUGM or TGM), Ministry of Transport (DLH General Directorate) and Ministry of Environment

- (CEDPGM) regarding the bid, and the ministry may also ask the views including some information and documents from the other related organizations.
- b- The view of the Ministry of Environment is to include “the document for EIA positive-negative or Environmental Impacts are minor! for the activities which are included within the coverage of IEA regulation.
4.
 - a- The ministry examines the bid in taking the views from the organizations into consideration, in case the ministry deems the bid appropriate, it instructs the associated governorate to prepare the proposed settlement plan.
 - b- The ministry completes the process of approval of the bid in accordance with the article 7 of the coastal law numbered 3621 which has been amended with the law numbered 3830.
 5. The settlement plans which have been improved by the ministry in accordance with the coastal law numbered 3621 which has been amended with the law numbered 3830.
 - Associated Governorate
 - Associated Municipality (if any)
 - Undersecretariat of maritime (DUGM or TGM)(2 copies)
 - Ministry of Transport (DLH)(2 copies)
 - Ministry of Tourism (YGM)(1 copy)
 - Ministry of Environment (CEDPGM)(1 copy)
 - Ministry of Finance (MEYGM)(1 copy)
 - Ministry of Tourism (TBYGM)(1 copy)
 - Associated organizations
 6. The condition of approval for settlement plan or changes in the plan on the scale of the general plan in accordance with the article 7 of the coastal law for the implementation settlement plans which are to be approved in accordance with the above article (Article C-4).
 7. If the investment that is to be made is within the tourism area or tourism center and if it is aiming at tourism activities, the process which mentioned in the articles C-1,2,3,4,5 is completely followed on the scale of the general settlement plan. The process which are mentioned in articles C-1,2,3,4,5 is entirely applied the 1/1000 scale implementation settlement plan. However, these plans are approved by The Ministry of Tourism in stead of The Ministry which was mentioned in Article C-5.
 8. If the investment which is to be realized is within the Special Environmental Protection Area, the qualities of the coastal structures which are mentioned in the 1/25000 scale Environmental Settlement Plans for Special Environmental Protection Areas which became effective upon the approval of The Institution for Special Environmental Protection and the places suitable for construction should be taken into consideration and the environmental settlement plan articles must be applied.
 9. The investor is to apply to DLH (at least 5 copies through the related division directorates) with the following documents which are related to the “Landfill Settlement Plan approved by the

ministry” and also related to the coastal structure which the investor is to prepare in accordance with this settlement plan:

- Implementation projects (plan, cross section, and details included)
- All kinds of calculation (static, reinforced concrete and stability calculations including technical base)
- Geotechnical report
- Model experiment report if necessary (unsteadiness, granulating and stability etc.)

10. If incentive is to be granted, the investor should apply to the Undersecretariat of Treasury with the following documents:

- Approved settlement plan
- Implementation projects approved by DLH
- Tourism investment certificate for tourism investments

11. The investor should apply to the Ministry of Finance General directorate of MEGM with the following documents in order to obtain the permission which will constitute a base for the construction permit related with the investment (as it is quoted in the Article 15 of the regulation).

- Approved landfill settlement plan
- Implementation projects approved by DLH
- The investment certificate which is to be obtained from The Ministry of Tourism for the tourism purposed structures which are located in the tourism areas and centers

12. The investor is to obtain a construction permit from the associated administration (municipality or governorate) by showing the permit which is to be issued by General Directorate of National Estates (MEGM). The procedure for obtaining construction permit will be carried out in accordance with the related articles of the Settlement Law numbered 3194.

13. The structure is to be built under the supervision of DLH within the bounds of possibility in full responsibility of the investor.

14. For the investments related with marinas and slipways which require investment certificate from The Ministry of Tourism, the procedure for granting investment certificate by Tourism Ministry is carried out in accordance with the The Law for encouragement of Tourism numbered 2634 and The Regulation on The Marina Tourism.

15. Upon the completion of the construction, the investor applies to the Undersecretariat of Maritime and gets a permit for “availability for operation” and sends a copy of this permit to the Ministry of Finance General Directorate of National Estates (MEGM)

16. The investor is to apply to the related administration together with the permit for “availability for operation”

17. For the structures for which a tourism investment certificate has been obtained, the investor is

to apply the 'Ministry of Tourism with the documents which were mentioned in the above articles (Article C-12, C-16, and 17) and to obtain Tourism Operation Certificate

18. The administration which granted Construction Permit, Operation Permit and Tourism Operation Permit which are the documents included in Articles C-12, C-16 and 17 is to provide The Ministry of Environment and the other related organizations with a copy of the official correspondence proving that the documents have been granted to the investor.

Appendix 12.2.4 BOT Contract Agreement

DERINCE PORT CONTAINER TERMINAL DRAFT AGREEMENT

DERINCE PORT CONTAINER TERMINAL DRAFT AGREEMENT OF PRIVILEGES

The General Directorate of Railroad, Port, and Airfield Construction of the Ministry of Transportation, and (.....) have agreed upon the construction, management, and turnover of the Port of Derince under the following conditions:

Parties

Article 1: The parties to this agreement are the General Directorate of Railroad, Port and Airfield Construction of the Ministry of Transportation, and (.....).

The Scope of the Agreement:

Article 2: It comprises the completion of the project, construction, and the production and management of all technical equipment as well as their turnover at the end of the period of the agreement, of the Port of Derince Container Terminal and its complementary parts, which are to be constructed in the area specified in the addendum appended to the agreement.

The Formation of a New Company:

Article 3: In order to carry out the businesses which from the scope of the agreement, a new company will be formed within three months of signing the agreement, the main charter of which will be approved by the administration.

Upon the registration and promulgation of the company to be formed, all rights and obligations undertaken by the Original Company will be deemed to be transferred to the new company.

Definitions:

Article 4: The following words in the text of the present agreement refer to the successive definitions:

Administration: The General Directorate of Railroad, Port, and Airfield Construction
Original Company. (.....)

Agreement: The Agreement of Privileges on the Container Terminal of the Port of Derince, signed between the Administration, superstructure, and equipment to be realized within the scope of this agreement, the main lines of which have been outlined in the special addendum to the agreement.

First Stage: The first part of the terminal. comprising 500.000 TEU/year

Second Stage: The part remaining over from the First Stage, comprising another 500.000 TEU/year

The Duration of the Agreement:

Article 5: The duration of the agreement includes the additional demands of the administration and extensions of time period, including those caused by a force majeure, and is a

total of 49 (forty-nine) years, with (...) years and (...) months allocated for investment, and (...) years and (...) months allocated for management.

a) the period allocated for investment starts when the ground allocation record has been signed by the parties,

b) the period allocated for management starts when the acceptance record has been signed at the end of the investment period, and approved by the administration.

But, in case the administration deems it fit, permission for partial management might be granted

The duration of the agreement can in no way be prolonged, except for the aberrant conditions outlined in the present agreement and its addenda.

The Cost of Investment:

Article 6: The original company will realize the aforementioned facility in such a way that it will be ready to operate once it is handed over. The facility will be realized within the period of investment and with a fixed price of (.....) US dollars (including contract and finance expenditures, and period of investment repays of interest).

Finance:

Article 7: a) the Original Company will cover at least 20 percent of the total cost of investment from its own resources.

b) Any possible increases in the total amount of investment will be covered by the Original Company, and in this case too, the ratio mentioned in the clause above will apply.

c) In case foreign sources are utilized during the period of investment or management, the conditions of receiving credit will be submitted to the approval of the administration, accompanied by official documents.

d) The capital and interest repayment terms will not exceed the duration of the agreement, for the part of the investment cost covered by foreign resources.

e) In the last three months of the period of investment, the management capital necessary during the period of management will be particularized in terms of US dollars by reaching a compromise with the administration, and the Original Company will have provided for this amount by its own resources, before the acceptance.

f) Any price increase in the cost of investment will be financed by the Original Company.

Increases in Costs:

Article 8: The costs have been specified in prices for the year 1997, and are the prices which are accepted for the facility being ready to use. No escalation will take place during the investment, and except for the cost increases resulting from the force majeure outlined in Article 26 and the additional demands of the administration, all cost increases will be covered by the Original Company.

