ISTANBUL & MARMARA, AEGEAN, MEDITERRANEAN, BLACK SEA REGIONS

CHAMBER OF SHIPPING

MARITIME SECTOR REPORT

ISTANBUL 2020

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FOREWORD

Maritime sector is integral to Turkey. The sector has improved significantly in line with the historical reforms have taken place until this very day and proved its efficient and respectable position.

As of today, Turkish merchant fleet has shown great development and is diversified in terms of vessel type, tonnage and fleet volume.

Transportation capacity of Turkish maritime sector holds the 15th place with 29.3 million DWT in the list of countries controlling the largest fleet of the world (1000 GT and over). As for luxury yacht building sector, Turkey sits at 3rd place while the yearly production capacity of our shipyards have reached to 4.51 million DWT.

Our Chamber has been active in carrying out activities before relevant domestic and foreign Institutions and Organizations in order to perform its policies which are constituted with the purpose of increasing the contribution of maritime sector to the national economy and ensuring its competitiveness with the rest of the world. Our ultimate objective is to ensure shipping industry to be considered under "National Government Policy".

The Maritime Sector Report has been prepared as a result of an intense study in order to include the development of the maritime sector in Turkey as well as the world and to examine the circumstances of the maritime sector as of 2019 with its various aspects.

During the preparation process of the report, our aim has been to examine, neutrally, the circumstances of maritime sector in Turkey and the world in 2019 and to constitute the report on the basis of scientific data. We are pleased to make the recent data and reliable information on maritime sector available through Maritime Sector Report.

We present the report by believing that contributions of maritime sector to the national economy will continue to increase in the forthcoming years and would like to thank those who have undertaken responsibility in the development and growth of our sector having an important mission in the development of our country.

Tamer KIRAN
Chairman of the Board of Directors

TURKISH CHAMBER OF SHIPPING

Istanbul & Marmara, Aegean, The Mediterranean, Black Sea Regions Chamber of Shipping, briefly called Turkish Chamber of Shipping (TCS), is an important professional organization of the Turkish Maritime Sector, with its headquarters in Istanbul and main branch offices in Izmir, Bodrum, Marmaris, Aliağa, Antalya, Iskenderun, Fethiye, Karadeniz Ereğli and Kocaeli. Turkish Chamber of Shipping which has 15 Representations in Turkey was first established as Istanbul Chamber of Shipping in 1982 and afterwards, its area of activities has been expanded gradually so as to cover the regions of the Sea of Marmara, the Aegean Sea coast, the Mediterranean coast the Black Sea coast and finally the inland waters of Turkey.

OBJECTIVES AND ACTIVITIES

The most important goal of the Turkish Chamber of Shipping is to develop shipping in accordance with the national transportation and shipping policy and public interest. Its other major objectives are to promote the interests and provide the common requirements of its members, to arrange the development of the profession, to guide and facilitate the professional activities, to establish common rules and to inform the authorities on shipping matters and also to keep the discipline, morals, and solidarity of the shipping profession.

The major activities of the Turkish Chamber of Shipping include establishing rules and practices in shipping, conducting research and collecting information on shipping, ensuring that sea trade is developing in accordance with the national policy of transportation, providing information to foreign organizations on the possibilities and tariffs of the Turkish ports, becoming a member and following the activities of international organizations concerned with shipping and performing other functions defined by the law.

MEMBERS

Turkish Chamber of Shipping has more than 9521 Members. In accordance with the Law No: 5174 concerning The Union of Chambers and Commodity Exchanges of Turkey (TOBB) every company performing activities in the field of Maritime Shipping has to become a Member of the Turkish Chamber of Shipping. Among the members of the Turkish Chamber of Shipping are; ship-owners, ship operators, ship agents, ship sale and purchase brokers, forwarders, stevedores, tally firms, classification societies, marine insurance companies, underwriters, marine surveyors and experts, auxiliary services such as salvage, rescue, pilotage, dredging and yachting and also ship chandlers and suppliers, port and marina operators, ship-yacht builders and shipyards, ship-yacht equipment and repair services, maritime training companies, sand extractors, and fishermen. The Members of The Turkish Chamber of Shipping have been gathered in 48 Professional Committees, according to their fields of occupation.

CHAMBER MEMBERSHIP IN NATIONAL AND INTERNATIONAL ORGANIZATIONS

National Organizations:

The Union of Chambers and Commodity Exchanges of Turkey (TOBB) and International Chamber of Commerce (ICC)-The Turkish National Committee.

International Organizations:

The International Chamber of Shipping (ICS), The International Chamber of Commerce – International Maritime Bureau (ICC-IMB), The Federation of National Associations of Ship Brokers and Agents (FONASBA), The European Community Association of Ship Brokers and Agents (ECASBA), The Baltic and International Maritime Council (BIMCO), The Turkish American Chamber of Commerce and Industry (TACCI), The Yacht Harbour Association (TYHA), The European Boating Association (EBA), The International Bunker Industry Association (IBIA), The European Shortsea Network (ESN) and The Turkish - German Chamber of Commerce and Industry (TD-IHK).

PUBLICATIONS

Turkish Chamber of Shipping publishes many studies on shipping, including the regularly published annual “MARITIME SECTOR REPORT” in Turkish and in English and a monthly published shipping magazine: “TURKISH SHIPPING WORLD MAGAZINE”.

TURKISH CHAMBER OF SHIPPING HEADQUARTER
Meclis-i Mebusan Cad. No:22 Fındıklı 34427 İSTANBUL/TURKEY
Phone: +90 212 252 01 30 (8 lines) - 243 54 95 (3 lines)
Fax: +90 212 293 79 35
Web: www.denizticaretodasi.org
E-mail: contact@chamberofshipping.org.tr

Aliağa Branch
Kültür Mah. İstiklal Cad. No:24 K:1 Daire : 3-4 Aliağa-İZMİR/TURKEY
Phone : +90 232 617 10 25
Fax : +90 232 617 10 23
E-Mail : aliaga@denizticaretodasi.org.tr

Antalya Branch
Yeşilbahçe Mh. 1471 Sk. Giritli Ali Bey Evleri No:3A/1-2
(VİLLA A) Muratpaşa – ANTALYA/TURKEY
Phone : +90 242 241 02 10
Fax : +90 242 241 02 11
E-Mail : **antalya@denizticaretodasi.org.tr**
Web : www.antalyadto.org.tr

Bodrum Branch
Yokuşbaşı Mah. Kıbrıs Şehitleri Cad. No 32 Bodrum MUĞLA/TURKEY
Phone : +90 252 316 55 06
Fax : +90 252 316 78 31
E-Mail : bodrum@denizticaretodasi.org.tr
Web : www.dtobodrum.org.tr

Fethiye Branch
Fevzi Çakmak Cad. Körfez Apt. No.21/14 Fethiye-MUĞLA/TURKEY
Phone : +90 252 612 84 96 - 97
Fax : +90 252 614 64 17
E-Mail : fethiye@denizticaretodasi.org.tr

İskenderun Branch
Çay Mah. Atatürk Bulvarı No: 26 İskenderun / TURKEY
Phone : +90 326 614 50 25
Fax : +90 326 614 50 26
E-Mail : iskenderun@denizticaretodasi.org.tr
Web : www.dtoiskenderun.org.tr

İzmir Branch
Cumhuriyet Blv. Muzaffer Bey İş Hanı No: 88 Kat:1 5 35210
Pasaport-İzmir/TURKEY
Phone : +90 232 425 72 15
Fax : +90 232 441 87 96
E-Mail : izmir@denizticaretodasi.org.tr
Web : www.dtoizmir.org.tr

Kdz.Ereğli Branch
Orhanlar Mah. Ali Onsekiz Sok. No:26 Karadeniz EREĞLİ / TURKEY
Phone : +90 372 323 64 95-96-97
Fax : +90 372 322 55 29
E-Mail : kdzeregli@denizticaretodasi.org.tr
Web : www.dtoeregli.org.tr

Kocaeli Branch
Hacı Osman Mahallesi, Bostan Sokak, No:1 Körfez Kocaeli/ TURKEY
Phone : +90 262 528 00 01
Fax : +90 262 528 44 44
E-Mail : kocaeli@denizticaretodasi.org.tr
Web : www.dtokocaeli.org.tr

Marmaris Branch
Sarıana Mahallesi. 23.Sokak No:2 Marmaris/Muğla /TURKEY
Phone : +90 252 413 45 61
Fax : +90 252 413 45 63
E-Mail : marmaris@denizticaretodasi.org.tr
Web : www.dtomarmaris.org.tr

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CHAPTER I

THE DEVELOPMENT OF THE TURKISH SHIPPING

1. THE DEVELOPMENT OF TURKISH SHIPPING

1.1.The Turkısh Merchant Fleet

A detailed analysis of the Turkish merchant fleet has been made under the Turkish National Ship Registry and Turkish International Ship Registry. The values which were established for individual ship groups have been evaluated by number, tonnage and also by being imported or built in Turkey.

In the analysis, ships of size 1000GT or higher have been taken into consideration. Age and tonnage ranges have also been evaluated in their respective tables.

Number and tonnage values are as of 31 December 2019.

1.2.The Analysis of the Turkish Merchant Fleet by Number and Tonnage

A general analysis of the merchant fleet has been made according to number, tonnage, and place of build. Table 1 shows that Turkish merchant fleet consists of 516 ships of which 269 (5.3 million DWT) have been imported and 247 (1.4 million DWT) have been built in Turkey.

516 ships are distributed by type as follows; 27,34% dry cargo ships, 10,85% bulk carriers, 10,47% chemical tankers, 9,50% containers and 8,53% service ships, 33,31% other types.

By DWT the fleet consists of; 36,25% bulk carriers, 20,89% oil tankers, 15,28% containers, 10,85% dry cargo ships, 7,79% chemical tankers and 8,94x% other types.

By DWT, 5,70% of our fleet is registered in the National Ship Registry, 94,30% of thefleet is registered in the International Ship Registry. By GT, 9,29% of our fleet is registered in the National Ship Registry, 90,71% of the fleet is registered in the International Ship Registry. (Table 2)

The fleet registered in the International Ship Registry (6.4 Million DWT) is composed of; bulk carriers (36,64%), oil tankers (21,98%), container ships (13,77%), dry cargo vessels (10,85%), chemical tankers (8,12%) and other types (8,64%). (Table 2)

Table 2 shows Turkish merchant fleet which consists of 516 ships. 13,76% of the total fleet (71 ships) is registered in the National Ship Registry and 86,24% of the total fleet (445 ships) is registered in the International Ship Registry.

The majority of the fleet registered in the National Ship Registry (388.404 DWT) is composed of container ships (40,24%), bulk carrier ships (30,03%), dry cargo ships (10,82%), service ships (5,09%), Dry Cargo -Ro-Ro (3,08%) and other types (10,74%).

Table 1: The General Examination of the Turkish Merchant Fleet By Number and Tonnage According to Import and Build (1000 GT and Over)

SHIP TYPES	COUNT				DWT				GT			
	Import	Build	Total	%	Import	Build	Total	%	Import	Build	Total	%
DRY CARGO	38	103	141	27,34	243.057	496.347	739.404	10,85	167.975	314.462	482.437	8,65
BULK CARRIER	51	5	56	10,85	2.320.506	150.971	2.471.477	36,25	1.328.634	94.380	1.423.014	25,48
CONTAINER	37	12	49	9,50	842.717	198.312	1.041.029	15,28	680.113	152.274	832.387	14,92
DRY CARGO/CONTAINER	4	6	10	1,94	12.369	50.466	62.835	0,92	8.066	34.164	42.230	0,76
CHEMICAL TANKERS	27	27	54	10,47	325.884	205.298	531.182	7,79	207.104	136.039	343.143	6,15
LPG TANKERS	5	0	5	0,97	27.804	0	27.804	0,41	25.574	0	25.574	0,46
ASPHALT TANKERS	1	3	4	0,78	2.770	54.850	57.620	0,85	1.900	43.630	45.530	0,82
RO-RO SHIPS	18	0	18	3,49	195.680	0	195.680	2,87	460.099	0	460.099	8,25
RO-RO FERRY/PASSENGER	10	7	17	3,29	26.208	1.582	27.790	0,41	64.663	21.810	86.473	1,55
FERRY BOATS	7	22	29	5,62	2.538	19.648	22.186	0,33	28.710	27.861	56.571	1,01
TRAIN FERRIES	0	6	6	1,16	0	2.960	2.960	0,04	0	9.835	9.835	0,18
PASSENGER AND CARGO SHIPS	1	8	9	1,74	1.540	5.687	7.227	0,11	4.701	21.655	26.356	0,47
FISHING BOATS	1	1	2	0,39	569	0	569	0,01	1.407	2.534	3.941	0,07
SCIENTIFIC RESEARCH VESSEL	4	2	6	1,16	3.580	4.200	7.780	0,11	28.474	7.358	35.832	0,64
HARBOUR FERRIES	1	0	1	0,19	0	0	0	0,00	1.043	0	1.043	0,02
HARBOUR CAR FERRIES	0	6	6	1,16	0	1.974	1.974	0,03	0	7.547	7.547	0,14
TUGS	1	0	1	0,19	0	0	0	0,00	1.565	0	1.565	0,03
SERVICE SHIPS	30	14	44	8,53	48.960	37.494	86.454	1,27	255.071	125.522	380.593	6,82
OIL TANKERS	11	11	22	4,26	1.234.361	189.119	1.423.480	20,89	660.284	100.702	760.986	13,64
TRAIN FERRIES/RO-RO	1	0	1	0,19	6.266	0	6.266	0,09	15.195	0	15.195	0,27
DRY CARGO/RO-RO	5	1	6	1,16	70.454	17.183	87.637	1,29	190.767	60.465	251.232	4,50
MARINE VEHICLES	16	13	29	5,62	8.000	5.686	13.686	0,20	209.045	79.443	288.488	5,17
TOTAL	**269**	**247**	**516**	100%	**5.373.263**	**1.441.777**	**6.815.040**	100%	**4.340.390**	**1.239.681**	**5.580.071**	100%

Table 2: The General Examination of the Turkish Merchant Fleet by National and International Registries (1000 GT and Over)

SHIP TYPES	COUNT				DWT				GT			
	National Reg.	Inter Reg.	Total	%	National Reg.	Inter Reg.	Total	%	National Reg.	Inter Reg.	Total	%
DRY CARGO	7	134	141	27,34	42.007	697.397	739.404	10,85	28.845	453.592	482.437	8,65
BULK CARRIER	5	51	56	10,85	116.655	2.354.822	2.471.477	36,25	71.927	1.351.087	1.423.014	25,48
CONTAINER	5	44	49	9,50	156.278	884.751	1.041.029	15,28	123.464	708.923	832.387	14,92
DRY CARGO/CONTAINER	1	9	10	1,94	2.356	60.479	62.835	0,92	1.720	40.510	42.230	0,76
CHEMICAL TANKERS	2	52	54	10,47	9.497	521.685	531.182	7,79	6.441	336.702	343.143	6,15
LPG TANKERS	0	5	5	0,97	0	27.804	27.804	0,41	0	25.574	25.574	0,46
ASPHALT TANKERS	1	3	4	0,78	2.770	54.850	57.620	0,85	1.900	43.630	45.530	0,82
RO-RO SHIPS	0	18	18	3,49	0	195.680	195.680	2,87	0	460.099	460.099	8,25
RO-RO FERRY/PASSENGER	3	14	17	3,29	1.500	26.290	27.790	0,41	30.319	56.154	86.473	1,55
FERRY BOATS	1	28	29	5,62	2.314	19.872	22.186	0,33	1.596	54.975	56.571	1,01
TRAIN FERRIES	6	0	6	1,16	2.960	0	2.960	0,04	9.835	0	9.835	0,18
PASSENGER AND CARGO SHIPS	3	6	9	1,74	3.761	3.466	7.227	0,11	17.189	9.167	26.356	0,47
FISHING BOATS	0	2	2	0,39	0	569	569	0,01	0	3.941	3.941	0,07
SCIENTIFIC RESEARCH VESSEL	0	6	6	1,16	0	7.780	7.780	0,11	0	35.832	35.832	0,64
HARBOUR FERRIES	0	1	1	0,19	0	0	0	0,00	0	1.043	1.043	0,02
HARBOUR CAR FERRIES	0	6	6	1,16	0	1.974	1.974	0,03	0	7.547	7.547	0,14
TUGS	1	0	1	0,19	0	0	0	0,00	1.565	0	1.565	0,03
SERVICE SHIPS	19	25	44	8,53	19.774	66.680	86.454	1,27	145.706	234.887	380.593	6,82
OIL TANKERS	3	19	22	4,26	10.868	1.412.612	1.423.480	20,89	5.940	755.046	760.986	13,64
TRAIN FERRIES/RO-RO	0	1	1	0,19	0	6.266	6.266	0,09	0	15.195	15.195	0,27
DRY CARGO/RO-RO	1	5	6	1,16	11.978	75.659	87.637	1,29	32.770	218.462	251.232	4,50
MARINE VEHICLES	13	16	29	5,62	5.686	8.000	13.686	0,20	39.258	249.230	288.488	5,17
TOTAL	**71**	**445**	**516**	100%	**388.404**	**6.426.636**	**6.815.040**	100%	**518.475**	**5.061.596**	**5.580.071**	100%

Graph 1: Examination of Registries (1000 GT and Over)

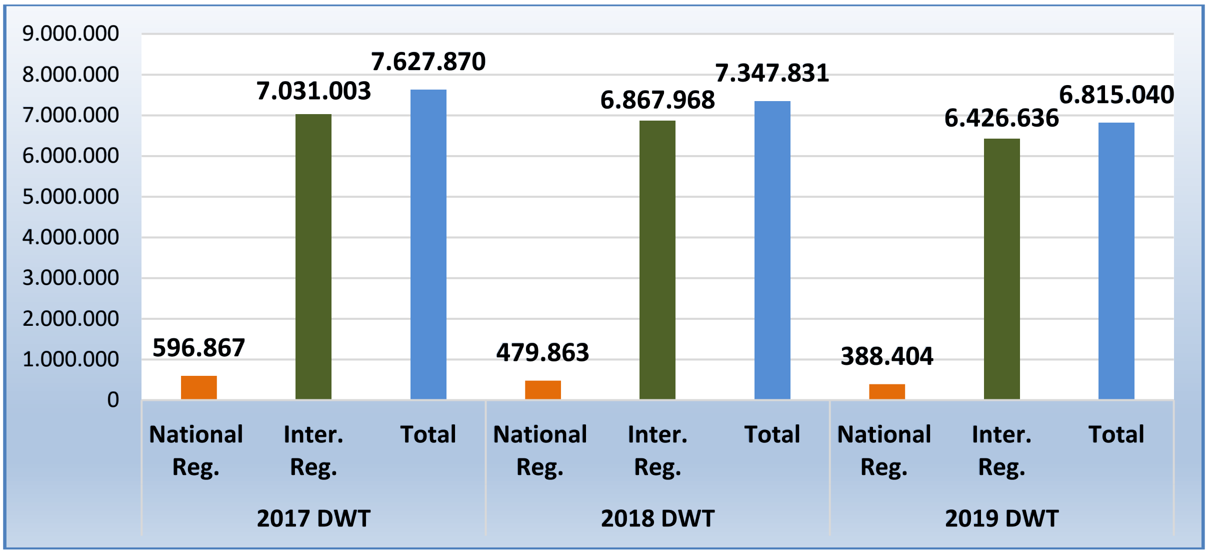


Table 3: Examination of Registries (DWT) 2016-2017-2018 (1000 GT and Over)

SHIP TYPES	2017 DWT			2018 DWT			2019 DWT			Years 2018-2019 % Change
	National Reg.	Inter. Reg.	Total	National Reg.	Inter. Reg.	Total	National Reg.	Inter. Reg.	Total	
DRY CARGO	52.735	918.077	970.812	35.162	821.158	856.320	**42.007**	**697.397**	**739.404**	-13,65%
BULK CARRIER	169.296	2.671.378	2.840.674	169.296	2.639.655	2.808.951	**116.655**	**2.354.822**	**2.471.477**	-12,01%
CONTAINER	302.781	765.393	1.068.174	194.610	1.016.704	1.211.314	**156.278**	**884.751**	**1.041.029**	-14,06%
DRY CARGO/CONTAINER	2.356	101.916	104.272	2.356	97.429	99.785	**2.356**	**60.479**	**62.835**	-37,03%
CHEMICAL TANKERS	9.497	439.043	448.540	9.497	447.899	457.396	**9.497**	**521.685**	**531.182**	16,13%
LPG TANKERS	0	33.803	33.803	4.444	33.803	38.247	**0**	**27.804**	**27.804**	-27,30%
ASPHALT TANKERS	2.770	39.896	42.666	2.770	39.896	42.666	**2.770**	**54.850**	**57.620**	35,05%
RO-RO SHIPS	0	230.032	230.032	11.978	230.032	242.010	**0**	**195.680**	**195.680**	-19,14%
RO-RO FERRY/PASSENGER	13.478	25.232	38.710	1.500	23.632	25.132	**1.500**	**26.290**	**27.790**	10,58%
FERRY BOATS	2.314	22.638	24.952	2.314	22.637	24.951	**2.314**	**19.872**	**22.186**	-11,08%
TRAIN FERRIES	2.960	0	2.960	2.960	0	2.960	**2.960**	**0**	**2.960**	0,00%
PASSENGER AND CARGO SHIPS	3.761	1.226	4.987	3.761	1.226	4.987	**3.761**	**3.466**	**7.227**	44,92%
FISHING BOATS	0	569	569	2.887	569	3.456	**0**	**569**	**569**	-83,54%
SCIENTIFIC RESEARCH VESSEL	0	7.780	7.780	0	7.780	7.780	**0**	**7.780**	**7.780**	0,00%
HARBOUR FERRIES	0	0	0	0	0	0	**0**	**0**	**0**	0,00%
HARBOUR CAR FERRIES	0	1.974	1.974	0	1.974	1.974	**0**	**1.974**	**1.974**	0,00%
TUGS	0	0	0	0	0	0	**0**	**0**	**0**	0,00%
SERVICE SHIPS	24.051	13.365	37.416	19.774	51.892	71.666	**19.774**	**66.680**	**86.454**	20,63%
OIL TANKERS	10.868	1.744.415	1.755.283	10.868	1.417.416	1.428.284	**10.868**	**1.412.612**	**1.423.480**	-0,34%
TRAIN FERRIES/RO-RO	0	6.266	6.266	0	6.266	6.266	**0**	**6.266**	**6.266**	0,00%
DRY CARGO/RO-RO	0	0	0	0	0	0	**11.978**	**75.659**	**87.637**	0,00%
MARINE VEHICLES	0	8.000	8.000	5.686	8.000	13.686	**5.686**	**8.000**	**13.686**	0,00%
TOTAL	**596.867**	**7.031.003**	**7.627.870**	**479.863**	**6.867.968**	**7.347.831**	**388.404**	**6.426.636**	**6.815.040**	**-7,25%**

1.3.The Age Profile of the Turkish Merchant Fleet

Table 4 shows the age profile of the Turkish Merchant Fleet with respect to different ship types. The Merchant Fleet of ships with size 1.000 GT and above consists of 516 ships. The average age of these ships is 22,76 as of 31.12.2019.

The average age of dry cargo ships is 27 which makes 27,34% of the fleet. The average age of bulk carriers is 19 and makes up 10,85% of the total fleet. The average age of containers is 15 which is 9,50% of the fleet. The average age of chemical tankers is 18 which is 10,47% of the fleet. The average age of oil tankers is 16 which is 4,26% of the fleet.

Table 4: The Average Profile of the turkish Merchant Fleet (1000 GT and Over)

SHIP TYPES	Number	Tonnage (DWT)	Tonnage (GT)	Average Age
DRY CARGO	141	739.404	482.437	27
BULK CARRIER	56	2.471.477	1.423.014	19
CONTAINER	49	1.041.029	832.387	15
DRY CARGO/CONTAINER	10	62.835	42.230	22
CHEMICAL TANKERS	54	531.182	343.143	18
LPG TANKERS	5	27.804	25.574	22
ASPHALT TANKERS	4	57.620	45.530	12
RO-RO SHIPS	18	195.680	460.099	17
RO-RO FERRY/PASSENGER	17	27.790	86.473	24
FERRY BOATS	29	22.186	56.571	23
TRAIN FERRIES	6	2.960	9.834	46
PASSENGER AND CARGO SHIPS	9	7.227	26.356	25
FISHING BOATS	2	569	3.941	23
SCIENTIFIC RESEARCH VESSEL	6	7.780	35.832	22
HARBOUR FERRIES	1	0	1.043	67
HARBOUR CAR FERRIES	6	1.974	7.547	26
TUGS	1	0	1.565	35
SERVICE SHIPS	44	86.454	380.593	31
OIL TANKERS	22	1.423.480	760.986	16
TRAIN FERRIES/RO-RO	1	6.266	15.195	33
DRY CARGO/RO-RO	6	87.637	251.232	6
MARINE VEHICLES	29	13.686	288.488	24
TOTAL	**516**	**6.815.040**	**5.580.071**	**22,76**

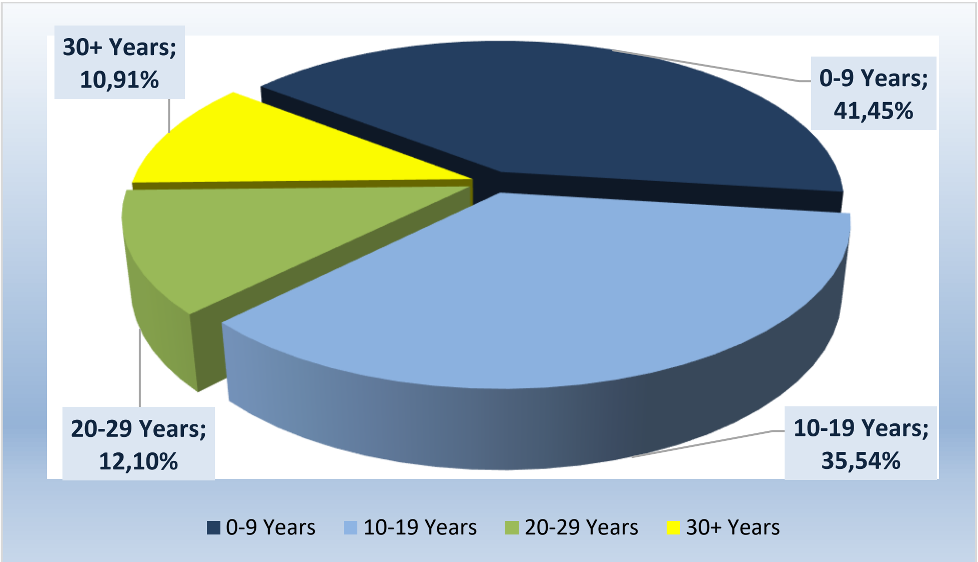
Table 5 shows the Turkish Merchant Fleet grouped by different age and tonnage ranges. Turkish Merchant Fleet consists of 516 ships with a total of 6.815.040 DWT.

- 110 ships with total size 2.980.498 DWT are in the 0-9 age range,
- 146 ships with total size 2.258.738 DWT are in the 10-19 age range,
- 91 ships with total size 844.154 DWT are in the 20-29 age range,
- 169 ships with total size 731.650 DWT are of age 30 or older.

Table 5: Turkish Merchant Fleet Distribution by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
150-1499	31	1.223	6,00%	22	5.560	27,28%	11	3.166	15,53%	53	10.434	51,19%	117	20.383
1500-5999	13	52.829	8,06%	43	164.476	25,11%	42	152.055	23,21%	85	285.768	43,62%	183	655.128
6000-9999	8	57.463	13,24%	21	159.288	36,71%	15	119.243	27,48%	14	97.863	22,57%	58	433.857
10000-34999	30	580.071	30,14%	42	732.468	38,06%	17	274.348	14,26%	17	337.585	17,54%	106	1.924.472
35000-52999	8	320.121	30,67%	11	500.504	47,95%	5	223.171	21,38%	0	0	0,00%	24	1.043.796
53000-79999	9	556.693	64,74%	4	231.039	26,87%	1	72.171	8,39%	0	0	0,00%	14	859.903
80000-119999	4	327.933	100,00%	0	0	0,00%	0	0	0,00%	0	0	0,00%	4	327.933
120000+	7	1.084.165	69,97%	3	465.403	30,03%	0	0	0,00%	0	0	0,00%	10	1.549.568
TOTAL	**110**	**2.980.498**	43,73%	**146**	**2.258.738**	33,14%	**91**	**844.154**	12,39%	**169**	**731.650**	10,74%	**516**	**6.815.040**

Graph 2: Turkish Merchant Fleet Distribution by Age Groups (DWT)



The graph shows the age groups of the Turkish merchant fleet. 43,73% of the fleet is in the 0-9 age range, 33,14% of the fleet is in the 10-19 age range, 12,39% of the fleet is in the 20-29 age range and 10,74% is 30 years old or over.

The tables of different ship types below show the age profile of the Turkish merchant fleet and are organized according to size and age.

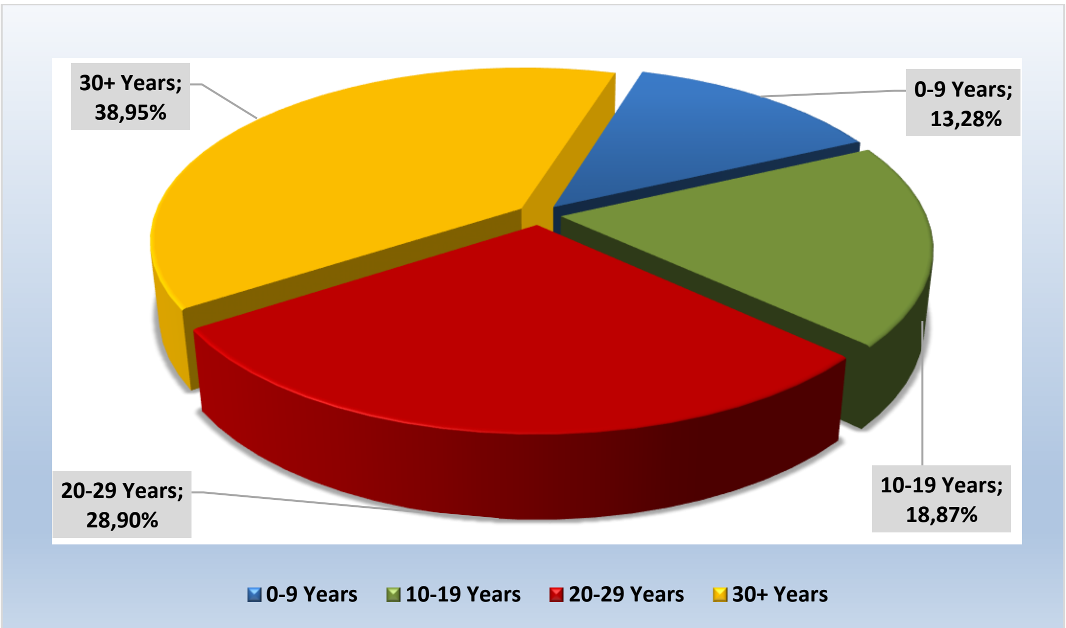
Table 6 shows the Dry Cargo segment (141 ships) which has a total size of 739.404 DWT.

- 14 ships of size 98.228 DWT are in the 0-9 age range,
- 24 ships of size 139.507 DWT are in the 10-19 age range,
- 37 ships of size 213.658 DWT are in the 20-29 age range,
- 66 ships of size 288.011 DWT are 30 years or older.

Table 6: Dry Cargo Ships by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
150-1499	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
1500-5999	8	38.419	39%	15	61.195	44%	30	109.729	51%	55	191.067	66%	108	400.410
6000-9999	3	21.445	22%	7	46.332	33%	4	31.273	15%	7	47.164	17%	21	146.214
10000-34999	3	38.364	39%	2	31.980	23%	2	22.791	11%	4	49.780	17%	11	142.915
35000-52999	0	0	0%	0	0	0%	1	49.865	23%	0	0	0%	1	49.865
53000-79999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
80000-119999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
120000+	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
TOTAL	**14**	**98.228**	100%	**24**	**139.507**	100%	**37**	**213.658**	100%	**66**	**288.011**	100%	**141**	**739.404**

Graph 3: Age Distribution of Dry Cargo Segment (DWT)



13,28% of Dry Cargo Ships are in the 0-9 age range; 18,87% are in the 10-19 age range; 28,90% are in the 20-29 age range and 38,95% are 30 years or older.

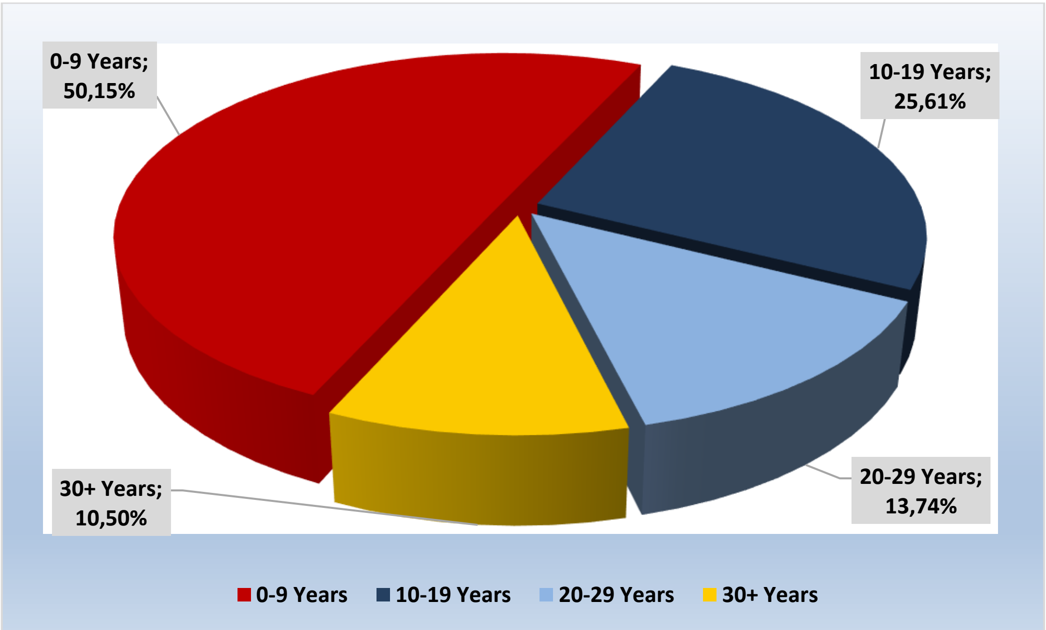
Table 7 shows the Bulk Carrier Segment (56 ships) with a total size of 2.471.477 DWT.

- 21 ships of size 1.239.377 DWT are in the 0-9 age range,
- 14 ships of size 632.826 DWT are in the 10-19 age range,
- 10 ships of size 339.500 DWT are in the 20-29 age range,
- 11 ships of size 259.773 DWT are 30 years or older.