The cost increases because of the additional demands of the administration can in no way exceed %5. The cost increases stemming from the additional demands of the administration will be determined by way of comparing the investment costs with the management period, and this will be reflected in the period of the contract.

In determining the land usage price to be paid by the Original Company for the additional period granted, the last accrued rent price will be multiplied by the fixed increase rate for rent, and this will be taken to be the price of usage.

Up to 30% of the increase in the cost of investment, which may result from an alteration of the place or the necessity to move the subterranean or supra-terranean facilities of other public institutions and organizations, will be determined by comparing the cost of investment with the period of management, and will be reflected in the duration of the agreement. In cases of increases exceeding 30% of the investment costs, the Original Company has a right to choose between canceling or proceeding with the business.

Assurance:

Article 9: The Original Company is, during the stage of signing the agreement, obliged to give the administration definite assurance of the amount to be determined in line with the framework set out in Article 6(2)1 of the List of Conditions for this bidding.

the values which may be accepted as definite assurance have been specified in the List of Conditions for this bidding.

Once the definite assurance has been given, the temporary assurance will be reimbursed.

Delivery of the Place:

Article 10: The Original Company will apply to the administration within seven weekdays of the signing of the agreement and the approval of the Project Zoning and Construction Plan, drawn with a scale of 1/1000, or the changes in the Plan, and will demand the delivery of the place where the facilities are to be constructed.

The administration will execute the delivery of the place within fifteen workdays of the signing of the agreement.

The axis poles, sommes, ropers etc. will be checked on ground and sea by the representatives of the Administration and the Company, and the parties will prepare five copies of the Record of Delivery.

The Original Company will be responsible for applying the job in line with the cotes, coordinates, and the data it has been presented by the administration; and for providing that all sections of the work are correct in terms of their placement, cotes, dimensions etc., and for providing all of the necessary engineering equipment, material, and the workmanship. During the progress of the work, if any mistake is to be encountered in terms of the cotes, dimensions, lines, and axes etc., the Original Company undertakes to correct the mistake at its own expense. That any applications, cotes, and lines have been checked by personnel of the Administration, will not protect the Original Company from responsibility about the accuracy of these.

The Original Company will not displace any of the polygons, nivelman ropers, axes, and reference poles, and any other signs, until the work has been delivered and accepted.

Application Projects:

Article 11: The Original Company will provide the Administration with the Architectural, Static, Material, Infrastructural, Furnishing, and Installation Projects which it will construct upon the land it has been given within 90 days of the delivery of the place, and these projects will be prepared as they have been specified in the Special List of Conditions.

The Administration will examine the projects for a period of 45 days, and delays resulting from the Administration and exceeding the aforementioned time limit will be added to the duration of the contract.

No changes or additions in the application projects will be carried out, unless the prior approval of the Administration is taken. The Administration will respond to such applications for

changes within 15 days.

Unexpected Traffic and Special Loads:

Article 12: All operations necessary for executing the work will be carried out without preventing others from reaching or utilizing their property or State roads or private roads and paths.

The Original Company will undertake all necessary precautions to make sure that the roads and bridges in the workplace or on the way to the workplace will not be demolished or damaged by its usage, or that of its subsidiary companies; and it will keep the unexpected traffic resulting from selecting and using the roads and the vehicles, distributing and limiting the loads, and transporting construction machines to and from the site of the workplace, as limited as possible.

The Original Company will be responsible for all damage and demolition of roads and bridges and other structures which may arise from its own fault, during the period of the agreement and because of the assurance given with the agreement.

The Place of the Construction Site, the Chief of the Construction Site, and Technical Personnel:

Article 13: The Original Company will construct the facilities of the construction Site basing on the "General condition Plan for the Construction Site", approved by the administration.

The Original Company will, pending the delivery of the place, construct all construction sites, buildings, and facilities, all installations of water, electricity, and the hygienic installations, and all internal and external connection roads, and will make the area utilizable. The buildings and facilities will be appropriate for providing that the personnel will dwell and work in health, safety, and technical conditions, and for protecting the equipment, and will be secured against all internal and external factors and dangers such as fire, flooding etc.

The Original Company will report the name of the Chief of the Construction Site within ten days of the delivery of the place, and will also deliver his documents. The administration will conduct the necessary examinations about the person, and within a period of thirty days, will report to the Original Company whether they he is accepted or not. The Original Company must adhere to the rule of reporting the approved Chief of the Construction Site.

A Protocol will be concluded for the technical personnel between the Original Company and the control organization, in line with the business program. This protocol will determine which technical personnel with which qualifications will be in charge of the job, and the Protocol will be enforced once it has obtained the approval of the Administration.

The Chief of the Construction Site will be qualified to represent the Original Company on all issues relating to the agreement. All correspondence and statements sent to the Chief of the Construction Site will be considered to have been sent to the Original Company.

The Original Company will report all changes in the personnel immediately to the Administration.

Work Program:

Article 14: The Original Company will, in the 15 days following the delivery of the place, present the administration with the work programs prepared on a monthly basis and in line with the provisions of the agreement.

For varying construction parts of the overall work, work programs for all parts will be

prepared with CPM (Critical Mark) and bar methods, and the production and preparations for every month will be specified.

The aforementioned work program, and the resources of the company foreseen in realizing the work program and the expenditures showing credit spending will be submitted by the Original Company in bar diagrams to the Administration.

The work in the production and work program will be shown within the production groups which they are in, and the beginning and end dates of these will be determined in such a way as to take into account all relevant factors and finish the task.

The Administration is entitled to the right to approve the work program either with changes or in the same way.

The Original Company must adhere to the work program approved by the Administration. But in cases involving a force majeure, or the approval of the Administration, changes may be made in the work program.

If the construction period is prolonged due to force majeure, the Original Company will take into account the effects of the delay on the finishing of the work, and will reschedule the work program within ten days after receiving notification of the prolongation of the period.

Work Reports:

Article 15: The Original Company will send a report to the Administration on the progress of the work within ten days after the end of the month.

The report will comprise the latest state of the work, the jobs done within that month, the machinery, equipment, and material utilized, accounting for delays if any have occurred within the business program, and the precautions that have been taken by the Original Company to prevent these delays or to deal with them.

Subsidiary Companies:

Article 16: The Original Company can have any of the jobs agreed upon in the agreement, done via domestic or foreign individuals or organizations, provided they obtain the approval of the Administration. In such a case, the Original Company is still responsible to the Administration.

Supervision:

Article 17: The construction work within the scope of the agreement will be controlled by the control organization to be posted by the Administration, during the course of the construction.

The Original Company is obliged with executing all the issues deemed necessary by the control organization according to the technical List of Conditions, agreement, and their addenda, by covering all expenses which might occur.

Anybody conferred the right to do so by the Administration will always have the right to enter the workplaces and workshops and the places where the work is done or where the machinery or material or equipment is stored, and the Original Company undertakes to show all necessary assistance and easiness for the right to enter.

During the course of the construction, the Administration can, in a written form, demand the following:

- a) Any material which is not in line with the Agreement can be demanded to be removed from the workplace within a given period of time.
- b) The removed material can be demanded to be replaced by material satisfying the terms of the agreement and its addenda.

- c) Any work which does not suit the agreement either in terms of workmanship or material, regardless of whether it has been tested before or not, can be demanded to be removed and to be reconstructed.

The Original Company will, in case of non-compliance with the agreement, stop the construction of all or some of the work, as well as deemed appropriate by the Administration, for a certain amount of time, and during the course of this time, ensure the safety and security of the work as it may be deemed appropriate by the Administration. If the work has been stopped because of the fault of the company, no extra time will be granted.

The supervision of the Administration will in no way restrict the entitlements of other administrative offices to the supervision and control over the investment, and the pecuniary, legal, and penal responsibilities arising from this supervision will be borne by the Original Company.