Table 7: Bulk Carrier Ships by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
150-1499	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
1500-5999	0	0	0%	0	0	0%	1	4.468	2%	0	0	0%	1	4.468
6000-9999	1	6.635	1%	0	0	0%	0	0	0%	0	0	0%	1	6.635
10000-34999 (HandySize)	4	108.250	9%	4	93.461	15%	4	89.555	26%	11	259.773	100%	23	551.039
35000-52999 (HandyMax)	2	70.603	6%	6	308.326	49%	4	173.306	51%	0	0	0%	12	552.235
53000-79999 (Panamax)	9	556.693	45%	4	231.039	36%	1	72.171	21%	0	0	0%	14	859.903
80000-119999 (Capesize)	4	327.934	26%	0	0	0%	0	0	0%	0	0	0%	4	327.934
120000+ (LargeSize)	1	169.263	13%	0	0	0%	0	0	0%	0	0	0%	1	169.263
TOTAL	**21**	**1.239.377**	100%	**14**	**632.826**	100%	**10**	**339.500**	100%	**11**	**259.773**	100%	**56**	**2.471.477**

Graph 4: Age Distribution of Bulk Carriers (DWT)



50,15% of the bulk carriers are in the 0-9 age range; 25,61% are in the 10-19 age range; 13,74% are in the 20-29 age range and 10,50% are 30 years or older.

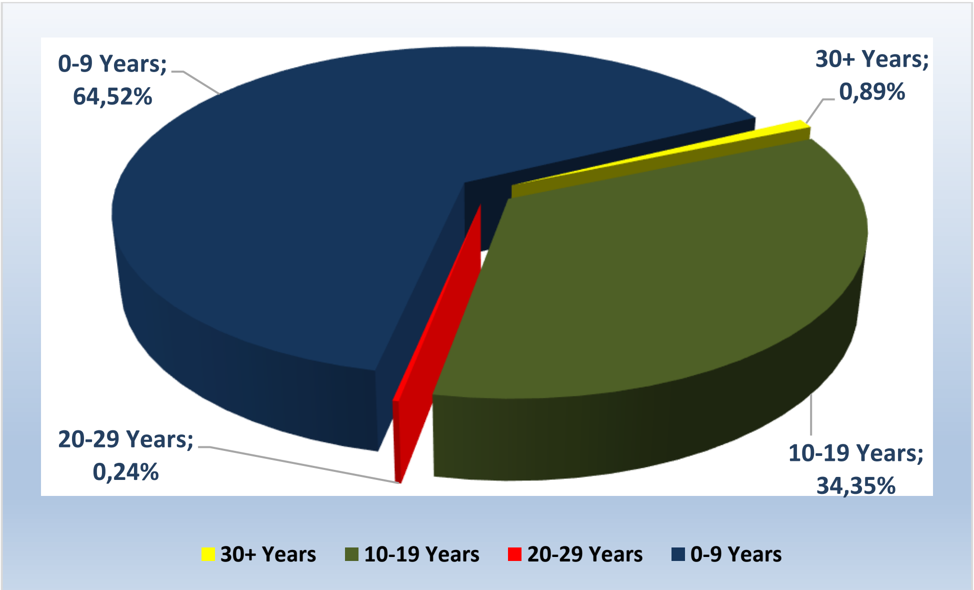
Table 8 shows Oil Tankers Segment (22 ships) with a total size of 1.423.480 DWT

- 8 ships of size 918.498 DWT are in the 0-9 age range,
- 9 ships of size 488.993 DWT are in the 10-19 age range,
- 1 ship of size 3.384 DWT are in the 20-29 age range,
- 4 ships of size 12.605 DWT are 30 years or older.

Table 8: Oil Tankers by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
150-1499	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
1500-5999	2	3.596	1%	6	23.590	5%	1	3.384	100%	4	12.605	100%	13	43.175
6000-19999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
20000-49999 (Product Tanker)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
50000-79999 (Panamax)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
80000-109999 (Aframax)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
110000-164999 (Suezmax)	6	914.902	99%	3	465.403	95%	0	0	0%	0	0	0%	9	1.380.305
165000-299999 (VLCC)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
300000+ (ULCC)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
TOTAL	**8**	**918.498**	100%	**9**	**488.993**	100%	**1**	**3.384**	100%	**4**	**12.605**	100%	**22**	**1.423.480**

Graph 5: Age Distribution of Oil Tankers (DWT)



64,52% of the oil tankers are in the 0-9 age range; 34,35% are in the 10-19 age range; 0,24% are in the 20-29 age range and 0,89% are 30 years old or older.

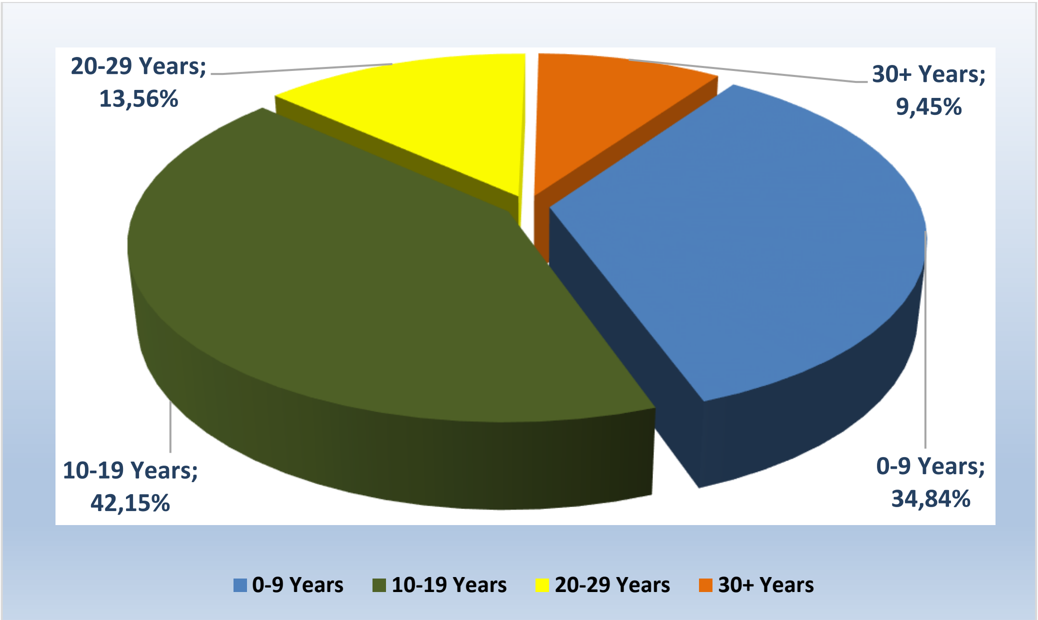
Table 9 shows the average age of the chemical tankers (54 ships) with a total size of 531.182 DWT.

- 9 ships of size 185.061 DWT are in the 0-9 age range,
- 25 ships of size 223.893 DWT are in the 10-19 age range,
- 11 ships of size 72.055 DWT are in the 20-29 age range,
- 9 ships of size 50.173 DWT are 30 years or older.

Table 9: Chemical Tankers by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
150-1499	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
1500-5999	0	0	0%	11	42.606	19%	4	19.069	26%	5	18.716	37%	20	80.391
6000-19999	7	83.539	45%	13	141.288	63%	7	52.986	74%	4	31.457	63%	31	309.270
20000-49999 (Product Tanker)	1	49.990	27%	1	39.999	18%	0	0	0%	0	0	0%	2	89.989
50000-79999 (Panamax)	1	51.532	28%	0	0	0%	0	0	0%	0	0	0%	1	51.532
80000-10999 (Aframax)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
110000-164999 (Suezmax)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
165000-299999 (VLCC)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
300000+ (ULCC)	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
TOTAL	**9**	**185.061**	100%	**25**	**223.893**	100%	**11**	**72.055**	100%	**9**	**50.173**	100%	**54**	**531.182**

Graph 6: Age Distribution of Chemical Tankers (DWT)



34,84% of chemical tankers are in the 0-9 age range; 42,15% are in the 10-19 age range; 13,56% are in the 20-29 age range and 9,45% are 30 years or older.

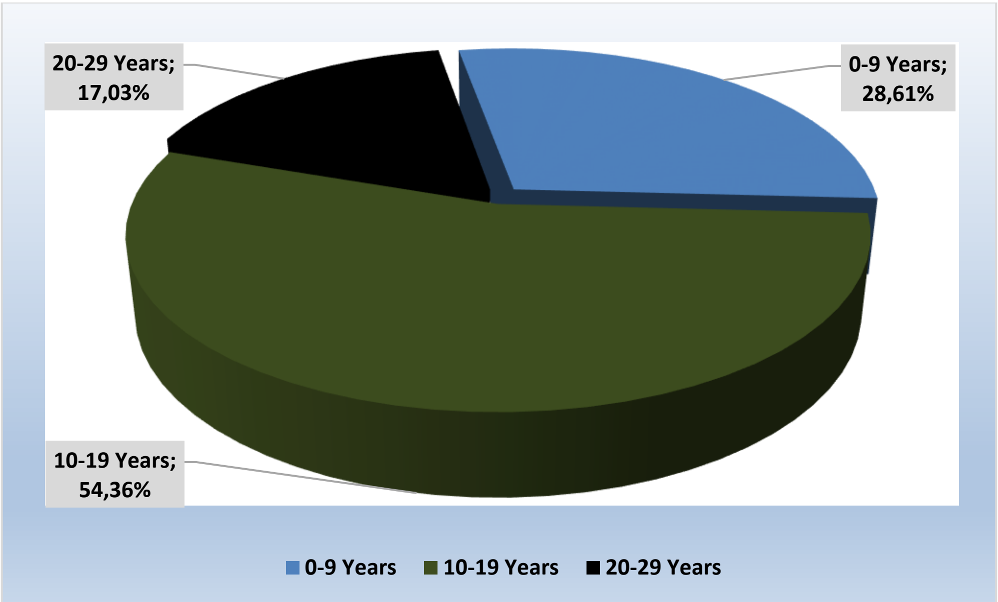
Table 10 shows the average age of the Container Ships (49 ships) with a total size of 1.041.029 DWT.

- 9 ships of size 297.875 DWT are in the 0-9 age range,
- 27 ships of size 565.942 DWT are in the 10-19 age range,
- 13 ships of size 177.212 DWT are in the 20-29 age range,

Table 10: Container Ships by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
150-1499	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
1500-5999	0	0	0%	1	3.301	1%	0	0	0%	0	0	0%	1	3.301
6000-9999	0	0	0%	2	14.332	3%	3	25.316	14%	0	0	0%	5	39.648
10000-34999	5	149.879	50%	20	396.130	70%	10	151.896	86%	0	0	0%	35	697.905
35000-52999	4	147.996	50%	4	152.179	26%	0	0	0%	0	0	0%	8	300.175
53000-79999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
80000-119999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
120000+	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
TOTAL	**9**	**297.875**	100%	**27**	**565.942**	100%	**13**	**177.212**	100%	**0**	**0**	0%	**49**	**1.041.029**

Graph 7: Age Distribution of the Container Ships (DWT)



28,61% of Container ships are in the 0-9 age range; 54,36% are in the 10-19 age range and 17,03% are in the 20-29 age range.

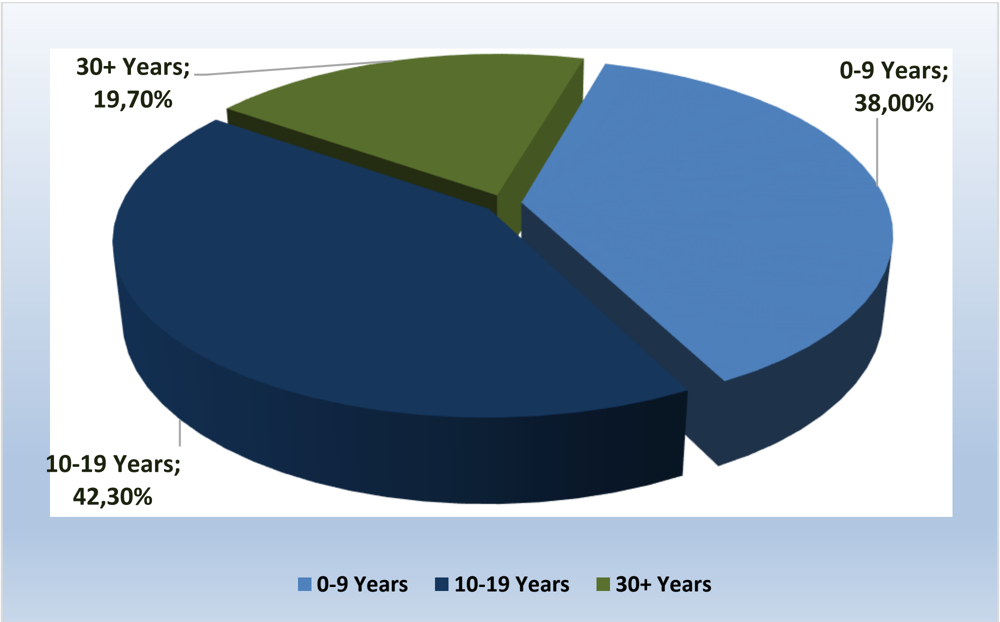
Table 11 shows the average age of the Ro-Ro Ships, (18 ships) with a total size of 195.680 DWT.

- 6 ships of size 74.363 DWT are in the 0-9 age range,
- 8 ships of size 82.772 DWT are in the 10-19 age range,
- 4 ships of size 38.545 DWT are 30 years or older.

Table 11: RO-RO Ships by Tonnage and Age Groups (1000 GT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT	%	NO	DWT
1500-5999	0	0	0%	0	0	0%	0	0	0%	2	10.513	27%	2	10.513
6000-9999	0	0	0%	5	48.200	58%	0	0	0%	0	0	0%	5	48.200
10000-34999	6	74.363	100%	3	34.572	42%	0	0	0%	2	28.032	73%	11	136.967
35000-52999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
53000-79999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
80000-119999	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
120000+	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0
TOTAL	**6**	**74.363**	100%	**8**	**82.772**	100%	**0**	**0**	0%	**4**	**38.545**	100%	**18**	**195.680**

Graph 8: Age Distribution of the RO-RO Ships (DWT)



39,57% of Ro-Ro Ships are in the 0-9 age range; 48,79% are in the 10-19 age range and 11,64% are 30 years old or older.

1.4.Turkish Merchant Fleet by Number and Tonnage (1000 DWT and Over)

(Accepted International Seaborne Transportation Tonnage)

Table 12 shows the numerical and tonnage values of ships which are 1000 DWT and over and are suitable for international transportation.

Table 13 shows that the Turkish merchant fleet consists of 499 ships. 6,22% of the total fleet (68 ships) is registered in National Ship Registry and 93,78% of the total fleet (431 ships) in the International Ship Registry. The total DWT and GT values of the ships over 1000 DWT are 6.969.838 DWT and 4.974.670 GT respectively. 6 classes make up the majority of this capacity. Bulk carriers lead with 35,45%, oil tankers follow with 20,91%, containers with 14,94%, dry cargo with 11,60%, chemical tankers with 7,62% and Ro-Ro's with 2,81%. These 6 classes make up 93,33% of the total fleet based on DWT.

4,72% of the bulk carrier ships are registered in the National Ship Registry, and the rest 95,28% are registered in the International Ship Registry with a total weight of 2.471.477 DWT for the bulk carrier segment.

1,48% of the oil tankers are registered in the National Ship Registry, and the rest 98,52% are registered in the International Ship Registry with a total weight of 1.457.464 DWT for the oil tankers segment.

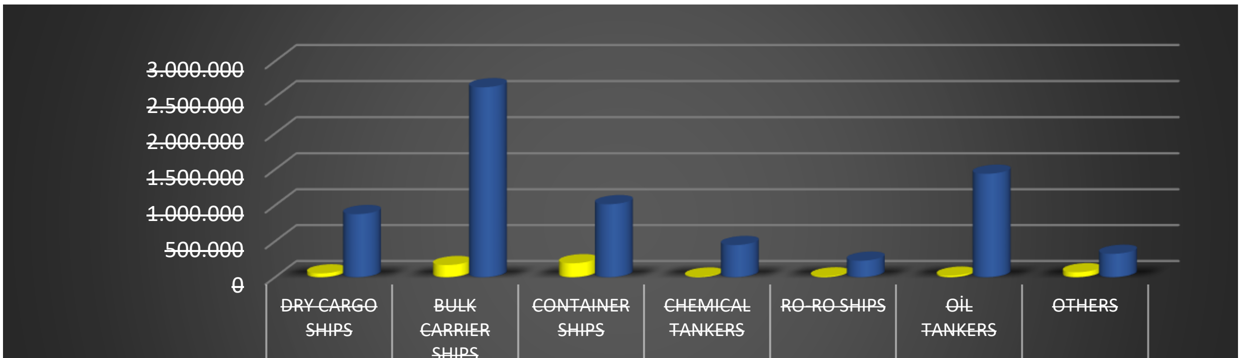
15,01% of the container ships are registered in the National Ship Registry, and the rest 84,99% are registered in the International Ship Registry with a total weight of 1.041.029 DWT for the container ship segment.

7,03% of the dry cargo ships are registered in the National Ship Registry, and the rest 92,97% are registered in the International Ship Registry with a total weight of 808.300 DWT for the dry cargo ship segment.

1,79% of the chemical tankers are registered in the National Ship Registry, and the rest 98,21% are registered in the International Ship Registry with a total weight of 531.182 DWT for the chemical tankers segment.

Ro/Ro ships are 100% are registered in the International Ship Registry with a total weight of 242.010 DWT.

Graph 9: Turkish Fleet According to Registries, 1000 DWT and Over



	DRY CARGO SHIPS	BULK CARRIER SHIPS	CONTAINER SHIPS	CHEMICAL TANKERS	RO-RO SHIPS	OIL TANKERS	OTHERS
National Reg.	53.659	169.296	194.610	9.497	11.978	21.624	69.601
International Reg.	878.902	2.639.655	1.016.704	447.899	230.032	1.440.633	326.410

Table 12: The General Examination of the Turkish Merchant Fleet by Number and Tonnage According to Import and Build (1000 DWT and Over)

SHIP TYPES	COUNT				DWT				GT			
	Import	Build	Total	%	Import	Build	Total	%	Import	Build	Total	%
DRY CARGO	44	141	185	37,10	252.002	556.298	808.300	11,60	173.164	347.275	520.439	10,46
BULK CARRIER	51	5	56	11,22	2.320.506	150.971	2.471.477	35,45	1.328.634	94.380	1.423.014	28,59
CONTAINER	37	12	49	9,82	842.717	198.312	1.041.029	14,94	680.113	152.274	832.387	16,73
DRY CARGO/CONTAINER	4	6	10	2,00	12.369	50.466	62.835	0,90	8.066	34.164	42.230	0,85
CHEMICAL TANKERS	27	27	54	10,82	325.884	205.298	531.182	7,62	207.104	136.039	343.143	6,90
LPG TANKERS	5	0	5	1,00	27.804	0	27.804	0,40	25.574	0	25.574	0,51
ASPHALT TANKERS	1	3	4	0,80	2.770	54.850	57.620	0,83	1.900	43.630	45.530	0,92
WATER BARGES	0	1	1	0,20	0	1.027	1.027	0,01	0	488	488	0,01
RO-RO SHIPS	18	0	18	3,61	195.680	0	195.680	2,81	460.099	0	460.099	9,25
RO-RO FERRY/PASSENGER	7	3	10	2,00	25.751	4.309	30.060	0,43	56.298	5.457	61.755	1,24
FERRY BOATS	0	8	8	1,60	0	15.329	15.329	0,22	0	11.846	11.846	0,24
TRAIN FERRIES	0	2	2	0,40	0	2.600	2.600	0,04	0	2.466	2.466	0,05
PASSENGER AND CARGO SHIPS	1	2	3	0,60	1.540	3.539	5.079	0,07	4.701	12.018	16.719	0,34
SCIENTIFIC RESEARCH VESSEL	2	1	3	0,60	3.580	4.200	7.780	0,11	21.740	2.569	24.309	0,49
SEA BUSES	1	0	1	0,20	29.642	0	29.642	0,43	431	0	431	0,01
SERVICE SHIPS	17	15	32	6,41	58.634	54.225	112.859	1,62	43.731	60.295	104.026	2,09
OIL TANKERS	17	28	45	9,02	1.243.354	214.110	1.457.464	20,91	665.854	115.507	781.361	15,71
TRAIN FERRIES/RO-RO	1	0	1	0,20	6.266	0	6.266	0,09	15.195	0	15.195	0,31
DRY CARGO/RO-RO	5	1	6	1,20	70.454	17.183	87.637	1,26	190.767	60.465	251.232	5,05
MARINE VEHICLES	1	5	6	1,20	8.000	10.168	18.168	0,26	6.926	5.500	12.426	0,25
TOTAL	**239**	**260**	**499**	100%	**5.426.953**	**1.542.885**	**6.969.838**	100%	**3.890.297**	**1.084.373**	**4.974.670**	100%

Table 13: The General Examination of the Turkish Merchant Fleet by National and International Registries (1000 DWT and Over)

SHIP TYPES	COUNT				DWT				GT			
	National Reg.	Inter Reg.	Total	%	National Reg.	Inter Reg.	Total	%	National Reg.	Inter Reg.	Total	%
DRY CARGO	18	167	185	37,10	56.786	751.514	808.300	11,60	37.226	483.213	520.439	10,46
BULK CARRIER	5	51	56	11,22	116.655	2.354.822	2.471.477	35,45	71.927	1.351.087	1.423.014	28,59
CONTAINER	5	44	49	9,82	156.278	884.751	1.041.029	14,94	123.464	708.923	832.387	16,73
DRY CARGO/CONTAINER	1	9	10	2,00	2.356	60.479	62.835	0,90	1.720	40.510	42.230	0,85
CHEMICAL TANKERS	2	52	54	10,82	9.497	521.685	531.182	7,62	6.441	336.702	343.143	6,90
LPG TANKERS	0	5	5	1,00	0	27.804	27.804	0,40	0	25.574	25.574	0,51
ASPHALT TANKERS	1	3	4	0,80	2.770	54.850	57.620	0,83	1.900	43.630	45.530	0,92
WATER BARGES	0	1	1	0,20	0	1.027	1.027	0,01	0	488	488	0,01
RO-RO SHIPS	0	18	18	3,61	0	195.680	195.680	2,81	0	460.099	460.099	9,25
RO-RO FERRY/PASSENGER	1	9	10	2,00	1.500	28.560	30.060	0,43	19.638	42.117	61.755	1,24
FERRY BOATS	1	7	8	1,60	2.314	13.015	15.329	0,22	1.596	10.250	11.846	0,24
TRAIN FERRIES	2	0	2	0,40	2.600	0	2.600	0,04	2.466	0	2.466	0,05
PASSENGER AND CARGO SHIPS	2	1	3	0,60	3.240	1.839	5.079	0,07	15.284	1.435	16.719	0,34
SCIENTIFIC RESEARCH VESSEL	0	3	3	0,60	0	7.780	7.780	0,11	0	24.309	24.309	0,49
SEA BUSES	0	1	1	0,20	0	29.642	29.642	0,43	0	431	431	0,01
SERVICE SHIPS	14	18	32	6,41	36.067	76.792	112.859	1,62	26.160	77.866	104.026	2,09
OIL TANKERS	10	35	45	9,02	21.624	1.435.840	1.457.464	20,91	12.499	768.862	781.361	15,71
TRAIN FERRIES/RO-RO	0	1	1	0,20	0	6.266	6.266	0,09	0	15.195	15.195	0,31
DRY CARGO/RO-RO	1	5	6	1,20	11.978	75.659	87.637	1,26	32.770	218.462	251.232	5,05
MARINE VEHICLES	5	1	6	1,20	10.168	8.000	18.168	0,26	5.500	6.926	12.426	0,25
TOTAL	**68**	**431**	**499**	100%	**433.833**	**6.536.005**	**6.969.838**	100%	**358.591**	**4.616.079**	**4.974.670**	100%

Table 14: The Average Age Profile of the Turkish Merchant Fleet (1000 DWT and Over)

SHIP TYPES	Number	Tonnage (DWT)	Tonnage (GT)	Ave. Age.
DRY CARGO	185	808.300	520.439	31
BULK CARRIER	56	2.471.477	1.423.014	19
CONTAINERS	49	1.041.029	832.387	15
DRY CARGO/CONTAINER	10	62.835	42.230	22
CHEMICAL TANKERS	54	531.182	343.143	18
LPG TANKERS	5	27.804	25.574	22
ASPHALT TANKERS	4	57.620	45.530	12
WATER BARGES	1	1.027	488	50
RO-RO SHIPS	18	195.680	460.099	17
RO-RO FERRY/PASSENGER	10	30.060	61.755	34
FERRY BOATS	8	15.329	11.846	30
TRAIN FERRIES	2	2.600	2.466	46
PASSENGER AND CARGO SHIPS	3	5.079	16.719	45
SCIENTIFIC RESEARCH VESSEL	3	7.780	24.309	25
SEA BUSES	1	29.642	431	31
SERVICE SHIPS	32	112.859	104.026	31
OIL TANKERS	45	1.457.464	781.361	18
TRAIN FERRIES/RO-RO	1	6.266	15.195	33
DRY CARGO/RO-RO	6	87.637	251.232	6
MARINE VEHICLES	6	18.168	12.426	7
TOTAL	**499**	**6.969.838**	**4.974.670**	**24,09**

Table 15: Turkish Merchant Fleet Distribution by Tonnage and Age Groups (1000 DWT and Over)

DIVISIONS OF TONNAGE	0-9 YEARS			10-19 YEARS			20-29 YEARS			30+ YEARS			TOTAL	
	No	DWT	%	No	DWT	%	No	DWT	%	No	DWT	%	No	DWT
150-1499	3	3.483	4,65%	6	7.886	10,52%	5	6.103	0,71%	45	57.479	6,75%	59	74.951
1500-5999	22	68.711	9,47%	45	167.757	23,12%	47	160.420	22,11%	109	328.828	45,30%	223	725.716
6000-9999	8	57.462	13,24%	21	159.288	36,71%	15	119.243	27,48%	14	97.863	22,57%	58	433.856
10000-34999	30	580.071	29,68%	42	732.468	37,48%	17	274.348	14,04%	18	367.227	18,79%	107	1.954.114
35000-52999	8	320.121	30,67%	11	500.504	47,95%	5	223.171	21,38%	0	0	0,00%	24	1.043.796
53000-79999	9	556.692	64,74%	4	231.039	26,87%	1	72.172	8,39%	0	0	0,00%	14	859.903
80000-119999	4	327.934	100,00%	0	0	0,00%	0	0	0,00%	0	0	0,00%	4	327.934
120000+	7	1.084.165	69,97%	3	465.403	30,03%	0	0	0,00%	0	0	0,00%	10	1.549.568
TOTAL	**91**	**2.998.639**	43%	**132**	**2.264.345**	32%	**90**	**855.457**	12%	**186**	**851.397**	12%	**499**	**6.969.838**

1.5. The Position of the Turkish Merchant Fleet Within the World Fleet

As of January 1st 2020, accounting only for ships with size 1000GT and above, Turkish fleet under foreign flag is 23,1 million DWT, whereas the total fleet under both Turkish and foreign flag amounts to 29,3 million DWT.

On the other hand, the ratio distribution of the fleet regarding the flags of registration is as follows: 21% percent of these ships are registered under the Turkish flag and 79% are registered under the foreign flags.

Table 16: Turkish Ships Under the National Flag and Foreign Flags (1000 GT and Over)

Years	National Flag			International Flag			Total Fleet Controlled		Years Change %
	No	**1000 DWT**	**%**	**No**	**1000 DWT**	**%**	**No**	**1000 DWT**	
1999	448	8.697	90%	69	915	10%	517	9.612	
2000	456	8.269	91%	96	855	9%	552	9.124	-5,1%
2001	445	7.321	82%	107	1.607	18%	552	8.928	-2,1%
2002	451	7.815	84%	117	1.514	16%	568	9.329	4,5%
2003	432	7.045	80%	147	1.772	20%	579	8.817	-5,5%
2004	408	6.556	75%	163	2.159	25%	571	8.715	-1,2%
2005	420	6.427	70%	237	2.725	30%	657	9.152	5,0%
2006	432	6.844	65%	353	3.609	35%	785	10.453	14,2%
2007	446	6.464	58%	424	4.650	42%	870	11.114	6,3%
2008	490	6.592	50%	513	6.591	50%	1.003	13.183	18,6%
2009	520	6.736	44%	636	8.592	56%	1.156	15.328	16,3%
2010	560	7.246	42%	665	9.954	58%	1.225	17.201	12,2%
2011	547	7.797	40%	672	11.863	60%	1.219	19.660	14,3%
2012	523	8.479	38%	642	14.093	62%	1.165	22.572	14,8%
2013	627	9.488	31%	842	20.838	69%	1.469	30.326	34,4%
2014	599	8.580	28%	890	21.846	72%	1.489	30.427	0,3%
2015	564	8.297	30%	834	19.209	70%	1.398	27.507	-9,6%
2016	551	8.272	28%	984	20.879	72%	1.535	29.151	6,0%
2017	525	7.800	27%	1.022	21.465	73%	1.547	29.265	0,4%
2018	483	7.288	25%	1.028	21.323	75%	1.511	28.611	-2,2%
2019	457	6.831	24%	1.027	21.758	76%	1.484	28.589	-0,1%
2020	410	6.194	21%	1.074	23.157	79%	1.484	29.352	2,7%

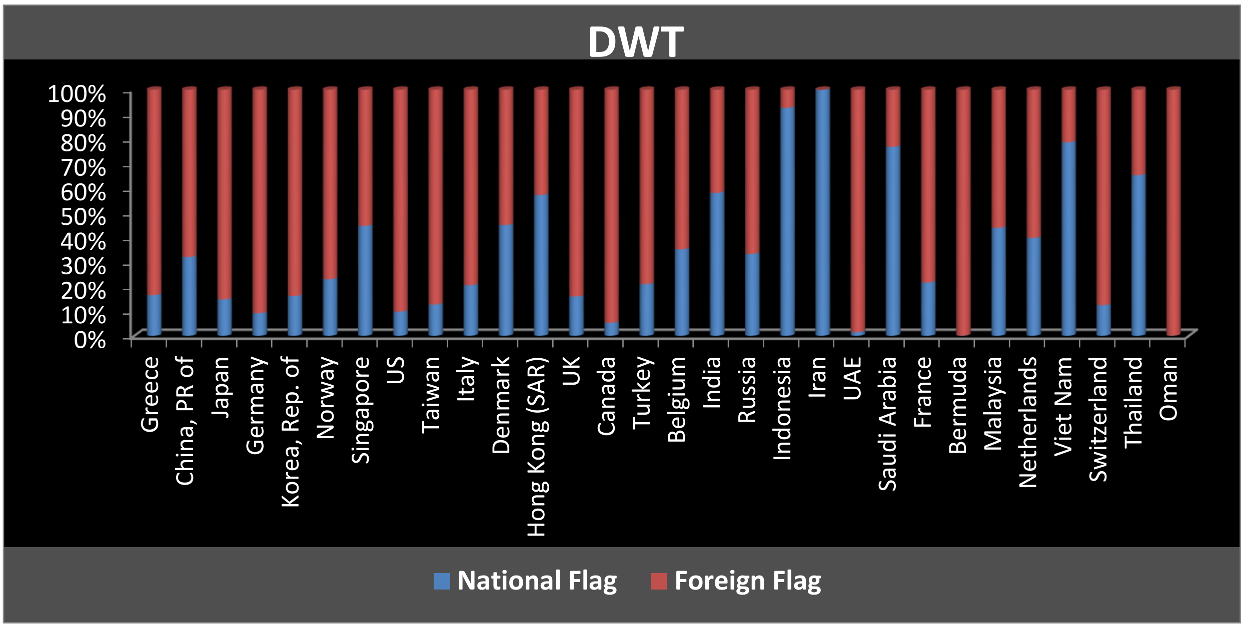
Source: ISL January-February 2020

Table 17: Total Fleet of the 30 Countries by National and Foreign Flags (01 January 2020) (1000 GT and Over)

Country of Control (DWT-Rank 2020)		National Flag				International Flag				Total Fleet				Year Change %	DWT % Share
		No	1000 DWT	1000 TEU	Years	No	1000 DWT	1000 TEU	Years	No	1000 DWT	1000 TEU	Years		
1	Greece	688	65.545	50	15.1	4.238	329.049	2.036	11.5	4.926	394.593	2.086	12.0	3.7	83.4
2	China, PR of	3.832	95.314	954	12.3	2.856	201.039	3.074	12.0	6.688	296.353	4.028	12.2	6.5	67.8
3	Japan	852	37.139	238	12.0	3.332	212.571	1.853	0	4.184	249.710	2.090	9.0	2.3	85.1
4	Germany	177	8.227	600	16.5	2.449	80.871	3.578	12.5	2.626	89.098	4.178	12.8	-6.7	90.8
5	Korea, Rep. of	722	13.865	145	18.0	908	71.490	422	11.5	1.630	85.354	567	14.4	6.9	83.8
6	Norway	587	17.582	58	15.3	1.125	58.460	485	14.1	1.712	76.042	543	14.5	1.3	76.9
7	Singapore	738	29.239	325	9.7	829	35.966	550	14.1	1.567	65.204	875	12.0	18.4	55.2
8	US	206	5.832	92	22.7	971	53.491	204	14.3	1.177	59.323	296	15.8	-0.5	90.2
9	Taiwan	130	6.559	175	15.6	815	44.763	833	12.7	945	51.322	1.008	13.1	-0.6	87.2
10	Italy	417	10.364	72	18.7	686	39.795	1.563	11.5	1.103	50.159	1.635	14.2	4.2	79.3
11	Denmark	361	20.410	1.412	14.6	521	24.766	1.148	12.0	882	45.176	2.561	13.1	-1.3	54.8
12	Hong Kong(SAR)	416	22.830	27	9.5	561	16.955	42	19.4	977	39.784	68	15.2	5.5	42.6
13	UK	185	6.106	115	13.0	604	31.889	839	12.1	789	37.995	954	12.3	18.6	83.9
14	Canada	132	1.688	10	24.1	386	29.904	920	11.1	518	31.593	930	14.4	0.1	94.7
15	**Turkey**	**410**	**6.194**	**84**	**22.1**	**1.074**	**23.157**	**242**	**19.4**	**1.484**	**29.352**	**325**	**20.1**	**2.6**	**78.9**
16	Belgium	90	10.044	18	10.8	159	18.411	62	9.8	249	28.455	80	10.2	1.2	64.7
17	India	629	15.573	19	14.6	167	11.162	4	13,7	796	26.735	23	14.4	8.7	41.8
18	Russia	1.148	7.749	97	29.2	336	15.422	39	20.1	1.484	23.171	136	27.1	2.3	66.6
19	Indonesia	1.956	20.051	212	23.3	74	1.582	18	19.4	2.030	21.633	230	23.1	4.1	7.3
20	Iran	208	18.173	103	18.7	4	12	-	33.8	212	18.185	103	19.0	3.8	0.1
21	UAE	49	277	6	15.0	545	17.603	135	20.2	594	17.879	141	19.8	24.6	98.5
22	Saudi Arabia	111	13.270	8	15.6	39	3.994	1	19.1	150	17.264	8	16.5	-3.6	23.1
23	France	118	3.528	242	13.8	203	12.698	940	10.9	321	16.226	1.181	12.0	1.5	78.3
24	Bermuda	1	13	-	11.3	90	14.502	40	7.7	91	14.515	40	7.8	23.0	99.9
25	Malaysia	198	6.380	23	18.2	132	8.114	1	15.3	330	14.494	25	17.0	3.3	56.0
26	Netherlands	566	4.704	201	12.8	330	7.075	75	14.0	896	11.779	276	13.3	1.8	60.1
27	Viet Nam	828	7.662	40	13.3	130	2.072	4	19.6	958	9.734	44	14.2	5.5	21.3
28	Switzerland	27	1.146	3	8.2	195	8.026	5	11.3	222	9.172	9	10.9	5.7	87.5
29	Thailand	311	5.614	30	25.7	76	2.964	31	16.1	387	8.578	61	23.8	13.9	34.6
30	Oman	5	6	-	12.8	51	8.069	1	9.2	56	8.075	1	9.5	2.5	99.9
Total 30 Countries		**16.098**	**461.084**	**5.360**	**16.5**	**23.886**	**1.385.869**	**19.144**	**12.6**	**39.984**	**1.846.954**	**24.504**	**14.2**	**4.4**	**75.0**
Others		2.311	33.750	221	23.6	2.609	75.285	351	20.8	4.920	109.035	572	22.1	3.6	69.0
Subtotal		18.409	494.835	5.581	17.4	26.495	1.461.155	19.495	13.4	44.904	1.955.989	25.076	15.0	4.4	74.7
Unknown										470	5.607	139	25.4	-4.2	
World Total										**45.374**	**1.961.597**	**25.215**	**15.1**	**4.3**	

Source: ISL January-February 2020

Graph 10: By Country of Domicile as of 1 January 2020



The World fleet (300 GT and over) consists of 55.655 ships with a total size of 1.970.526.000 DWT based in 155 countries as of 01.01.2020. Turkish merchant fleet is positioned 30th in the world as shown in the Table.