Guarantee over Machinery, Material, and Equipment:

Article 18: All machinery, systems, and equipment to be used by the Original Company in the facility will be guaranteed by the producing company, and will be new. This guarantee will cover a period of one year at least. In addition, the Original Company will, at the time of the delivery and acceptance, present the Administration with a list of the guarantee periods of every machinery, systems, and equipment, as well as approved copies of the documents of guarantee.

Delivery and Acceptance:

Article 19: The Original Company will, basing on the work program (a revised and approved work program, if any) approved with the agreement and its addenda, apply in written form to the Administration for acceptance. The control organization will, within five days of the application, launch an examination, and determine with a report whether the work is ready to be accepted or not. This period cannot be extended. If the investment is not ready for acceptance, this issue is specified in the report with its reasons, and the acceptance demand of the Original Company is refused. If the control organization determines in the report that the work is ready to be accepted, the Administration will, within five days, form the committee or committees of acceptance within five workdays at the latest, and in the subsequent three workdays, the procedures for acceptance will be started. In cases involving absolute necessities, these periods can be extended to twice as much, provided that a reason is shown, and the approval of the Administration is taken.

The acceptance of the whole facility will be realized in an integrated manner, following the one by one realization of the checks, guarantees, and proforma bills etc. of the acceptance contracts and the projects which are their addenda, of all systems, the bidding List of Conditions, the technical List of Conditions for the electronic, electric, and mechanic systems, the contract of construction for the building and electronic, electric, and mechanical systems, the garbage dumping, purification, and the capacities of the water tanks and the company proposals.

The Original Company will present the Administration with an inventory list of the furnishing, fixtures, and other fixed valuables, together with the acceptance demand, and the acceptance commission of the Administration or another commission to be formed by the Administration will count these, and the subsequent list signed by the commission and the representative of the Original Company will form an addendum to the acceptance record.

The beginning date for the acceptance procedures by the acceptance commission or commissions at the site of construction is the finishing date of the investment period, provided that the work is suitable for acceptance.

The acceptance procedure will be completed within thirty days of its commencement, and the record about the acceptance will be signed by the Original Company and the acceptance commission or commissions, and will be approved by the Administration within a period of five days.

In case the acceptance commission or commissions find a matter which will be an obstacle for the acceptance of the facility, the procedures will be done according to the framework set out in the Regulation on Acceptance, of the Ministry of Public Works.

Operational Management of the Facility:

Article 20: After the acceptance has been made, the facility will be opened up for commercial operations, with the written consent of the Administration.

The documents to be lodged with the Administration by the Original Company for pening up the facility for operations are as follows:

- a) A document of operation, to be obtained from the office as provided for by the laws and regulations in force.
- b) The insurance policy for the period of management.
- c) Documents affirming that the management personnel have been trained in their respective branches, and that their security checks have been completed.
- d) The management plan for the facility.
- e) The licenses and permissions necessary for managing the facility, which need to be obtained from the relevant agencies and offices.

In case the Original Company starts managing the facility without obtaining a permission of commercial operations, the period of management and the coming into effect of the usage costs will be started after this incident has been found out.

In case the permission for commercial operations is not granted by the Administration because the period of investment is delayed due to the faults of the Original Company, or if the principles outlined in this Article cannot be executed by the Original Company, the ensuing period of delay will be subtracted from the period of management.

Principles of Management:

Article 21: A "Container Port Regulation" will be prepared by the Original Company prior to the commercial management date, and this regulation will be approved by the agency or office as stipulated by the laws and regulations in force.

The Original Company is bound to operate the facility in line with international standards, the articles of the agreement, and the principles of the approved regulation.

The following points must be borne in mind for directing the method of management and supervising whether the rules are adhered to or not:

The Original Company will, during the operations of the facility, keep an adequate amount of trained personnel, and will take all necessary precautions about maintenance and spare parts in order to ensure that the facility will continue to operate without any interruptions whatsoever.

The Original Company can in no way make any changes in the facility without obtaining the prior permission of the Administration.

The Original Company will, in the Container Terminal, allocate the necessary amount of space, famished and free of charge, for the Administration of the Port, the Superintendent for Customs Controls, the personnel to be posted by the Board of Health and Customs, and the

Passport Police.

The Original Company will not engage in contracts on the commercial facilities which are exceeding the period of management and are binding on the Administration.

In case the agreement is terminated by the Administrations before the period of the contract is over, and in case the investment and facilities are appropriated, all rental contracts carried out by the Original Company and with third parties will be transferred to the Administrations, with all rights and obligations attached thereunto. The part of the rents, received in advance by the Original Company and attributed to a period of time postdating the takeover of the facilities by the Administration, will be paid to the Administration in the thirty days following the communication of the Administrations.

No additional commercial areas can be created by the Original Company in addition to those already specified in the approved project, and no rent can be obtained from such areas. If it is determined that the Original Company is not providing the management services at the desired standards, or if it is creating commercial areas in additions to those specified in the approved projects, an adequate period of time will be given to the Original Company. In case the same defect or fault is repeated, a pecuniary fine of five-ten thousandth (5/10,000) will be exacted, and the Original Company will be asked to pay the fee in cash to the treasury in a period of thirty days. In case the pecuniary fine is not paid in the given amount of time, the monthly legal interest of belated payments will be added to the fine. If the defect or fault necessitating of a pecuniary fine has been caused by public institutions will be warned, and they will be asked to take necessary precautions.

Noncompliance with the instructions of the relevant Ministry by the company will also mean the termination of the contract. That injunctions have been exercised as a result of the supervision of the relevant Ministry or other offices will not waive the responsibilities of the Company arising out of the agreement.

Water, Electricity, Telephones, and Similar Services:

Article 22: The provision of the water and electricity to be used in the facilities, their transfer to the facility, the provision of installations such as dirty water purification plants, electricity, and telephones, the affixing of counters, the signing of subscription contracts with the relevant institutions on behalf of the Original Company, and maintenance costs of the locality of the facility are to be covered by the Original Company.

Incomes:

Article 23: The aforementioned facility will be realized in accordance with the Ace Number 3996 and the Decision of the Council of Ministers, number 94/5907.

In line with this law, all income to be derived from the serviced by the Original Company at the facility are to belong to the Original Company. No income can be allocated to the Original Company during the period of investment (except for those which may be derived from a permissions of partial management).

The obtaining of the income is the responsibility of the Original Company. The Company can have no demand on the Administration, arguing that they are unable to obtain the income, and cannot refrain from discharging its responsibilities.

Responsibilities and reparations:

Article 24: The Original Company is obliged to carry out the projections of the

Investment and Serviced within the specified time limits, to provide the financing, to construct, manage, and maintain and repair the facility, and to transfer the facility to the Administration free of debts and liabilities, in a clean and workable and usable condition at the end of the period.

The Original Company cannot demand the changing of the provisions or the prolongation of the period of management by invoking reasons such as in taxes, the adoption of new taxes, or the increases in transportation, material, or workmanship costs after the agreement has been signed, until the undertaking has been totally completed either within the period of work, or in any other period.

In case the facilities, installations, and equipment is not free of all debts and liabilities, nice and clean, well-maintained, workable and usable at the time of the transfer of the investment and business to the Administration; the Original Company will be responsible for compensating all damages borne by the Administration in eliminating the debts and liabilities, or the expenses which are necessary for making the installations and equipment nice and tidy, workable and usable.

The Fees of Utilization to be Paid for the land:

Article 25: The possession of the land to be allocated by the Administration for the investment belongs to the Treasury.

Nationalization can be made in necessary areas belonging to private enterprises, the costs of which will be covered by Original Company.

The Original Company will pay the Administration (.....) US dollars as fees for utilization for the first year of the management period of the land, which has been allocated for realizing the facility. The fees for utilization in the subsequent years will be increased by % (.....) on the basis of US dollars every year. But the difference between the Turkish Lira equivalent of the dollar-based fees for utilization of the previous year, and the Turkish Lira equivalent of the fees for utilization at the date of the date of payment will not be less than the amount of the Wholesale Commodity Prices Index, published every year by the State Statistics Institute, The difference between these two figures will be paid to the Administration by the Original Company at the prevailing exchange rate of the Central Bank of the Republic of Turkey on the date of payment.