Panama leads with a share of 16,3%, Liberia is second with 13,5% and Marshall Island is third with share of 12,9% of the total registry.

Graph 11: World Merchant Fleet Ranking by Turkish Flag

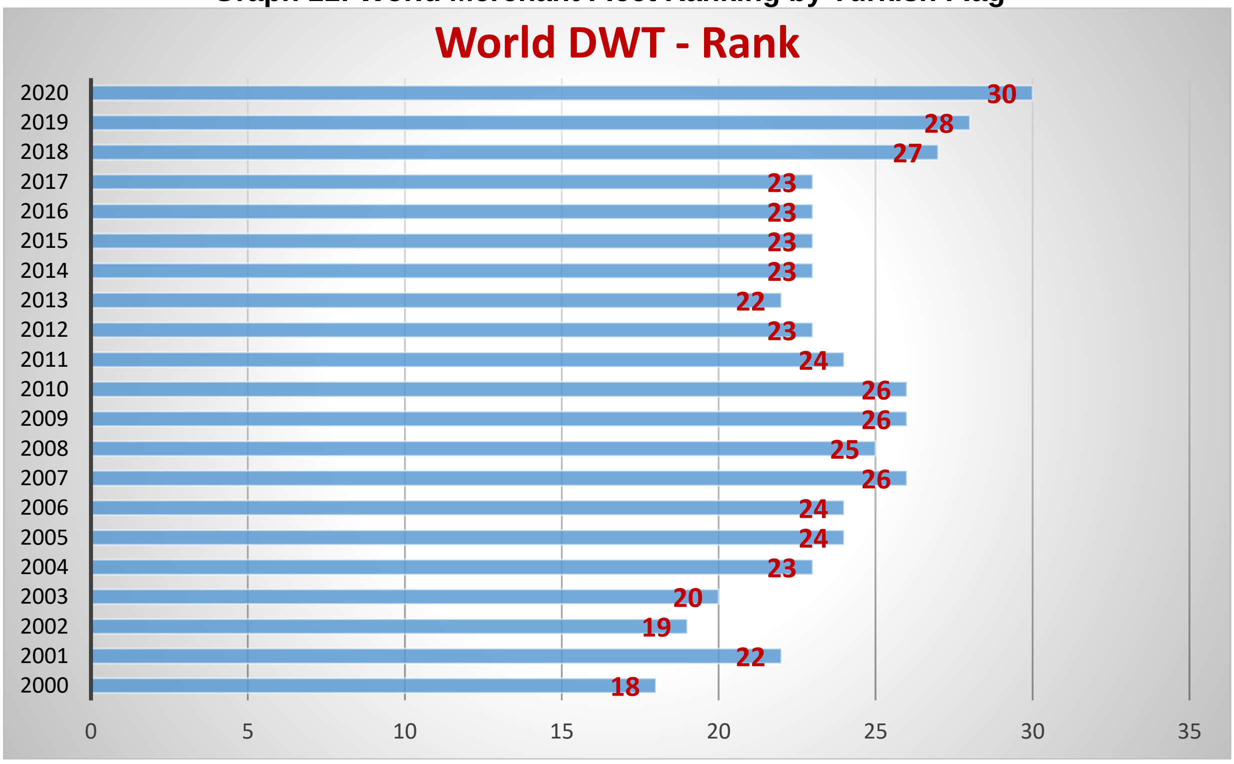


Table 18: World Merchant Fleet Ranking by Flag as of 1 January 2020 (300 GT and Over)

DWT Rank 2020	Flag	January 1st, 2019				January 1st, 2020				DWT % Share	Years Change %
		No of Ships	1000 GT	1000 DWT	1000 TEU	No of Ships	1000 GT	1000 DWT	1000 TEU		
1	Panama	6.398	211.917	323.031	3.291	6.486	212.179	320.335	3.489	16.3	-0.8
2	Liberia	3.332	149.541	236.874	3.876	3.553	165.854	266.245	4.009	13.5	12.4
3	Marshall Islands	3.255	146.245	237.316	1.267	3.404	155.141	254.460	1.250	12.9	7.2
4	Hong Kong (SAR)	2.544	124.263	197.725	3.454	2.534	126.763	200.544	3.596	10.2	1.4
5	Singapore	2.326	84.497	126.533	2.345	2.362	90.016	135.649	2.467	6.9	7.2
6	Malta	1.998	73.890	109.635	1.590	2.036	79.320	114.468	2.036	5.8	4.4
7	China, PR of	4.346	59.916	93.592	936	4.425	61.277	95.759	954	4.9	2.3
8	Greece	913	39.573	69.099	50	913	39.843	68.887	51	3.5	-0.3
9	Bahamas	1.146	54.383	65.727	177	1.133	55.419	65.224	212	3.3	-0.8
10	Japan	2.552	27.083	38.385	159	2.591	28.738	39.822	244	2.0	3.7
11	UK	735	30.755	42.844	826	634	24.038	34.465	384	1.7	-19.6
12	S. Cyprus	839	21.801	33.774	461	864	22.402	33.785	497	1.7	0.0
13	Denmark	504	20.310	22.436	1.494	516	21.035	23.177	1.528	1.2	3.3
14	Indonesia	3.267	14.689	20.564	216	3.391	16.037	22.651	218	1.1	10.1
15	Portugal	517	14.667	19.620	907	561	15.284	20.798	902	1.1	6.0
16	Norway	807	15.099	18.961	62	865	16.037	19.969	61	1.0	5.3
17	Iran	375	2.747	4.126	106	449	10.785	19.402	104	1.0	370.2
18	India	883	9.746	16.571	58	888	9.645	16.501	57	0.8	-0.4
19	Korea, Rep. of	1.021	8.763	12.439	110	1.025	10.558	14.763	145	0.7	18.7
20	Saudi Arabia	125	7.334	13.054	8	129	7.536	13.479	8	0.7	3.3
21	Italy	673	14.541	12.904	121	641	13.976	11.372	109	0.6	-11.9
22	Belgium	92	6.033	10.178	1	102	6.230	10.358	22	0.5	1.8
23	Russia	1.515	6.542	8.307	102	1.546	6.989	8.957	108	0.5	7.8
24	US	364	7.326	8.126	241	363	7.652	8.388	253	0.4	3.2
25	Viet Nam	1.370	4.710	7.710	40	1.401	5.113	8.359	40	0.4	8.4
26	Germany	246	7.664	8.352	600	238	7.672	8.338	605	0.4	-0.2
27	Bermuda	133	9.973	7.929	39	128	9.713	7.355	44	0.4	-7.2
28	France	203	5.777	6.956	220	218	6.011	7.116	242	0.4	2.3
29	Malaysia	417	5.656	6.860	23	429	5.627	6.907	27	0.4	0,7
30	**Turkey**	**782**	**5.270**	**7.303**	**120**	**735**	**4.943**	**6.698**	**97**	**0.3**	**-8.3**
31	Taiwan	184	3.820	5.636	160	200	4.421	6.659	176	0.3	18.1
32	Antigua & Barbuda	744	5.631	7.478	381	691	5.000	6.590	343	0.3	-11.9
33	Thailand	565	3.443	5.650	30	567	3.930	6.544	31	0.3	15.8
34	Cayman Islands	144	4.454	6.611	1	138	4.392	6.524	1	0.3	-1.3
35	Philippines	1.021	3.716	5.362	52	1.041	4.166	6.165	51	0.3	15.0
36	Netherlands	773	6.138	6.237	246	763	6.067	6.147	246	0.3	-1.4
37	Brazil	127	2.651	4.310	54	131	2.752	4.427	64	0.2	2.7
38	Kuwait	40	2.275	4.135	1	40	2.317	4.182	1	0.2	1.1
39	Bangladesh	276	1.359	2.370	1	315	1.840	3.185	0	0.2	34.4
40	Belize	448	1.960	3.086	17-	452	1.890	2.936	15	0.1	-4.8
155	Total	54.672	1.266.660	1.889.112	24.328	55.655	1.320.140	1.970.526	25.227	100	4.3

Source: ISL January-February 2020

1.6.Comparison of the Turkish Merchant Fleet with the Neighboring Countries

The capacity of the merchant fleet of Turkey and the neighboring countries are shown in the following Table (19).

Greece is in the 1st place being among the largest merchant fleets of the world. Southern Cyprus is 2nd,Iran is 3rd, Russia 4th and Turkey is in 5th place.

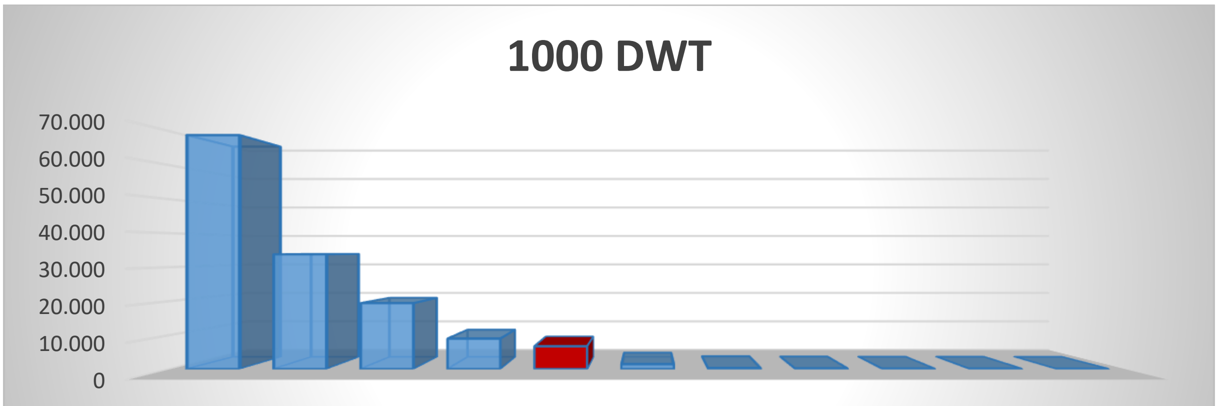
In addition to the national flags, when ships operating under foreign flag are added to the home registry, Turkey rises to 29,3 million DWT, Greece to 394 million DWT, Russia to 23 million DWT and Iran to 18 million DWT.

Table 19 : Turkish Merchant Fleet and the Neighbouring Countries (300 GT and Over)

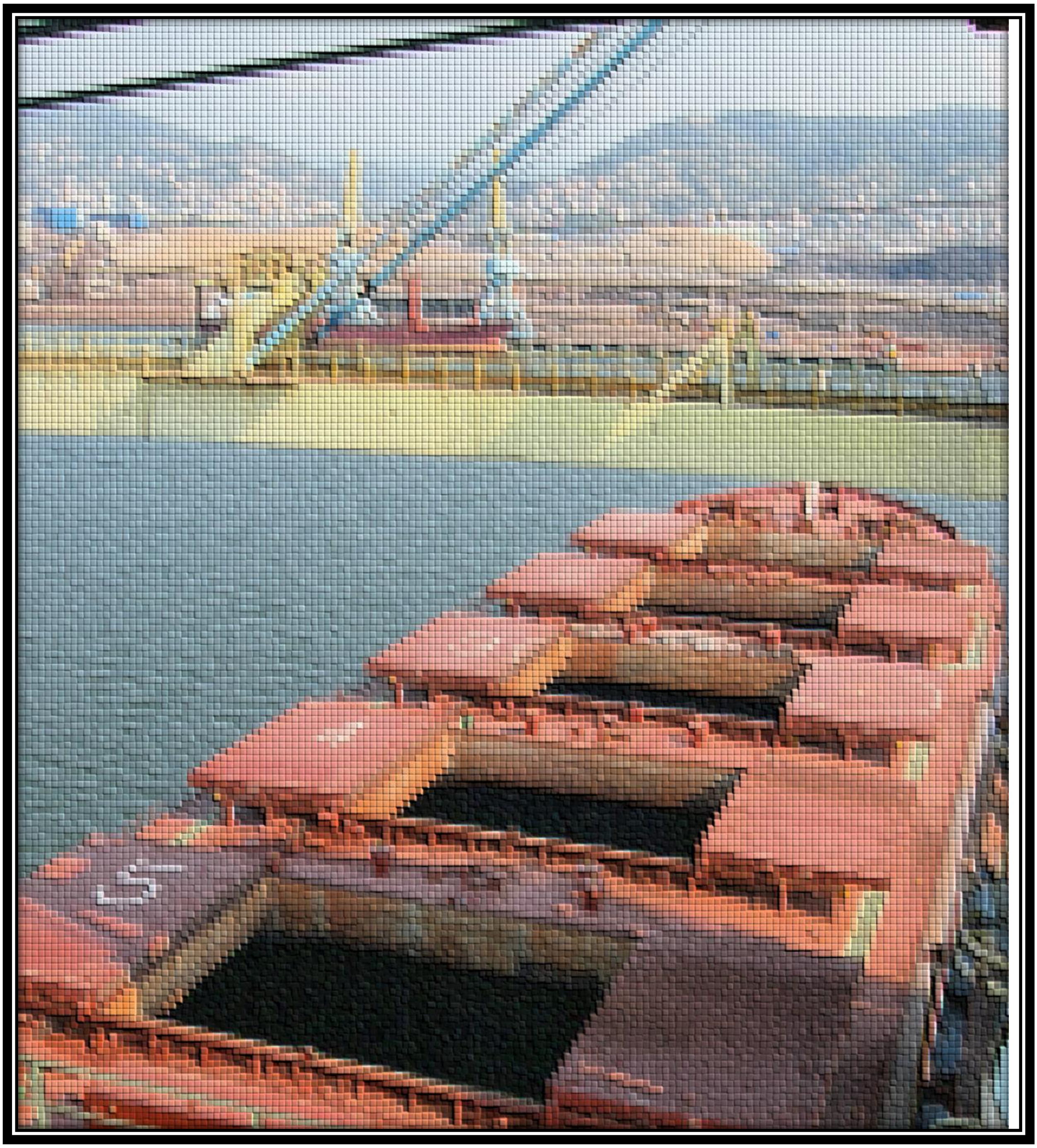
World DWT Rank	Country	No of Ships	1000 DWT	World %	Change %
8	Greece	913	68.887	3,5%	-0,3%
12	S. Cyprus	864	33.785	1,7%	0,0%
17	Iran	449	19.402	1,0%	370,2%
23	Russia	1.546	8.957	0,5%	7,8%
30	Turkey	735	6.698	0,3%	-8,3%
53	Egypt	99	1.431	0,1%	3,5%
88	Ukraine	103	274	0,0%	0,9%
98	Bulgaria	29	144	0,0%	-2,3%
107	Syria	13	78	0,0%	25,0%
108	Georgia	20	76	0,0%	-39,7%
121	Romania	16	41	0,0%	-

Source: ISL January-February 2020

Graph 12: Turkish Merchant Fleet and the Neighbouring Countries (01 January 2019)



	Greece	S. Cpyrus	Iran	Russia	Turkey	Egypt	Ukraine	Bulgaria	Syria	Georgia	Romania
1000 DWT	68.887	33.785	19.402	8.957	6.698	1.431	274	144	78	76	41



CHAPTER II

DEVELOPMENTS IN SEABORNE TRADE

2. DEVELOPMENTS IN SEABORNE TRADE

2.1. Developments In The Transportation Foreign Trade Cargoes

2020 is a projection. Trends calculated using an average of the 13 year period up to and including the current year, or a compound average growth rate over the period.

Estimated share of total world trade in 2019 (mt): sea 83%, land (road+rail) 16%, air <1%.