The fees of utilization will be paid in advance at the beginning of every year of Operations, within a time period of twenty days. In case the years are fractional(1/12) of the proposed fees of utilization will be multiplied by the fractional year, and the fees of utilization for that year will be determined. In case the fees of utilization are not paid within twenty days of the beginning of every year of operations, the monthly legal interest of belated payments will be added.

In case the Original Company delays paying the fees utilization for a time period exceeding 90 days, the agreement will be cancelled by the Administration. In such a case, Original Company cannot raise any rights or demands against the Administration.

Force Majeure;

Article 26: For an incident to be considered a force majeure within the framework of the present agreement, the party affected by the incident must have exercised adequate heedfulness and caution and must have taken the necessary precautions; and despite these, the incident must have been impossible to prevent, uncontrollable, or impossible to dismiss, and this situation must be significantly or totally affecting the discharge of the responsibilities undertaken within the scope of the contract, either in temporal or pecuniary terms.

Within these general principles, what counts as force majeure is listed below, incomplete

as the list may be, additions may be made by national or international organizations:

- a) The declaration of partial or general mobilization,
- b) Strikes,
- c) Sabotage, or the consequences of a nuclear explosion or leakage,
- d) Fires, flooding, earthquakes, or other natural disasters and epidemic diseases,
- e) Declaration of a stage of emergency due to intense economic depression,
- f) Transportation accidents or technological accidents which may influence the investment and terminal management operations.

If any one or some of the aforementioned causes take place during the discharge of the responsibilities within the scope of this agreement, the party affected will, within ten days of the beginning of the force majeure, notify the other party of the beginning date and nature of the force majeure, the duration or the estimated time it will last, the precautions taken, and the document of the national or international organization documenting the incident. Within thirty days after the force majeure has ended, the beginning and ending dates of the force majeure, its nature, the damage it caused, the delays and cost increases will be submitted to the other party, accompanied by acceptable proof.

In case the situations, which may be counted as force major during the period of investment, occur during the period of management, and if the facility is wrecked or becomes unmaintainable, the period of management and the fees of utilization may be suspended, and the Original Company may be granted a new period of investment for reconstructing the facility and restarting the management operations. The Original Company will, during the new period of investment, reconstruct and restart managing all facilities, while it will cover all financing and all costs.

The Administration and the Original Company will engage in talks on the reasons and outcomes of the force majeure, and the effects of the damages on the delays and increases in costs, investment programs and management programs resulting from the force majeure will be determined, and the ensuing damages or increases in costs and the periods will be determined comparing it to the costs of investment and the duration of the agreement and the conclusions will be submitted to the approval of the Administration. After the necessary approval is taken, the work program or the management program, the increases in costs and the costs of investment, and the period of investment and the period of management will be re-determined.

In case the facility becomes partly or wholly unusable or wrecked or unmaintainable due to force majeure, and if a right arises to a certain amount of insurance funds, the insurance funds will be used in the reconstruction and starting the management operations of the facility, on the condition that the Administration will oversee the whole process.

Termination of the Contract:

Article 27-A: Termination During the Period of Investment:

Following the signing of the agreement and before engaging in activities of investment, if the Original Company reports to the Administration in a written way that it will not carry out its obligations under the agreement, or if it does not apply for allocation of land, or if it refrains from taking over the land it has applied for, the Administration will record the definite guarantee as income.

If the Original Company does not engage in activities of investment within forty-five days following the allocation of land and if it does not fulfil its obligation will send the Original Company an official warning with a time limit of thirty days, and will demand that activities of

investment activities at the end of this period either and/or if it does not carry out other obligations of its, the Administration can, without any further warning terminate the agreement and record the definite guarantee as income.

If the Original Company reneges its commitment after the activities of investment have begun or if it does not act up its commitment despite the official warning with a limit of thirty days, if it does not adhere to the approved work program (approved and revised work program, if any) except for the force majeure as defined in the agreement and the ratios which cannot be taken to constitute a rejection of the approved work program, if it does not deal with the faults in its work program despite the warning of the Administration and if these faults delay or if it is understood that these faults will delay the period of investment for a time span exceeding one year, the Administration can terminate the agreement and record the definite guarantee as income and will seize the portion of the investment completed until then without any charges.

The definite guarantee recorded as income can in no way be counted for the debts of the Original Company to the Administrations.

If the Original company causes the termination of the agreement by violating it, it has no right to make any demands on the Administration whatsoever.

B-Termination During the period of Management:

If the Original Company does not deal with the defects arising out of its actions violating the agreement despite the thirty-day period which will be granted, the agreement will be terminated by the Administrations and the guarantee will be recorded as income.

In case of the cancellation of the Port Management Document of the Original Company, if a legal case has been brought forward in the judicial agencies, action will be taken in line with the outcome of this.

If the original Company goes bankrupt or experiences difficulties in its balance of payments or declares a composition of debts, its definite guarantee will be recorded as income and the agreement will be terminated.

Insurance:

Article 28: The Original Company will have the facilities and systems defined in the agreement insured as all-risk insurance to comprise the conditions set out in the PRINCIPLES OF INSURANCE forming an addendum to this agreement throughout the Period of investment and management by insurance companies which will be approved by the Administrations, in the name of the Administration. The insurance policies will be organized separately for the periods of investment and management.

Notice and Indemnities for Seniority:

Article 29: The Original Company will pay all the legal rights of the works it employed at the time of termination of the agreement or the end of the period of management, arising of the Labor Law No.1475 and the Law No.854. However, if it receives approval beforehand, it will also pay the Indemnities for Seniority to the Administration in cash, for the personnel decided by the Administration to continue to retain their posts, The Administration will report its decision on this issue to the Original Company at least three months prior to the takeover and in a written way.

Security and Safety Precautions for the Facility:

Article 30: The Original Company is charged with providing for the safety of the facility throughout the duration of the agreement, in line with laws and regulations currently in force.

The Original Company will take the necessary precautions both during the construction and the operation of the facility, so that movables and immovable belonging to the public or real or imagined personalities and all sorts of structures and facilities and the environment are not harmed and that no loss of life or property takes place; and all the responsibility arising out of this obligation will be that of the Original Company.

After the period of management has commenced, if conditions which might threaten the safety and peace of the Administration including an adequate limit of time Formosans arising out of the Original Company, the Administration is authorized to have the necessary precautions taken, with all expenses to be covered by the Original Company continues to engage in acts threatening the safety and peace of the public, the agreement may be terminated.

The Maintenance and Rectification of the Facilities;

Article 31: It is essential that the facilities which subject of the agreement be preserved in an adequate manner until the delivery to the Administration takes place.

It is the duty and responsibility of the Original Company to protect, maintain, and rectify the facilities (including the landscape) in line with the approved projects.

The Original Company will carry out the work on maintaining, repairing, and restoring according to the management plan it will submit to the Administration when the investment forming the subject of the agreement is being taken into commercial operations.

The Original Company will, throughout the period of management, protect the structures, installations, equipment, and furnishings in accordance with their respective List of Conditions without any perfectly, and will renew them within certain limits of time.

Addenda to the Agreement:

Article 32: The Original Company has to carry out the work forming the scope of the agreement within the framework of the agreement and the addenda attached to the agreement, which are listed below. In cases where interpretation is required and in cases of discord, the agreement will be the text with the priority, while the addenda have a subordinate status, In cases of a discord between the provisions of this agreement and the provisions of the addenda, the provisions of the agreement will prevail.

The addenda to the agreement are as follows:

- a) The Folder of Bidding, and its addenda,
- b) The Proposal of the Company, and its addenda,
- c) The Insurance Principles.

Transfer of the Facilities at the End of the Agreement:

Article 33: All facilities, equipment, installations and systems specified in the agreement and its addends, as well as the tools, implements, and equipment belonging to these will, at the end of the period of management, be transferred to the Administration, free of charge and in well-maintained, workable, and usable condition.

In the one year preceding the date of transfer, those which have lived out their economic lifespan among the equipment, installations, and systems present in the facility. Will be determined together with the Original Company, and will be replaced by new ones.