Table 20 : World Total Trade and World Seaborne Trade

Year	*World Total Trade (all modes) Billion Tonnes*	*World Transport Change (%)*	*World Seaborne Trade Billion Tonnes*	*Seaborn Trade as % Total*
2008	10,9	-0,12	8,6	79%
2009	9,6	13%	8,3	87%
2010	10,8	7%	9,1	84%
2011	11,5	3%	9,5	82%
2012	11,8	3%	9,9	84%
2013	12,2	3%	10,2	83%
2014	12,6	3%	10,5	83%
2015	12,9	3%	10,7	83%
2016	13,2	5%	11,0	84%
2017	13,8	3%	11,5	84%
2018	14,2	1%	11,8	83%
2019	14,3	1%	11,9	83%
2020	14,7	3%	12,2	83%

Source: Clarksons Research Feb.2020

Graph 13: World Total Trade and World Seaborne Trade

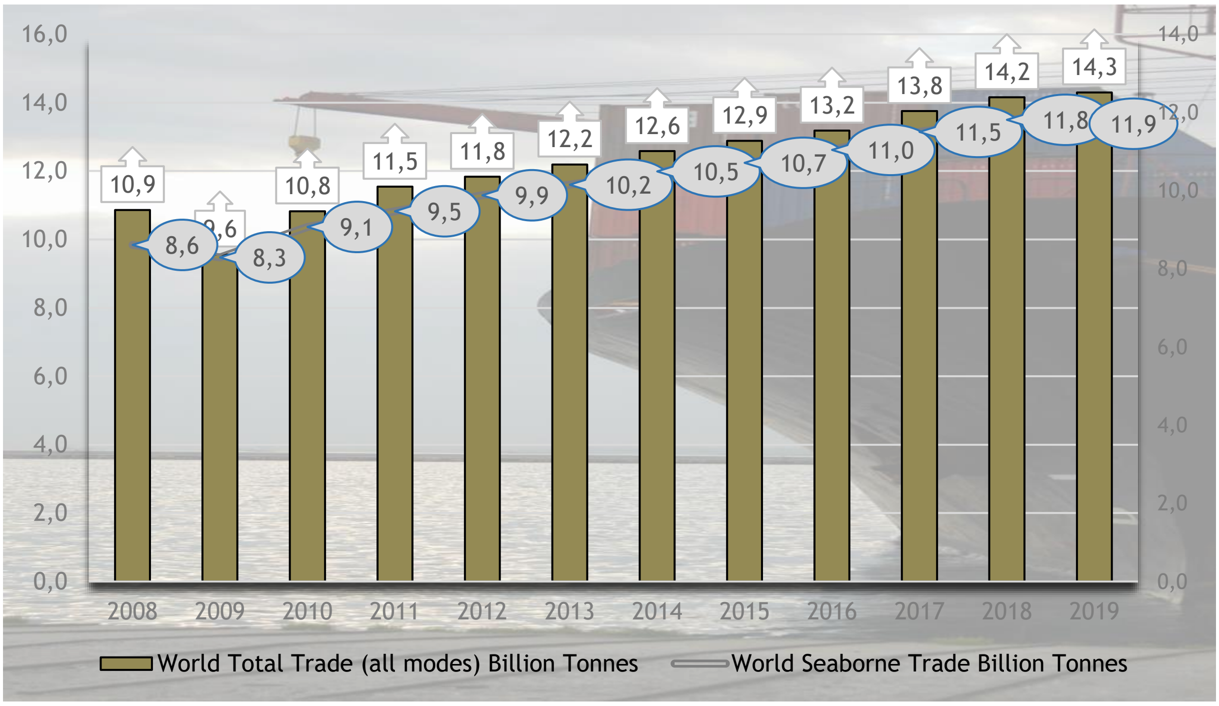


Table 21: Turkish Foreign Trade Transportation by Modes (%)

Year	Sea	Rail	Road	Air	Pipeline and Other
2006	87,4	1,1	10,4	0,1	1
2007	87,4	1,1	10	0,6	0,9
2008	86,5	1,1	10,7	0,7	1
2009	85	0,8	12,6	0,8	0,8
2010	85,6	0,8	12,5	0,3	0,8
2011	85,8	0,8	11,8	0,4	1,2
2012	87	0,6	10,6	0,4	1,4
2013	86,4	0,5	11,4	0,4	1,3
2014	86,2	0,4	11,2	0,5	1,7
2015	87,7	0,5	10,7	0,4	0,7
2016	88	0,5	10,8	0,3	0,4
2017	88,5	0,4	10,3	0,3	0,5
2018	88,7	0,4	10,3	0,4	0,2
2019	88,6	0,4	10,3	0,4	0,3

Source: Turkstat

88,60% of Turkey's foreign trade is being realised by maritime transportation. The progress between the years of 2006-2019 is shown in the Table below by the modes of transportation.

62.09 % of the volume of Turkey's foreign trade transportation has been carried by sea; 24,66 % has been carried by road; 0.69 % has been carried by rail; 12,45 % has been carried by air and 0,11 % has been carried by other transportation modes.

Graph 14: Foreign Trade Transportation by Modes (%)

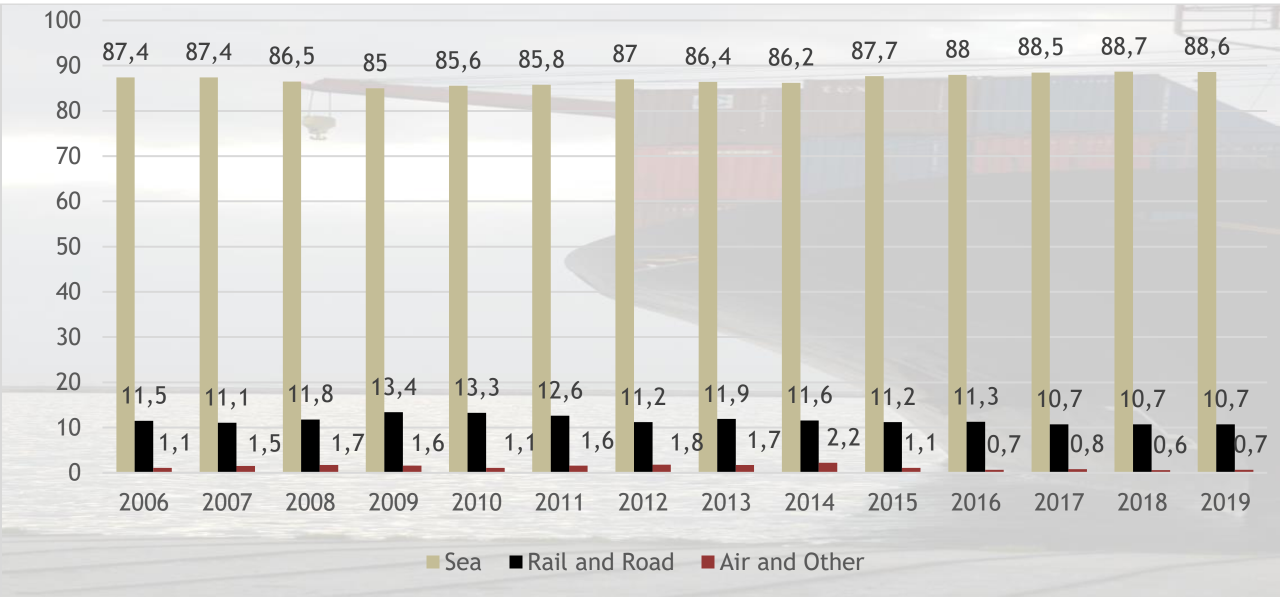
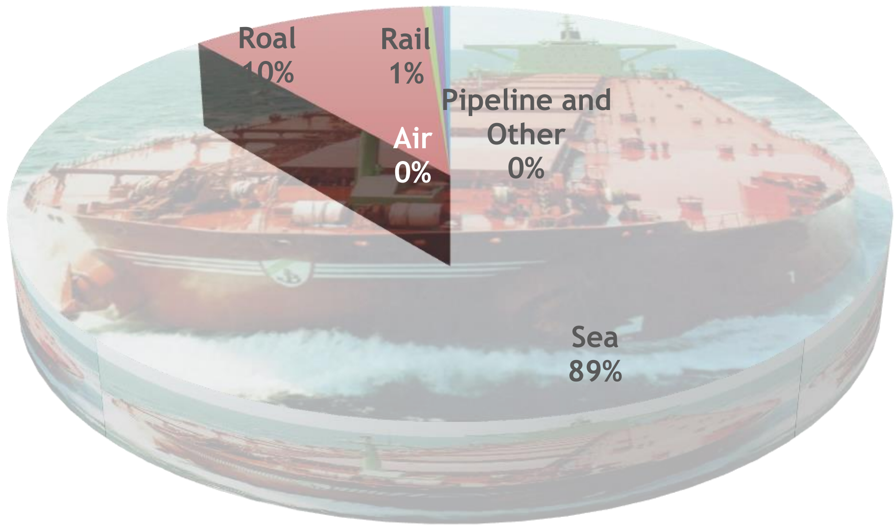


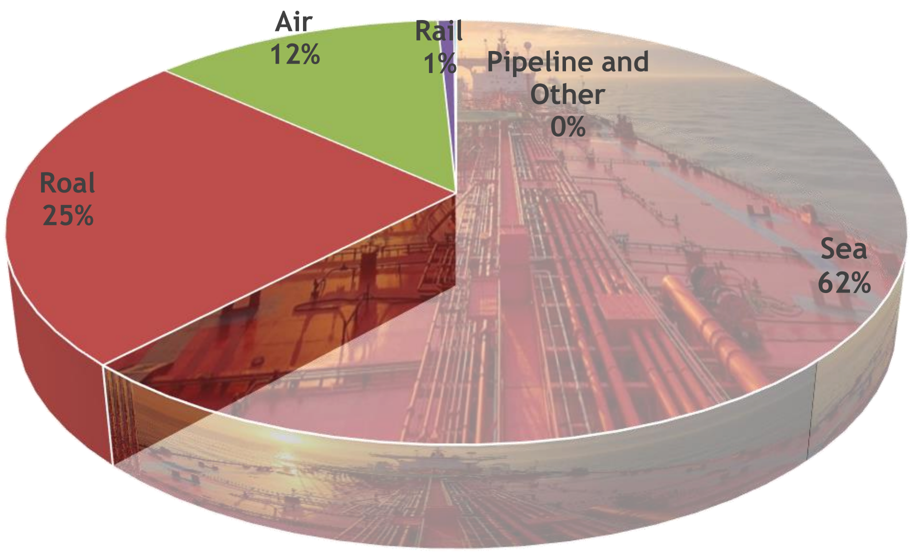
Table 22: Foreign Trade Transportation by Modes (ton) and ($)

Modes	Export Quantity %	Import Quantity %	Seaborn Trade Quantity %		Export Value US $ %	Import Value US $ %	Seaborn Trade Value US $ %
Sea	**79,48%**	**94,86%**	**88,55%**		**61,82%**	**62,36%**	**62,09%**
Roal	19,17%	4,03%	10,25%		29,00%	20,42%	24,66%
Air	0,88%	0,05%	0,39%		8,42%	16,38%	12,45%
Rail	0,46%	0,50%	0,48%		0,56%	0,81%	0,69%
Pipeline and Other	0,00%	0,55%	0,32%		0,19%	0,02%	0,11%
Total	100,00%	100,00%	100,00%		100,00%	100,00%	100,00%

Source: Turkstat

Grafik 15: Foreign Trade Transportation by Modes (ton %) and ($ %)





2.2. Developments Of Seaborne Trade

The progress of Turkey's seaborne trade has been examined under two headings; maritime cabotage and international transportation.

2.3. Cabotage Transportation

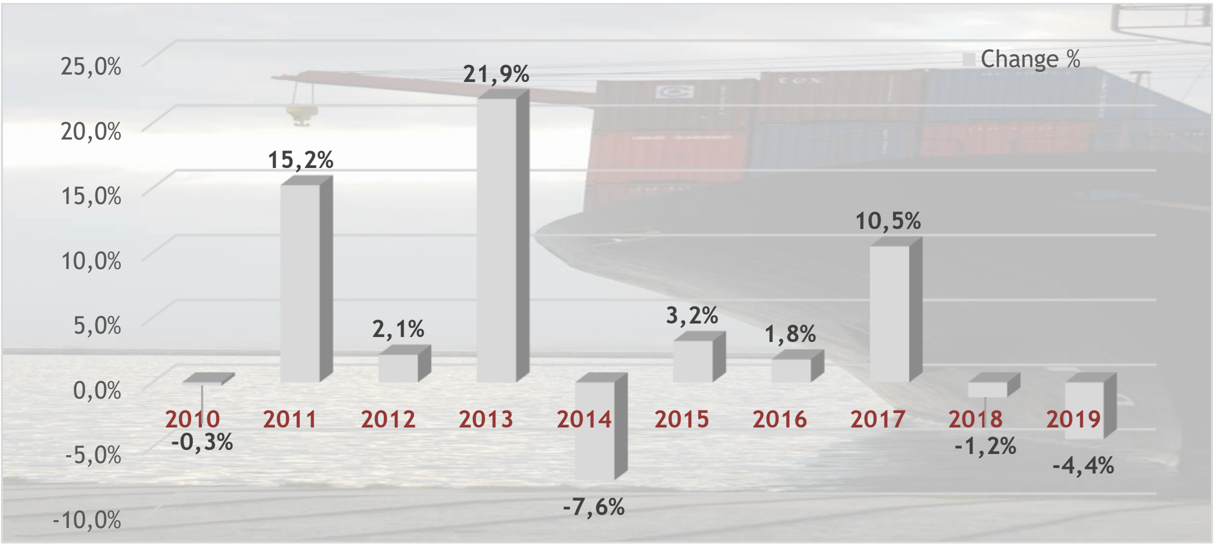
According to the Turkish Maritime Cabotage Law No. 815, the maritime transportation carried out by Turkish ships, being loaded at the harbors and seaports of Turkey and discharged at the harbors and seaports of Turkey, is defined as maritime cabotage.
The number of cargoes carried bulk and partially between 2007- 2019 in Turkish ports and wharves on ton basis is presented in Table 23.

Table 23: 2007-2019 Cabotage Transportation

Year	Cabotage Loading (tons)	Change %
2007	18.004.619	18,97%
2008	20.136.037	11,84%
2009	19.485.900	-3,23%
2010	19.434.485	-0,26%
2011	22.389.570	15,21%
2012	22.869.458	2,14%
2013	27.868.157	21,86%
2014	25.753.831	-7,59%
2015	26.578.284	3,20%
2016	27.050.225	1,78%
2017	29.898.010	10,50%
2018	29.550.554	-1,16%
2019	28.251.017	-4,40%

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 16: Rate of Change in Cabotage Transportation Between 2010-2019 (%)



The total cabotage transportation in 2019 is 28.251.017 tons cabotage transportation increased about 56,9 % between the years of 2007-201.

Table 24: Cabotage Transportation by the Types of Cargoes in 2019 (mtons)

Cargo Types	Cabotage Loading	Cabotage Unloading	Total	%
Dry Bulk Cargo	6.145.691	6.025.082	12.170.773	21,7%
General Cargo	5.010.088	4.664.094	9.674.182	17,2%
Liquid Bulk Cargo	12.564.433	12.575.311	25.139.744	44,8%
Container	4.496.857	4.564.782	9.061.639	16,1%
Vehicle	33.948	32.438	66.386	0,1%
Total	28.251.017	27.861.707	56.112.724	100,0%

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 17: 2019 Cabotage Transportation (Loading-Unloading) by the Types of Cargoes

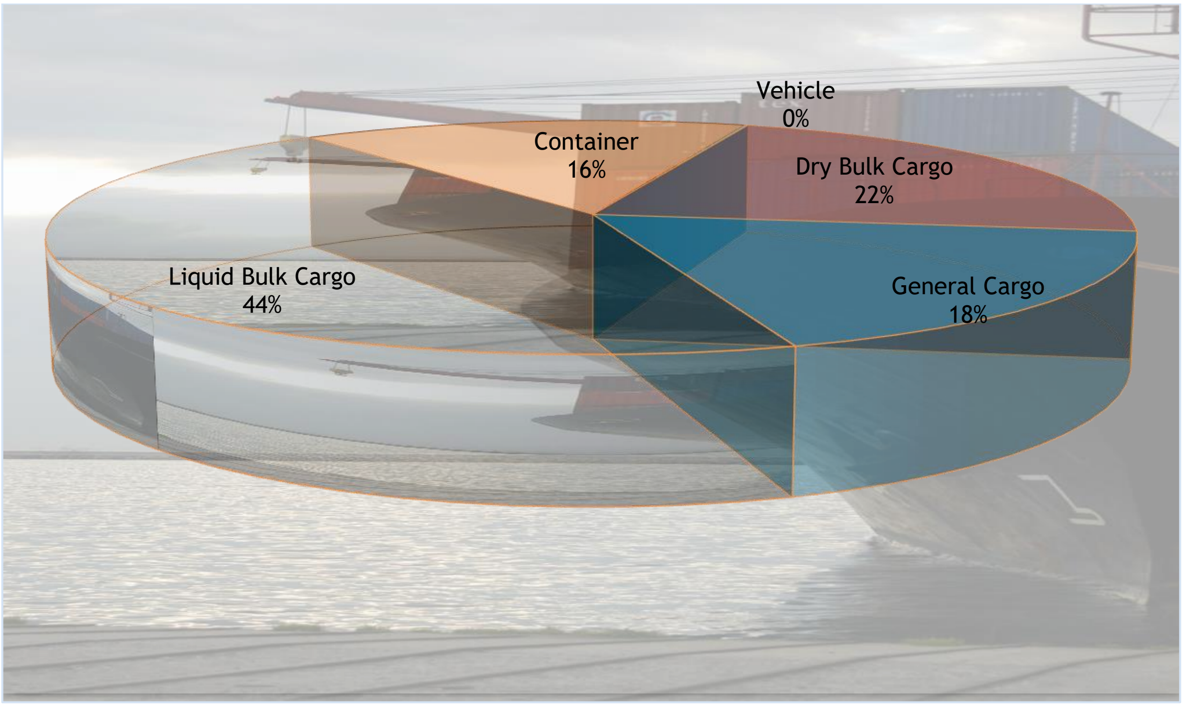


Table shows the cabotage transportation by cargo types. The first four cargo types are liquid bulk cargo (44%), dry bulk cargo (22%), general cargo (18%) and container (16%).