In the six months preceding the date of transfer, the Original Company will supply the Administration with the list of spare parts which might be needed for running the facilities in the upcoming three years.

Prior to the takeover of the investment and business by the Administration, a transfer commission consisting of ten members will be formed, five of which will be appointed by the Administration and the remaining five by the Original Company. The commission will be presided over by one of the representatives of the Original Company. The transfer commission will examine the condition of the transfer procedures, whether they are well-maintained and operational or not, and whether the facilities are ready for transfer to the Administration in line with the specifications of the agreement, and will defects and shortcomings and will specify the necessary expenditure and time for eliminating these shortcomings with a memorandum.

Other Issues:

Article 34:

- a) Patent Rights: The Original Company will be responsible for meeting all demands, payments, fines, and expenditures from third parties on all sorts of equipment, installations, projects, designs, facilities etc. related to the work it has undertaken with this agreement.

All projects about processes and sorts of designs prepared by the Original company within the scope of the agreement will become the property of the Administration, and the Administration will have the right to use the projects by changing their sizes and either making them smaller or larger, or to use them as they are, within the boundaries of Turkey.

- b) Ancient Works of art: Any material, property, or other valuables which may be unearthed during the excavations of the construction work and which may bear historical, cultural, artistic or scientific value are the property of the State. In such instances, the Original Company is obliged to notify the Administration of the situation, and to protect the works until the assigned officials come to pick them up, and to abide by the provisions of the regulations in force.
- c) Responsibilities about the Immovables: The Original Company can in no way give the immovables as security to third parties and cannot mortgage the immovables; and it can also not engage in obligations such as giving the movables or the commercial operations as security to third parties without obtaining the prior permission of the Administration.
- d) Documents of Construction and Utilization: All procedures and expenditures relating to obtaining the necessary permissions, licenses, and similar documents from the Ministries and the local administrations about the construction itself and the management of the facilities are to be carried out by Original Company, except for the approval of the Zoning and Construction Plan and the obtaining of a license for construction.
- e) Final Projects: The Original Company will, in the 120 days following the finishing of the construction, save the as-built projects onto a diskette, and submit it to the Administration with two copies of plotter outputs.
- The application projects including the final revisions will show the detailed places of the clean and drainage water pipes, electricity lines, and similar installations.
- f) Keeping the information Secret: Both parties accept and guarantee that all secret information provided, know-how transferred, documents given to itself by the other party and data obtained in any other way will be kept secret and that its directions and personnel will comply with secrecy, and that the data will not be transferred to a third

party without the written consent of the party providing the data.

- g) Assistance: The Original Company will apply on time for all necessary official permits and investment supports as required by the work program and the documents of the project, with the aim of executing the work within the framework of the authority granted to it. The Original Company will keep in touch with the Administration on obtaining the necessary permits and investment supports from official organizations. The Administration will grant the permissions within the bounds of its authority according to the work program, and will assist the Original Company in obtaining the necessary authority and permissions from other institutions and agencies of the State. The Administration will also assist in obtaining additional information from public institutions and organization, so that the Company can make the design and apply it with the conditions set out in the agreement.
- h) Expenditures of the Agreement: All taxes, duties, and expenditures about this agreement will be covered by the Original Company.
- i) Modifications in the Agreement: This agreement can only be modified in the manner it was put into effect.

Transfer of Obligations and Giving and Taking Formal possession:

Article 35: The Original Company can transfer all rights and responsibilities arising of the agreement to another company in the periods of investment within the framework and principles as set out in the decision of the council of Ministers, dated August 6, 1994, no.95/5907, provided the judgment of Administration and the decision of the Higher Council of Planning are obtained.

The Original Company can transfer the earmarked income during the Period of management to the creditors of the project within the scope of this agreement, in return for the payments of capital and interests.

The Notifications Address of the Original Company:

Article 36: The address of the Original Company for the notifications and communications to be made by the Administrations has been shown as follows:

Address:

Phone:

Fax;

Changes address will be reported Administration within seven days. Unless changes in the address are reported, all notifications and communications made to the address prior to the change will be considered to have been sent to and received by Original Company.

The Entry into Force of the Agreement:

Article 37: This agreement, prepared within the framework of the Law on Getting Some Investments and Services done Within the Construct-Manage-Transfer Model, No.3996, will enter into force after being examined by the parties.

If either the Administration or the Original Company cannot realized the changes in the Zoning and Construction Plan within one year following of the signing of the agreement without force majeure, both parties will have the right to terminate the agreement.

Administration

Original company

Appendix 12.2.5 BOT Contract Agreement

PORT OF DERINCE CONTAINER TERMINAL DRAFT AGREEMENT

SPECIAL LIST OF CONDITINS

SPECIAL LIST OF CONDITIONS ON INVESTMENTS FALLING UNDER THE SCOPE OF THE PROJECTION, CONSTRUCTION MANAGEMENT, AND TRANSFER OF THE CONTAINER TERMINAL OF THE PORT OF DERINCE

LIST OF CONDITIONS

Article - 1- General:

The completion of the preceding engineering studies, preparing the project, constructing obtaining and installing all necessary equipment, and the maintenance and rectification of the Container Terminal of the port of Derince, as well as the management and transfer to the Administration free of charge and without any debts attached and well – maintained and in usable condition in the area within the boundaries of the province of Kocaeli, as specified in placement plan given as one of the addenda to the bidding list of conditions, are business, and within the scope of this undertaking, the main items of investment are comprising the following works;

- 1) Nationalization,
- 2) Studies on Preceding Engineering and Projection,
- 3) Construction Work
 - Wharf and pier construction,
 - The drainage of the rear area filling and Construction of concrete coving
 - Construction of superstructure,
 - Construction of electricity and water installations,
 - Construction of railroad and national road connections,
 - Construction of a bridge crossing
- 4) The Procurement of Equipment

Article – 2 – Definition of the Project:

The area where the investment is to take place is within the area defined as he “Port of Derince Development Zone” ,Which lies between the present Port of Derince and the Petrol Ofsi facilities to the north of the Bay of Izmit.

As is Known, the port in the Istanbul region have reached their maximum capacity (the Port of Haydarpasa is working with a capacity of 5 million tons/year, and there is no possibility of further extensions).

The Port of Derince is the most suitable point for the new investment with links to national roads and railroads and with its favorable positioning in the bay, and the facility to be realized here can both cater to the requirement for a port which cannot be met by the Port of Haydarpasa anymore, and can serve the presently existing and still developing industry of region.

On the other hands, when viewed within the framework of the foreign political developments in the last years influencing Turkey, this will mean all opportunity for modem

container shipment giving the necessary service for expected transit transportation and domestic and international trade, and an additional capacity of 1,000,000 TEU/year will be created at the Port of Derince.

The feasibility and “CED” studies for the project of the Container Terminal for the Port of Derince have been carried out by the Istanbul Technical University.

In addition, the feasibility of the Port of Derince has been evaluated within the framework of the study on the Port of Marmara which has been carried out by JICA, an agency of the Japanese government.

Article - 3 – The Sections of the Project;

3.1- Nationalization:

The area of the Container Terminal of the Port of Derince covers an area of approximately 700,000 m², as can be seen from the placement plan which is one of the documents of the bidding submitted by the Administration, and most of this area will be gained from the sea by filling up the sea.

In order to realize the aforementioned project, areas outside the property of the Treasury can be utilized by being nationalized

As has been specified in Article 25 of the agreement of this work, the nationalization procedures will be carried out by the Administration, but the expenditures will be covered by the Original Company.

3.2-Preceding Studies and Projection:

3.2.A-Studies:

All engineering services for projecting the aforementioned facility (such as drilling, bathymetry wave forecast studies etc.) will be carried out by the Original Company.

The drillings will be carried out by the Original Company at the numbers and places determined by the Administration. The geo-technical report to be prepared in accordance with the drillings will determine the parameters to be used in the calculations of resting, subsiding, and pole carrying force.

3.2.B-Application Projects:

In line with the results of the studies outlined in Article 3.2.A, all application projects on construction works, the main lines of which have been drawn out in the special list of conditions and the preceding projects, will be prepared by the Original Company and approved by the Administration.