The ports with the largest shares in cabotage handling in 2019 are Kocaeli Port (19%), Aliağa and Iskenderun Port (12%).

Table 25: 2019 Cabotage Transportation in Ports

Port Authority	Cabotage Loadıng	Cabotage Unloadıng	Total	%
KOCAELİ	5.131.272	5.488.419	10.619.691	19%
ALİAĞA	5.555.142	1.416.726	6.971.868	12%
İSKENDERUN	5.165.239	1.359.879	6.525.118	12%
BOTAŞ	1.493.535	2.298.967	3.792.502	7%
TEKİRDAĞ	748.152	2.913.874	3.662.026	7%
ANTALYA	787.422	1.875.275	2.662.697	5%
GEMLİK	1.405.111	1.238.166	2.643.277	5%
AMBARLI	1.009.006	1.577.790	2.586.796	5%
İSTANBUL	67.210	2.465.453	2.532.663	5%
KARADENİZ EREĞLİ	479.835	1.606.160	2.085.995	4%
SAMSUN	979.111	1.027.676	2.006.787	4%
KARABİGA	496.783	632.498	1.129.281	2%
ÇANAKKALE	967.150	71.007	1.038.157	2%
MERSİN	248.276	785.780	1.034.056	2%
MARMARA ADASI	974.367	3.216	977.583	2%
İZMİR	358.754	461.811	820.565	1%
BANDIRMA	492.273	232.810	725.083	1%
ÜNYE	418.265	119.219	537.484	1%
TUZLA	320.303	183.176	503.479	1%
TİREBOLU	900	461.294	462.194	1%
HOPA	275.787	161.409	437.196	1%
RİZE	13.276	421.828	435.104	1%
ZONGULDAK	170.051	263.432	433.483	1%
TRABZON	190.355	240.180	430.535	1%
İNEBOLU	326.387	29.519	355.906	1%
YALOVA	69.699	239.293	308.992	1%
GÖCEK	0	106.703	106.703	0%
İĞNEADA	71.200	0	71.200	0%
BARTIN	1.900	59.088	60.988	0%
ÇEŞME	3	48.933	48.936	0%
MARMARİS	0	20.968	20.968	0%
AMASRA	11.105	2.199	13.304	0%
ALANYA	0	12.009	12.009	0%
FATSA	4.624	5.825	10.449	0%
BOZCAADA	0	9.775	9.775	0%
GİRESUN	4.146	5.193	9.339	0%
GÜLLÜK	9.058	0	9.058	0%
KARASU	0	7.598	7.598	0%
ERDEK	0	6.507	6.507	0%
ŞİLE	5.320	0	5.320	0%
TAŞUCU	0	1.987	1.987	0%
DİKİLİ	0	65	65	0%
Total	28.251.017	27.861.707	56.112.724	100%

Source: Republic of Turkey Ministry of Transport and Infrastructure

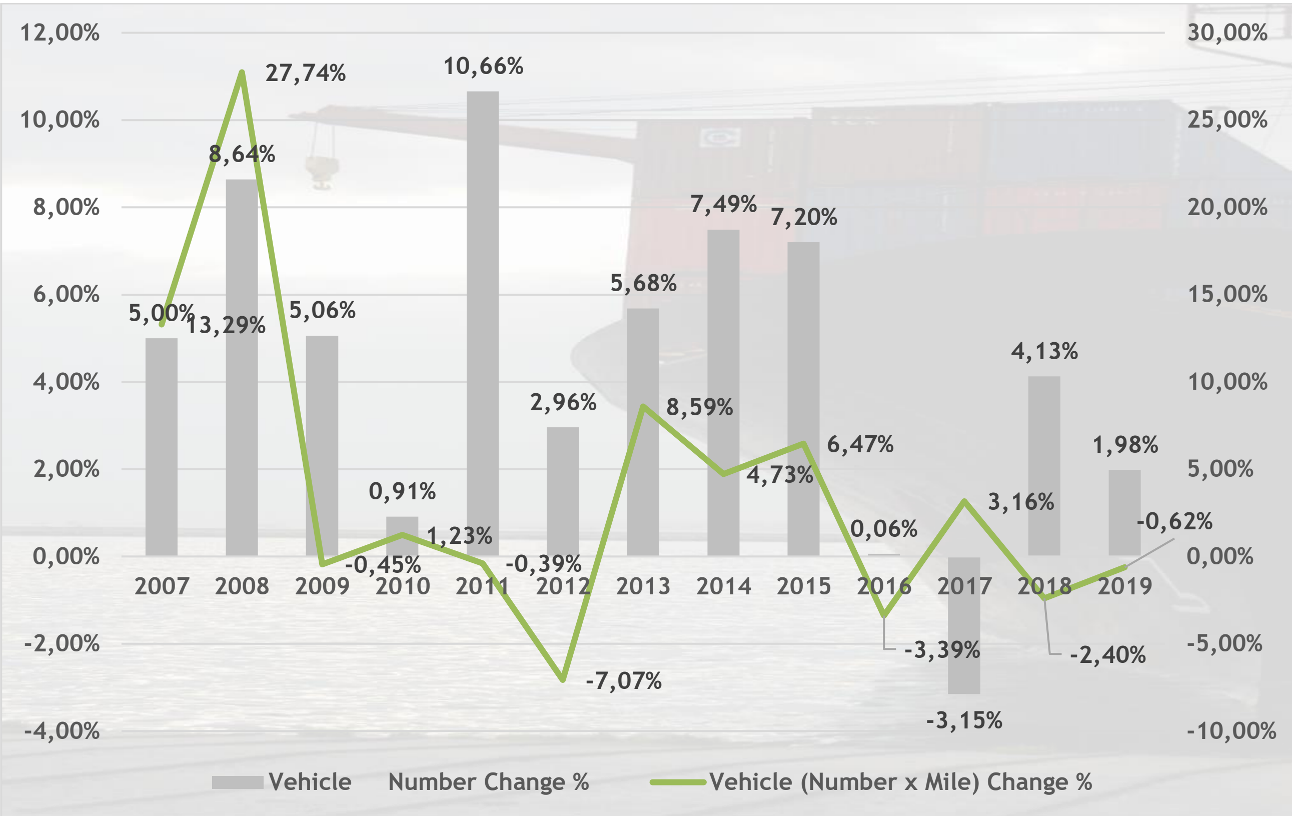
Table 26: 2007- 2019 Cabotage Transportation Vehicle Number

Year	Vehicle Number	Annual Change %	Vehicle (Number x Mile)	Annual Change %
2007	8.161.999	5,00%	59.942.527	13,29%
2008	8.866.797	8,64%	82.950.808	27,74%
2009	9.315.772	5,06%	82.580.396	-0,45%
2010	9.400.735	0,91%	83.607.444	1,23%
2011	10.402.917	10,66%	83.283.519	-0,39%
2012	10.710.645	2,96%	77.785.568	-7,07%
2013	11.318.561	5,68%	85.096.902	8,59%
2014	12.166.505	7,49%	89.322.962	4,73%
2015	13.042.399	7,20%	95.505.115	6,47%
2016	13.050.241	0,06%	92.267.227	-3,39%
2017	12.638.289	-3,15%	95.185.009	3,16%
2018	13.159.820	4,13%	92.868.442	-2,40%
2019	13.420.802	1,98%	92.289.144	-0,62%

Source: Republic of Turkey Ministry of Transport and Infrastructure

In table 26, the changes in cabotage transportation of vehicles between the years 2007 and 2019 are being shown. The number of carried vehicles increased 64 % in total between 2007 and 2019.

Graph 18: 2007- 2019 Cabotage Transportation Vehicle Number



The Table about the numbers of passengers carried via cabotage transportation shows that the largest increase was in 2007 with 10.7% and then, in 2013 the increase has decreased to

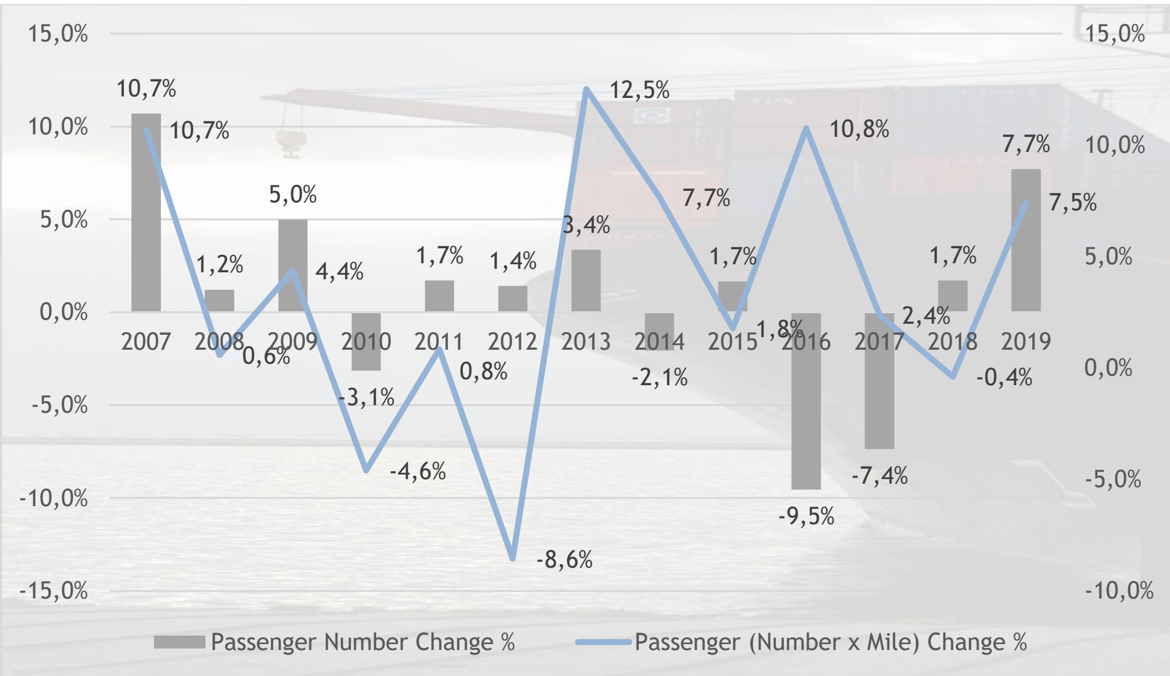
12,51 %. Between the years 2007-2019, a increased of 0,33 % in passenger number was observed.

Table 27: 2007- 2019 Cabotage Transportation Passenger Number

Year	Passenger Number	Annual Change %	Passenger (Number x Mile)	Annual Change %
2007	149.824.929	10,70%	842.975.355	10,69%
2008	151.645.639	1,22%	847.917.253	0,58%
2009	159.194.370	4,98%	886.609.389	4,36%
2010	154.198.088	-3,14%	847.715.977	-4,59%
2011	156.842.003	1,71%	854.909.150	0,84%
2012	159.076.921	1,42%	787.572.051	-8,55%
2013	164.426.997	3,36%	900.226.869	12,51%
2014	161.048.004	-2,06%	974.923.011	7,66%
2015	163.723.544	1,66%	992.592.392	1,78%
2016	148.101.589	-9,54%	1.112.255.126	10,76%
2017	137.195.691	-7,36%	1.138.826.307	2,38%
2018	139.556.332	1,72%	1.134.349.263	-0,39%
2019	150.312.216	7,71%	1.218.893.742	7,45%

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 19: 2007- 2019 Cabotage Transportation Passenger Number



2.4. Developments in International Sea Transportation

International sea transportation includes all transit cargoes that are loaded and unloaded in the harbors of Turkey, and Turkish exports and imports goods.

Table 28: Share of Turkish Flagged Vessels Within International Shipping (2010-2019) tons

Years	Seaborne Trade Total	Export	Import	Turkish Flag	Turkish Flag %	Foreign Flag %
2010	246.570.931	83.945.162	162.625.769	40.494.118	16	84
2011	255.334.712	81.779.528	173.555.184	42.396.010	17	83
2012	283.782.414	91.307.486	192.474.928	38.712.247	14	86
2013	277.335.605	89.553.990	187.781.615	34.610.534	12	88
2014	283.316.220	88.544.792	194.771.428	33.624.322	12	88
2015	300.478.930	92.152.622	208.326.308	36.479.586	12	88
2016	309.937.639	94.805.120	215.132.519	38.623.279	12	88
2017	347.348.092	113.692.068	233.656.024	36.815.820	11	89
2018	328.969.455	110.424.635	218.544.820	35.510.231	11	89
2019	353.081.390	131.676.578	221.404.812	27.895.737	8	92

Source: Republic of Turkey Ministry of Transport and Infrastructure

Compared with the previous year, export shipments increased to 131 million tons, import shipments increased to 221 million tons in 2019. The share of Turkish flag vessels transporting foreign trade cargoes has been realized as 8 % on average.

As a whole, the share of the Turkish flag vessels transporting foreign trade cargoes between 2010-2019 has been realized as 12% on the average.

Graph 20 : Development of the Seaborne Trade (Tons)

The transportation of foreign trade cargoes by Turkish flag vessels includes 6 % of the total of 221 million tonnes imports and 11 % of the total of 131 million tonnes exports.

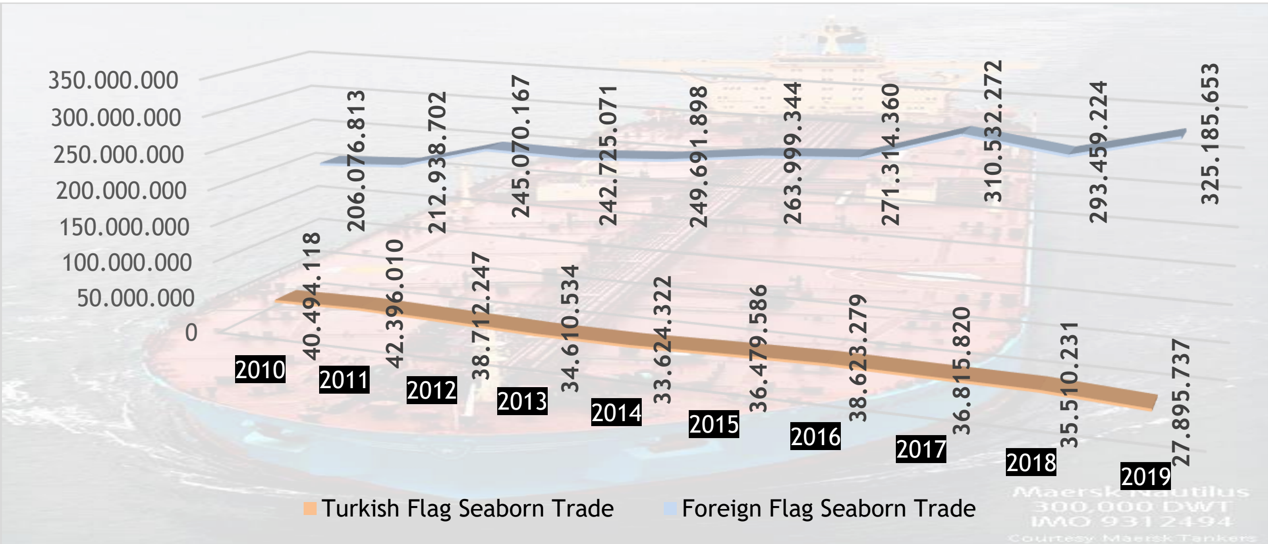
Table 29: Foreign Trade Transportation by Flags (Tons)

Year	Turkish Flag					Foreign Flag				
	Import	%	Export	%	Seaborn Trade	Import	%	Export	%	Seaborn Trade
2010	28.878.432	18	11.615.686	14	40.494.118	133.747.337	82	72.329.476	86	206.076.813
2011	30.122.065	17	12.273.945	15	42.396.010	143.433.119	83	69.505.583	85	212.938.702
2012	26.476.350	14	12.235.897	13	38.712.247	165.998.578	86	79.071.589	87	245.070.167
2013	22.949.887	12	11.660.647	13	34.610.534	164.831.728	88	77.893.343	87	242.725.071
2014	20.880.367	11	12.743.955	14	33.624.322	173.891.061	89	75.800.837	86	249.691.898
2015	22.724.776	11	13.754.810	15	36.479.586	185.601.532	89	78.397.812	85	263.999.344
2016	23.350.424	11	15.272.855	16	38.623.279	191.782.095	89	79.532.265	84	271.314.360
2017	21.677.485	9	15.138.335	13	36.815.820	211.978.539	91	98.553.733	87	310.532.272
2018	19.850.109	9	15.660.122	14	35.510.231	198.694.711	91	94.764.513	86	293.459.224
2019	13.763.576	6	14.132.161	11	27.895.737	207.641.236	94	117.544.417	89	325.185.653

Source: Republic of Turkey Ministry of Transport and Infrastructure

A comparison between 2010 and 2019 of the transportation of foreign trade cargoes reveals that the total amount increased from 246 million tons in 2010 to 353 million tonnes in 2019. Import goods increased from 162 million tons to 221 million tons, whereas export goods increased from 83 million tons to 131 million tons.

Graph 21: Turkish/Foreign Flag Shares (Tons)



The share of Turkish flag vessels in total foreign trade transportation increased to 14 million tons for exports and decreased to 13 million tons for imports in 2019 when compared to 11 and 28 million tons respectively in 2010.

The share of foreign flag vessels in total foreign trade transportation, increased to 117 million tons for exports and also increased to 207 million tons for imports in 2019, when compared with the 72 and 133 million tons in 2010.

2.5. Developments in Foreign Trade Transportation by Types of Cargoes

The major shipping segments of the 131 million tons exports and transit loading goods in 2019, are %39 Container, 31 % dry bulk Cargo, 14 % general cargo, % 12 Liquid Bulk Cargo and %4 vehicles.