The Original Company will apply to the Administration (the General Directorate) before preparing the application projects, and will seek a compromise over the principles of the project and the calculation criteria.

The projects which are to be prepared by the Original Company in eight copies and handed to the Administration are as follows:

- 1- (The 1/1000 scale application plan with coordinates of the port construction work, the main subject of the undertaking will be prepared by utilizing fixed rovers, and will be submitted to the Administration with polygon closing and coordinate calculations.
On this plan, all sounding lead depths taken after the date of the bidding, polygon points, topography of the land, and all fixed rovers and presents will be shown.
- 2- The General Positioning, Plan, organized in line with the principles of bidding projects of the investment due to undertaking.

- 3- Rear area filling and fortification projects and their details,
- 4- All statistical calculations and detail projects about the piers and wharves,
- 5- Area covering and calculations and projects,
- 6- Placements plan and details of rings, bollards, and fenders,
- 7- Projects and details of water and electricity installations,
- 8- Calculations, projects, and details on the construction of linkage roads(national road and railroad)
- 9- Projects and details about the bridge crossing,
- 10- Placement plan of superstructure,
- 11- Calculations and projects about superstructure facilities.

In addition, the Original Company is obliged to present the Administrations with all sorts of calculations and detail projects which may be demanded.

The Original Company will prepare and submit the application projects to the Administration within the time and period determined in the work program which is approved by the Administration.

All projects and relevant calculations will be examined within 45 days after being submitted to the administration, and the changes deemed necessary will be made and the documents will be approved or returned,

The application projects for the bridge crossing will be approved by the Republic of Turkey. General Directorate for Roads.

The Original Company will, within 120 days after the finishing of the construction, save the construction, save the as-built projects onto a diskette, and will submit it to the Administration with two copies of plotter printouts.

3.2.C-CED work:

The CED Work for the Container Terminal of the Port of Derince has been carried out, and if it needs to be renewed, will be reproduced by the Original Company, and the expenses will be covered by the Original Company.

All necessary preparations and payments about the approval of the Zoning and Construction Plan and the obtaining of a building license will be carried out by the Original Company.

If, during the approval of zoning and Construction Plan, the obtaining of a building license, or should it prove necessary, the preparation of the CED report, it becomes clear that there is an obstruction to realizing the project, the construction site will be altered if the Administration deems it appropriate and if a suitable alternative site is found, in case an alteration of the site should prove unrealizable, the Administration will have no further obligation than to refund the definite guarantee of the Original Company

3.3-Construction Work:

All construction and installation work to be done within the framework, of this contract will be realized in accordance with application projects, to be approved by the Administration.

3.3.A-Infrastructural Construction works:

These cover the following:

- Construction of a pier.
- Rear area filling drainage and concrete area covering
- All installation works of the port(electricity, water, purification, etc.)

All necessary precautions against the effects of corrosion in steel pipe poles resulting

from sea water will be taken.

3.3.B-Superstructural Construction Work:

The placement plan to be prepared on the superstructural facilities, which must be constructed in relation with the management plan to be prepared by the Original Company, will be submitted to the Administration, and pending the approval of the Administration, the aforementioned facilities will be realized in accordance with the application project.

3.3.C-linkage Roads and the Construction of a Bridge Crossing:

Within the scope of this undertaking the port is to be linked to the main highway (the E-5) via a bridge crossing, and to the railroads.

3.3.D-Equipment:

This covers the procurement and montage of an adequate number of dock cranes and area cranes and equipment with adequate endowments, providing the necessary capacity to handle containers, as they may be deemed fit by the Administration, and as necessitated by modern port management in the rear area of the port and on the docks.

Article-4-Technical Lists of Conditions:

The construction work within the scope of this undertaking will be realized in full compliance with the General Technical List of Conditions on Port and Maritime Affairs of the Ministry of Transport, the General Technical List of the Ministry of Ministry of public Works, the General Directorate of the Bank of Provinces (İller Bankası), the TCK (General Directorate of Roads), and the General Directorate of TEDAS, (Electricity Distribution Company of turkey), respectively.

Article-5-Experiments:

The Original Company is obliged to having the necessary experiments done on Materials such as concrete, cement, iron, rings, welding, etc. and the ground (experiments of loading, and driving in things with blows), as they may be deemed necessary by the Administration.

The experiments will be carried out in the format and deemed suitable by the Administrations.

Article-6-Materials and Material Mines:

All material to be used in this work will be provided by the Original Company, provided it fits the standards of the Administration.

The Original Company will be responsible for ensuring that the laws and regulations in force are upheld during the running of the material mines and during the transport of materials, and for the damages and losses and legal responsibilities which may occur.

Article-7-Preparatory Works:

7.1-The Original Company will from time allocate some personal, such as sheners, rowers, drivers etc. for services on controlling the construction or for measurements such as application, nivelman, and sounding lead, to the control organization.

7.2-The Original Company will, upon the demand of the control organization, provide for the control diver to make use of the diver team, and will allocate sufficient amounts of boats, buoys, sounding leads, measurement equipment (such as tachometers or nivo) to the control organization.

7.3-The Original Company will provide for lighting the workplace and provide an adequate number of guards for purposes of security.

In additions, it will also provide for the amount of lighting demanded during the construction of work, such as the docks, during dark hours, or the places deemed necessary by the control organization, for the safety and security of the works and the workplace.

7.4-The Original Company will construct three prefabricated building of at least 70 m2 net usage area each, to be used in the services and lodging of the control organization, within 60 days of the delivery of the workplace at latest, or will rent flats of the same size provided that they are deemed appropriate the by Administration. All furnishing and management expenses of these buildings or flats will be covered by the Original Company until the takeover.

7.5-The Original Company will, in the three months following the approval of the facility in a glass cover, constructed in the scale determined by the Administration.

7.6-The Original Company will erect a number of construction definition tables into the places to be shown within the construction site, the amount and size of which will be determined by the Administration.

Appendix 12.3.1 Transfer Contract Agreement

TRANSFER CONTRACT OF THE OPERATION RIGHT OF RIZE PORT

The transfer contract of the operation right is signed in between T.R.Prime Ministry Directorate of Privatization Division, Turkish Maritime Administration and the Riport Rize Port Administration Investment Inc. Co. according to the 07.04.1997 dated and 97/3 numbered decree of Higher Board of Privatization.

DEFINITIONS

Including in the contract;

ADMINISTRATION : T.R.Prime Ministry, Directorate of Privatization Division

TDI : Turkish Maritime Administration Inc.Co.

OPERATOR : Riport Rize Port Administration Investment Inc. Co. which is established by Asim Cillioglu Joint Venture Group which is the winner of the bidding in the aim of operating these workplaces.

PORT : Rize Port

OPERATION RIGHT : Transferring of the usage rights of the followings to the operator for 30 years.

- a) The unmovables which are in the responsibility of government and are in the use of TDI and PORT from the date of its activity and the superstructures and completing structures these unmovables
- b) The tax-free shops and institutes which are hired by the TDI in the PORT. (All the rights and responsibilities of this institutes and tax-free shops belong to TDI until the end of the contract period which is signed with TDI. Until the end of the contracts the construction of new shops will be by the permission of TDI.)
- c) The open or closed areas which are constructed by the operator and which can be hired (these areas will be hired according to the principles which are defined by TDI and the OPERATOR)

The operation rights includes the services like; sheltering, loading, unloading, shifting, limbo, terminal, guiding (pilotage), trailing, hawser, giving water to ships, collecting disposals, operating passenger saloons, care and repair, subsistence and etc.

ARTICLE 1- The operation right of Rize Port has been transferred to Riport Rize Port Administration Investment Inc. Co. with a total prize of 5,606,605 USD and 4% annual compound maturing rate difference over 140,000 USD for 30 years.

ARTICLE 2- The total operation price of Rize Port will be paid in annual equal part payments in 15 years including the difference of maturing. The first payment will be paid until the contract signing date, and the following payments will be paid in advance every year on the date of the contract signing date. The transferring of the Rize Port will be done in 10 days following the signing date of the contract by TDI to OPERATOR. On the condition that the OPERATOR does not obey the principles of the contract the letter of guarantee which is taken for the maturing

residue will be registered as income.

ARTICLE 3- The maturing partial payments will be increased annually in the 4% annual compound rate, and the difference defined by this rate will be paid in the payments. The first two of the partial payments of the operation right price which will be left for maturing a letter of guarantee will be required and it will be implemented in rotation until the whole debt is paid.

ARTICLE 4- The transferring service of passenger, load and vehicle; port services; (pilotage and trailer sales, sheltering place service sales, fresh water sales, loading service sales, warehouse and terminal sales, unloading service sales, keeping and freezing of goods service sales, passenger saloon service sales and other port services) and for each year, 25% of the income allocated from the hires, 2% of the outer incomes such as interest, commission or the operations in the open and closed areas (0.5% of the fuel sale) will be allocated as stable operation right price and the additional parts which exceed this price will be paid to TDI in 30 days following the submission of the financial tables to tax division.

sample

Net sale profit	500,000,000,000. -TL
Profits from the activities	300,000,000,000. -TL

- Passenger, load and vehicle transporting service; service of safety of life and good; port services; (pilotage and trailing service sales, unloading service sales, collecting of the disposals service sales, weighing service sales, ware house and terminal service sales, freezing and keeping service of goods sales, passenger saloon service sales and other port services)

- The incomes which are allocated by the hiring of institutes and the tax-free shops by the TDI in the PORT: 50,000,000,000 TL

- The incomes which are allocated by the open and closed areas which are hired by the OPERATOR	50,000,000,000 TL
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- incomes out of activities 100,000,000,000 TL

TDI's shares

- Incomes and rents in the activities	$400,000,000,000 \times 0.25 =$	100,000,000,000 TL
- Incomes out of activities	$100,000,000,000 \times 0.02 =$	2,000,000,000 TL

Total	102,000,000,000 TL
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After this operation the TDI's share will be exchange to US dollars over the Central Bank's annual average foreign currency rates belonging to the activity period in which the profit is allocated. For example if we exchange the TDI's share to annual average foreign currency rate the amount will be as following;

$102,000,000,000 \text{ TL} / 72,000 = 1,416,666 \text{ USD}$

For example if we add 50,000 USD -the income allocated from the institutes and tax-free shops which are hired by TDI- to 1,300,000 USD - the last price in proposal of the operator - then the sum which is the total operation right price will be 1,350,000 USD.

If we exclude this amount from the share which will be allocated from the profit;
 $1,416,666 - 1,350,000 = 66,666$ USD. This amount will be paid to TDI in advance in 30 days following the submission of the annual financial tables to the tax division.

The numbers in the calculations above are completely samples and not related to real ones.

ARTICLES 5- The possible incomes which will be allocated from the new investments that are done in the marine fields and the open or closed areas which are in the use of the ports by the OPERATOR, will be included in the operation right price, therefore any extra price will not be taken for these. However this price will be used in the calculation of the TDI's shares which is shown above.

ARTICLES 6- According to (a) part of the 37th article of the 4946 numbered Law and 4105 numbered Law the Riport Rize Port Administration Investment Inc. Co. must be registered to Turkish Commercial Records, its foreign capital share must not exceed 49%, the authorized majority for administration and representation must be Turkish citizens and the voting majority must be Turkish citizens according to the main contract of the firm.

ARTICLES 7- The Riport Rize Port Administration Investment Inc. Co. must be managed by a Management Board with at least 5 persons, and to this Management Board one person from TDI personal and one person from Governor of Province from the trial office will be transferre.

ARTICLES 8- The 100,000 USD of the indemnities of the included personnel's notifications and priorities will be allocated by the operator firm, and this price will be paid in advance to a private account which is opened in the name of Turkish Maritime Administrations.

ARTICLES 9- The rights and responsibilities in the chest, bank, debt and the money owing calculations of the port balance sheet will be belong to TDI from the transferring date and will not be mentioned in the operation right.

ARTICLES 10- The debts and their delay prices-owing to SSK (social insurance board), Tax Division and the tax, tuition, prime, water, electricity, phone, telex debts to the municipality and other boards which belong to the period before the transferring date-will belong to TDI, those whose period is after the transferring date will belong to the OPERATOR.

ARTICLES 11- The use of the unmovables - which are under the responsibility of government and under use of port and the other unmovables which belong to TDI and their infrastructure and superstructure institutes and the completing parts - will be transferred to the OPERATOR after the transferring date for the operation right period.

ARTICLES 12- The OPERATOR is responsible for keeping the elements which are given them in the port. For this reason it must take the safety and environmental precautions.

ARTICLES 13- At the end of the operation right period or on the condition that the contract is canceled, the OPERATOR is responsible for restration of the PORT stocks and the stocks which are under control of the government, the infrastructure and superstructure institutes and their completing parts etc to TDI free from all kinds of debts and in a well-cared and usable from. However the additional investments which are done by the OPERATOR will be returned to the OPERATOR.

ARTICLE 14- The OPERATOR has taken the port after seeing and examining its current physical situation. Therefore, the OPERATOR can not request any financial aid for repair, care or any other reason after the transferring date.

ARTICLE 15- Any possible expenditures which can occur after the transferring date about the unmovables belonging to Treasure or other public boards although it is in use of port will be paid by Turkish Maritime Administrations Inc. Co., however the possible payments that can occur because of the filling areas gained from the sea as a result of the investments after the transferring date will be paid by the OPERATOR.

ARTICLE 16- The investments which are already activated (except the ones whose bidding have not been started although their investment and bidding decision is taken) will be completed by the TDI.

ARTICLE 17- The damages in the harbor which are occurred by natural disasters will be repaired by the TDI and the operator, the expenses will be shared equally.

ARTICLE 18- The prices which are taken by the Turkish Maritime Administration in the Port, will be allocated by TDI after the privatization, and also in case necessary the allocation will be transferred to the OPERATOR in the frame of the agreement between TDI and operator with the condition that the prices will belong to TDI.

ARTICLE 19- The machines, equipment, installations and material found in the port and the marine vehicles (all kinds of stocks registered to port administration except unmovables and completing parts) whose spare parts are bounded to the pilotage, trailing, and sheltering services will be bought by the operator over the USD value. This value will be defined by taking the average of the proposals of 3 institutions -which is determined by the operator - and TDI. For the determination of the stock price a contract will be signed between TDI, OPERATOR and 3 institutions. The 40% of the buying price will be paid in advance including the matured price, the 30% of it will be paid after 24 months from the transferring date to the TDI. For the residue which is left for maturing a 10% annual maturing rate will be added to them, and the OPERATOR will give a letter of guarantee taken from the bank equal to the sum of residue and the matured difference. If the maturing residue is paid early, then the difference between the early paying date and the normal payment date will not be included in the payment.

In this frame, the payments of the institutions which will take duty will be paid equally by the OPERATOR and TDI.

If the operator does not obey the principles included in this article, then the letter of guarantee which is taken for these responsibilities will be exchanged to cash money and considered as income.

On the condition that the contract which will be signed to determine the value of stock sale and the transferring of these stocks -which will be bought by the OPERATOR - delays after the date of transferring, then the stock usage rights will be given to the OPERATOR by TDI without any charge until the transferring date, and the OPERATOR will be responsible for any expense or harm which can occur.

In case the OPERATOR abstain from signing the contract which must be signed in order to determine the stock values or abstain from buying the stocks after signing the agreement and completing the value determination process, paying the necessary assurance to TDI and giving letter of guarantee for the residue debts and maturing difference, the transferring contract can be canceled by TDI or ADMINISTRATION.

ARTICLE 20- The annual rental costs amount on the date of end of the rental contract of the tax free shops and institutes which are hired by TDI in the port will be added to the operation right price following the transferring of the place to the operator. In this case the stable operation right price will be redefined.

sample

The highest amount which is proposed in the bidding by the operator	1,300,000\$
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The ending date of the rental contract	3 years later
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The last rental cost on the ending date of the rental contract	50,000\$
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These rental costs will be acquired by TDI until the end of the contract period.

The rental places will be returned to the operator at the end of the rental contract and the operation right price on the transferring date will be:

1,350,000\$

On the condition that the operator does not hire or operate the places or add the rental costs to the operation right price after its transferring, there will not be provided any rights to the operator. In case there occurs difference between transferring and the contract date there will be deduction from wages in the first year, and the price determined by this will be paid to TDI in 1 month from the transferring date. However the rental cost will be added to up coming year's stable operation right price without any deduction.

On the condition that the Cayeli Copper Administration, which is currently using an area in the port, gives up using the port, the OPERATOR can include the rental cost on the ending date of the rental contract to the operation right price or on the condition that the operator can not hire mentioned field to the 3rd persons or operate it the rental cost will not be added to the operation right price.

The numbers in the calculations above are not related to the real ones, they are only written for sample.

ARTICLE 21- The personnel who are working in the out of content status and the personnel who are bounded to the 657 numbered Law and the contracted personnel will be transferred to other public institutions and boards according to 22nd article of the 4046 numbered Law.

All kinds of expenses of the transferred personnel such as wage, social rights and helps and identity rights will be paid by TDI over the current prices on the signing date of the transfer of the operation rights with the condition of it will be allocated by the Privatization Fund.

The personnel who are included in the content and who are working in the PORT and bounded to the 1475 and 864 numbered employment Laws will be employed by TDI.

ARTICLE 22- The OPERATOR can not transfer the operation rights of the PORT to the 3rd persons. The OPERATOR can not activate free from the PORT administration in a way that it directly or indirectly affect the aim and activities of the PORT, without taking written permission from the TDI.

ARTICLE 23- The operator will be responsible for all kinds of loss and damage that can occur about the 3rd persons about the PORT during the PORT activities.

ARTICLE 24- TDI will be authorized to take construction license for the buildings which are under construction or constructed before the transferring date in the PORT. There is no time limit for TDI to establish these works unless it prevents the PORT's main activities, however the retributions occurred because of not taking the construction license will belong to TDI.

ARTICLE 25- The responsibility of taking operation license or unsanitary establishment license which is necessary for operating the PORT after its transferring date, will belong to OPERATOR following the completion of the procedure of the previous article.

ARTICLE 26- The responsibility of paying the real estate taxes about the stocks which are in use of the PORT will belong to the OPERATOR.

ARTICLE 27- The OPERATOR is authorized to define the price tariffs about the PORT services. However in the first 5 years the increase of the tariffs; 20% from foreign currency and Whole Sale Good Price Rate from Turkish Liras, will be valid by the approval of TDI. At the end of this period the condition of taking TDI's approval will be terminated.

In the contracts signed between Maritime Forces Commandeer, OPERATOR and TDI the principles mentioned above will be excluded according to port laws and regulations of War and Auxiliary Ships belonging to Turkish Armed Forces (TSK), therefore another contract will be defined in this case.

ARTICLE 28- The OPERATOR will operate the PORT according to the current regulations and laws and the international contracts and their rules which are approved by the Turkish Republic and according the two sided agreements.

ARTICLE 29- The MANAGER will establish any kind of life and good security in the HARBOUR area and related to activities which will be done by sea vehicles, in accordance with related current regulations.

ARTICLE 30- The MANAGER, will allocate adequate rooms for TDI workers (maximum 3 persons -1 room) in the HARBOUR area and in the service building, guaranteeing the right and authority given to TDI by agreements and additional agreements, during the time of management. The MANAGER will be responsible for all expenses related to this room (heating, lighting, fuel, phone, etc.). Charged persons under this frame will be able to benefit from the same social services (transport, food, etc.) given to HARBOUR workers.

ARTICLE 31- All the allocations of the places which are allocated to the public board and institutions which are activating in the PORT according to the regulations will go on in the same conditions. On the condition that the PORT activities are obstructed after the investments of the OPERATOR, the allocations can be left to OPERATOR's possessions on the condition of construction of a place an or out of the port field by the OPERATOR.

ARTICLE 32- Without breaking the principles of the contract, if necessary there may be changes in the operation contract by the agreements of the sides and appendixes and other contracts can be signed between TDI and OPERATOR.

ARTICLE 33- On the condition that one of the sides does not obey the contract principles or does not clear out the non-accordance manners in the following 60 days this contract can be canceled by the warning side- by keeping the indemnity rights closed, which occurred from the loss and damage taken because of being not doing the duties of the sides.

ARTICLE 34- During the operation right period if any force-majeur occurs and prevents the operation for 6 months like war, earthquake, fire, natural disasters, strikes, lock-out (the strikes and lock-outs which can be prevented by the side which claims about the force-majeur are not included.) the operation right contract can be canceled by one side. Because of this cancellation the sides do not have responsibilities. However all kinds of rights and responsiblities which occurred until the cancellation date will be executed by the sides.

ARTICLE 35- The OPERATOR will transfer the ort at the end of the defined operation period in the contract, it will not have any right to require to extend the operation period.

ARTICLE 36- The OPERATOR will not use the name and logo of TDI in any case.

ARTICLE 37- In any of the disagreements about the implementation of the contract the sides will first try to agree. One of the sides of the disagreement sends a written agreement to the other side and on the condition that there had not been an agreement following the 30 days, there will be a fortifying.

This side which has chosen its referee asks the other side to choose its referee in 7 days, If the side does not choose its referee, its referee will be chosen by commercial Court which is located in the center of TDI.

If the referees can not agree on their decisions they choose a third referee.

If they do not agree in the choosing of the third referee, the third referee will be chosen by the Commercial Court In TDI after the applying of one of the sides.

The referee committee will solve the disagreements according to; - in the importance sequence -4046 numbered law, related other regulations, conditions of the bidding document, operation right contract and appendix contract principles.

ARTICLE 38- The OPERATOR can pay the prices which are ought to be paid over foreign currency in the contract, whether over the foreign currency or as Turkish Liras on Central Bank's foreign currency sale rate on the payment day.

The OPERATOR ought to collect the payments which in the Privatization Fund Account in T.R.Ziraat Bank, and must take all the precautions about it. If the payments are done on time, there will be a 1% monthly interest over foreign currency.

ARTICLE 39- For the aim of developing the port so that it provide more profits to the national economy and encouraging the container transport and providing the necessary infrastructure and superstructure, TDI will support the activities in the view of the governal institutions and local administrations.

ARTICLE 40- The information documents (personnel, investment, profit-loss) which will be wanted according to the forms which are informed by the ADMINISTRATION, for the reason of examining the efficiency of the ports and economical comparing between before and after the privatization, will be sent as 6 months terms.

On the condition that the principles in this article are not obeyed, there will be a sanction of 1.000 USD for each term.

ARTICLE 41- the communication addresses of the sides are the followings;

T.R. PRIME MINISTRY, DIRECTORATE OF PRIVATIZATION DIVISION, Huseyin Rahmi Gurpinar Sk. No:2, Cankaya 06680-ANKARA

GENERAL DIRECTORATE OF TURKISH MARITIME ADMINISTRATION INC. CO., Karakoy-ISTANBUL

RİPORT RİZE PORT ADMINISTRATION INVESTMENT INC. CO. Menderes Avenue 53100, RİZE

If the changes in the communication addresses is not been reported in 10 days, the reports sent to that address will be valid.

ARTICLE 42- The transfer contract of the operation rights is signed and activated on 6/8/1997 in three copies.

THE OPERATOR	TURKISH MARITIME ADMINISTRATION
RIPORT RIZE PORT ADM.INVESTMENT INC.CO.	INC.CO.GENERAL DIRECTORATE
ASIM CILLIOGLU	K.FAYSAL CILLIOGLU
HUCUM TULGAR	MUZAFFER AKKAYA
DEP.GEN.DIRE.	GENERAL DIRECTOR

T.R.PRIME MINISTRY
DIRECTORATE OF PRIVATIZATION DIVISION
YALCIN ATLI
VICE DIRECTOR

Appendix for Chapter 8

Appendix for Chapter 12