Table 30: Export and Transit Loading by Cargo Types

Cargo Types	Turkish Flag Export	Foreign Flag Export	Total Export	Export %	Transit Loading	Total
Dry Bulk Cargo	3.768.212	37.320.058	41.088.270	31%	235.052	47.469.013
General Cargo	1.677.114	17.110.067	18.787.181	14%	117.112	23.914.381
Liquid Cargo	842.485	14.379.808	15.222.293	12%	53.174.342	80.961.068
Container	3.960.738	47.315.785	51.276.523	39%	11.431.667	67.205.047
Vehicle	3.883.612	1.418.699	5.302.311	4%	2.558	5.338.817
Total	14.132.161	117.544.417	131.676.578	100%	64.960.731	224.888.326

Source: Republic of Turkey Ministry of Transport and Infrastructure

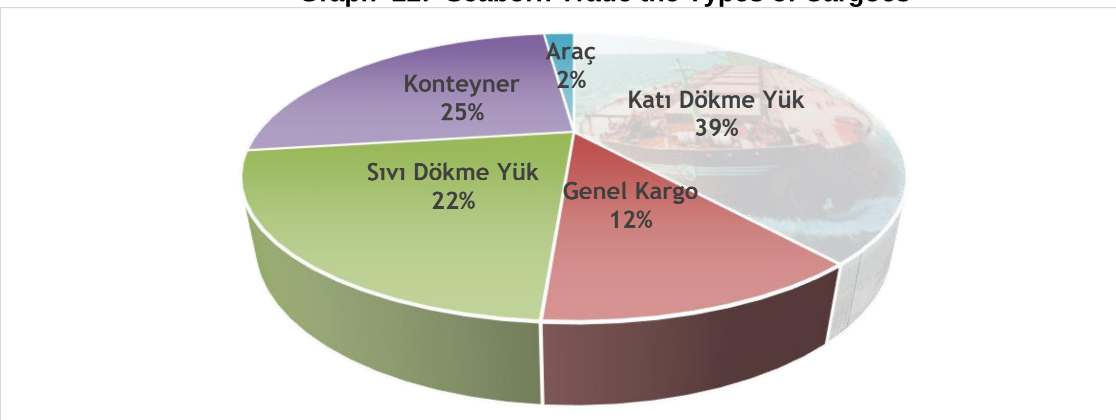
Major shipping segments of the 221 million tons imports and transit unloading goods in 2019 are 44% dry bulk cargo, 28% Liquid bulk cargo, 17% Container, %11 General Cargo and %1 vehicles.

Table 31: Import and Transit Unloading by Cargo Types

Cargo Types	Turkish Flag Import	Foreign Flag Import	Total Import	Importt %	Transit Unloading	Total
Dry Bulk Cargo	3.857.580	92.803.485	96.661.065	44%	189.403	102.875.550
General Cargo	2.059.458	22.010.580	24.070.038	11%	24.478	28.758.610
Liquid Cargo	4.047.629	57.272.230	61.319.859	28%	397.676	74.292.846
Container	2.391.245	35.211.714	37.602.959	17%	9.395.222	51.562.963
Vehicle	1.407.664	343.227	1.750.891	1%	6.788	1.790.117
Total	13.763.576	207.641.236	221.404.812	100%	10.013.567	259.280.086

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 22: Seaborn Trade the Types of Cargoes



2.6. The Progress in Seaborne Trade by Country Groups

In 2019, 67 million tons of exports and 66 million tons of imports, totally (loading-unloading) 51 million tons of transportation have been realized to the OECD countries. Table shows the export and import values to the OECD countries.

Table32: Seaborne Export and Import,Transit Handling of Turkey and OECD Countries in 2019

OECD Country	Export	Transit Loading	Import	Transit Unloading	Total
Italy	14.359.420	40.466.149	4.304.862	139.819	59.270.250
U.S.	7.528.901	217.601	11.067.115	149.952	18.963.569
Spain	12.077.489	1.802.588	3.568.006	395.212	17.843.295
Greece	6.286.684	1.008.214	9.347.583	695.356	17.337.837
Isreal	8.049.607	607.250	6.418.563	392.573	15.467.993
Belgium	5.487.228	141.488	4.483.440	276.090	10.388.246
Holland	2.473.753	96.681	4.637.033	88.276	7.295.743
U.K.	2.848.477	970.137	2.925.889	58.143	6.802.646
France	2.369.326	1.183.025	2.188.890	28.490	5.769.731
Canada	715.988	281.103	3.170.695	53.048	4.220.834
S.Korea	916.547	17.982	1.936.991	288.904	3.160.424
Portugal	1.325.557	1.235.686	551.649	37.556	3.150.448
Australia	7.215	3.260	2.815.598	0	2.826.073
Germany	693.821	302.029	1.274.892	135.887	2.406.629
Norway	11.883	465	1.883.510	0	1.895.858
Latvia	211	0	1.565.848	75	1.566.134
Sweden	534.755	8.017	508.032	0	1.050.804
Lithuanian	23.575	0	1.019.973	0	1.043.548
Japan	330.350	135.000	299.480	42.672	807.502
Denmark	39.217	2.745	718.041	0	760.003
Poland	350.528	1.869	343.226	0	695.623
Mexico	44.510	178	553.142	140	597.970
Slovenia	336.953	52.077	182.893	19.815	591.738
Estonia	0	0	576.825	0	576.825
Finland	27.815	0	483.876	0	511.691
Ireland	171.136	1.020	36.099	16.051	224.306
Chile	186.657	0	27.385	0	214.042
Iceland	66.712	0	0	0	66.712
Austria	0	0	4.629	0	4.629
Switzerland	0	0	75	0	75
New Zeland	0	0	0	0	0
Total	67.264.315	48.534.564	66.894.240	2.818.059	185.511.178

Source: Republic of Turkey Ministry of Transport and Infrastructure

In 2019, the seaborne trade volume between Turkey and the OECD countries was 185 million metric tons of which 134 million metric tons were imports&exports while 51,3 million metric tons were transit cargoes.

In the year 2019, 53 million tons of exports and 44 million tons of imports or totally 98 million tons of seaborne transportation have been realized to the EU countries.

Table 33: Seaborne Trade (Export-Import) to EU Countries and Transit Loading /Unloading (ton) (2019)

EU Countries	Export	Transit Loading	Import	Transit Unloading	Seaborn Trade
Italy	14.359.420	40.466.149	4.304.862	139.819	59.270.250
Spain	12.077.489	1.802.588	3.568.006	395.212	17.843.295
Greece	6.286.684	1.008.214	9.347.583	695.356	17.337.837
Belgium	5.487.228	141.488	4.483.440	276.090	10.388.246
Romania	2.993.787	812.127	3.666.649	887.132	8.359.695
Holland	2.473.753	96.681	4.637.033	88.276	7.295.743
France	2.369.326	1.183.025	2.188.890	28.490	5.769.731
Bulgaria	1.180.666	706.035	3.145.978	512.304	5.544.983
Malta	2.989.372	393.263	1.187.842	31.870	4.602.347
Portugal	1.325.557	1.235.686	551.649	37.556	3.150.448
Germany	693.821	302.029	1.274.892	135.887	2.406.629
Letonya	211	0	1.565.848	75	1.566.134
Crotia	139.444	824.000	420.386	4.698	1.388.528
Sweden	534.755	8.017	508.032	0	1.050.804
Latvia	23.575	0	1.019.973	0	1.043.548
Denmark	39.217	2.745	718.041	0	760.003
Polland	350.528	1.869	343.226	0	695.623
Slovenia	336.953	52.077	182.893	19.815	591.738
Estonia	0	0	576.825	0	576.825
Finland	27.815	0	483.876	0	511.691
Ireland	171.136	1.020	36.099	16.051	224.306
Austria	0	0	4.629	0	4.629
Total	53.860.737	49.037.013	44.212.023	3.268.631	150.383.033

Source: Republic of Turkey Ministry of Transport and Infrastructure

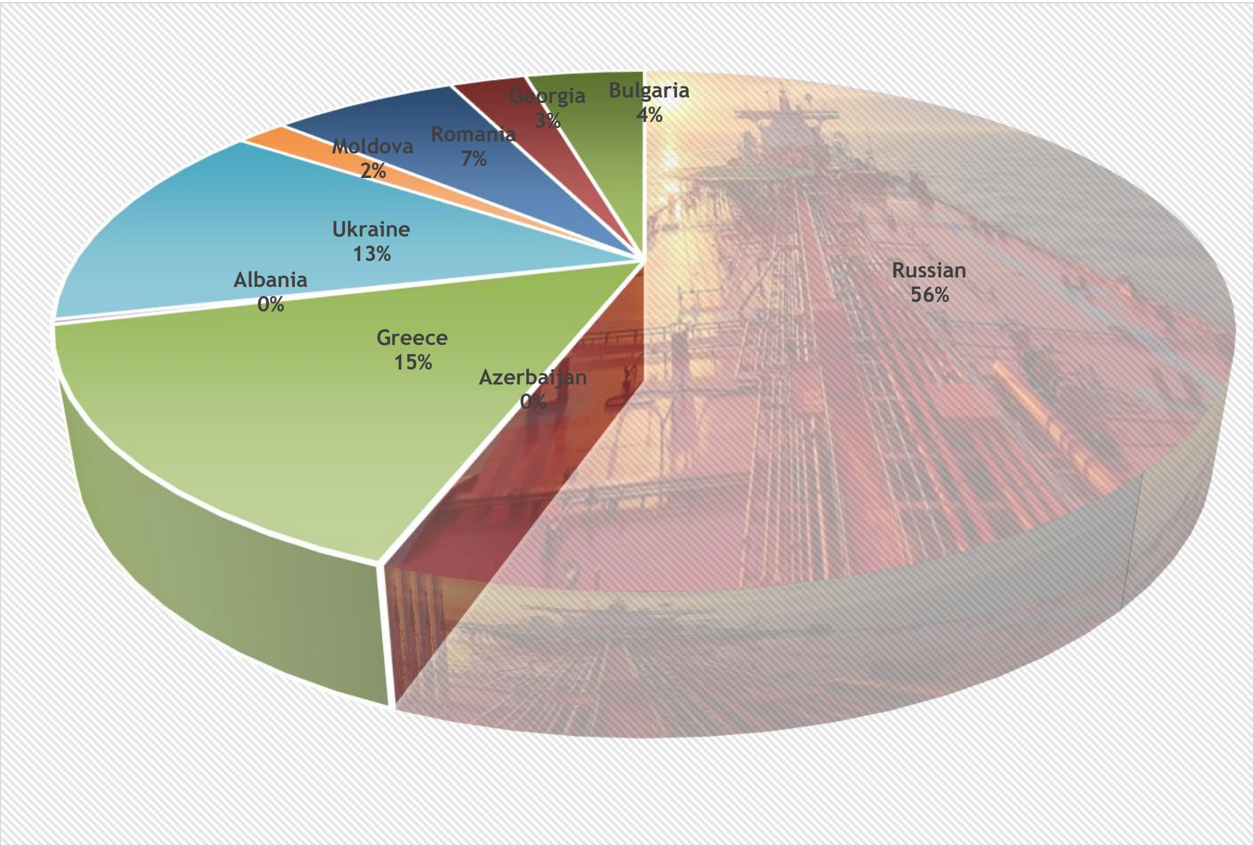
In 2019, 19 million tons of exports and 82 million tons of imports, totally 101 million tons seaborne transportation have been realized to the BSEC countries.

Table 34: Seaborne Trade to BSEC Countries (Tons)

BSEC Countries	Export	Transit Loading	Import	Transit Unloading	Total	%
Russian	2.545.208	922.318	54.027.474	1.181.103	58.676.103	52%
Greece	6.286.684	1.008.214	9.347.583	695.356	17.337.837	15%
Ukraine	2.796.846	1.062.361	10.869.780	1.225.854	15.954.841	14%
Romania	2.993.787	812.127	3.666.649	887.132	8.359.695	7%
Bulgaria	1.180.666	706.035	3.145.978	512.304	5.544.983	5%
Georgia	1.279.004	1.616.676	1.477.041	391.206	4.763.927	4%
Moldova	1.623.873	0	151.719	0	1.775.592	2%
Albania	288.826	0	9.092	0	297.918	0%
Azerbaijan	6.272	142	36.308	0	42.722	0%
Total	19.001.166	6.127.873	82.731.624	4.892.955	112.753.618	100%

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 23: Seaborne Trade to BSEC Countries Foreign Trade 2019



2.7. World Container Fleet by Country of Domicile

The “country of domicile” examination (including container ships of 1.000 GT and over) shows that at the beginning of 2019, 21.987.000 TEU of the container capacity was not registered in the country of domicile of the owner, but flagged out.

Table 35: World Full Container Fleet by Country of Domicile (1000 GT and over) 2019

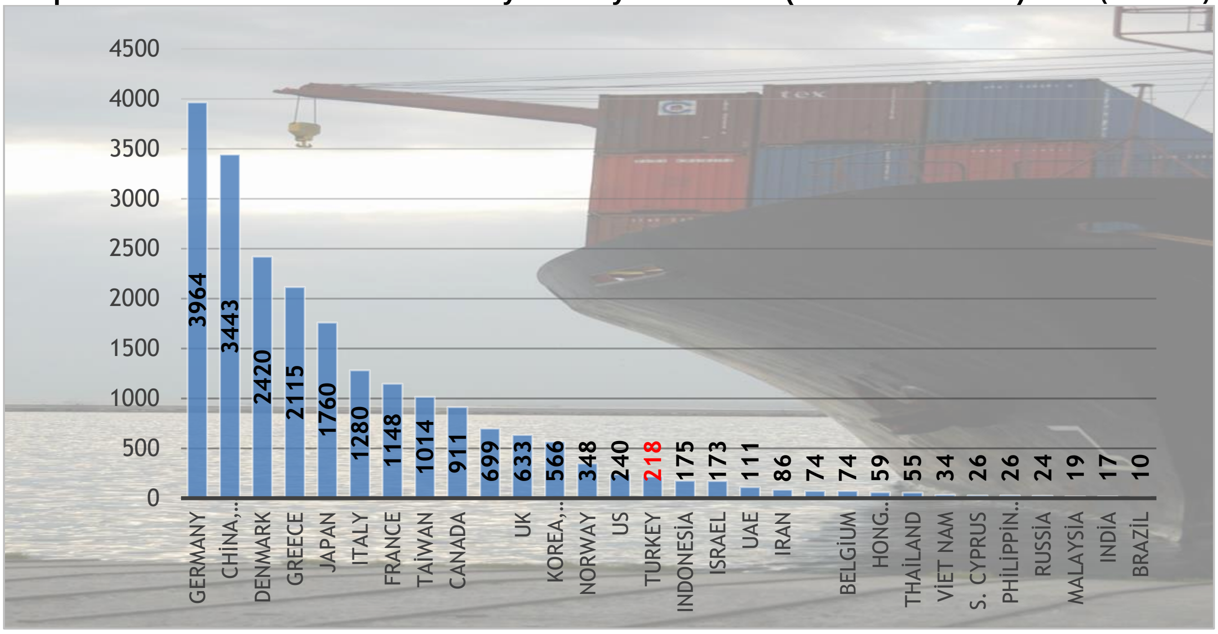
TEU Rank	Country of Control	National Flag			Foreign Flag			**Total Fleet**		
		No	1000 DWT	1000 TEU	No	1000 DWT	1000 TEU	No	1000 DWT	1000 TEU
1	Germany	87	7.043	587	1.034	41.655	3.377	1.121	48.698	3.964
2	China, PR of	253	9.239	691	392	30.742	2.752	645	39.981	3.443
3	Denmark	144	15.590	1.413	200	12.635	1.007	344	28.224	2.420
4	Greece	6	525	47	477	25.506	2.068	483	26.030	2.115
5	Japan	18	1.542	147	278	18.386	1.613	296	19.928	1.760
6	Italy				210	16.000	1.280	210	16.000	1.280
7	France	25	2.544	217	124	10.871	931	149	13.415	1.148
8	Taiwan	42	1.977	155	220	10.656	859	262	12.633	1.014
9	Canada	1	15	1	112	10.440	910	113	10.455	911
10	Singapore	113	4.115	319	96	4.587	380	209	8.702	699
11	UK	15	1.073	92	132	6.878	541	147	7.951	633
12	Korea Rep of	85	1.394	104	119	5.682	462	204	7.076	566
13	Norway				74	4.228	348	74	4.228	348
14	US	30	931	69	48	2.206	171	78	3.137	240
15	Turkey	**49**	**1.123**	**82**	**45**	**1.610**	**136**	**94**	**2.733**	**218**
16	Indonesia	207	2.357	161	11	197	15	218	2.554	175
17	Israel	5	288	23	27	1.872	150	32	2.161	173
18	UAE	2	28	2	56	1.444	109	58	1.472	111
19	Iran	25	1.123	86	0	0	0	25	1.123	86
20	Netherlands	31	372	30	37	562	44	68	934	74
21	Belgium	0	0	0	23	930	74	23	930	74
22	Hong Kong	17	288	21	27	515	37	44	803	59
23	Thailand	26	320	24	24	406	31	50	726	55
24	Viet Nam	41	433	31	4	43	3	45	475	34
25	S. Cyprus	2	12	1	7	317	25	9	329	26
26	Philippines	42	265	20	5	81	6	47	346	26
27	Russia	13	90	7	10	225	17	23	314	24
28	Malaysia	21	261	18	2	8	0	23	269	19
29	India	8	192	14	2	38	3	10	230	17
30	Brazil	4	139	10	0	0	0	4	139	10
	Total 30 countries	1.312	53.279	4.374	3.796	208.720	17.349	5.108	261.999	21.723
	Others	50	530	39	77	2.532	225	107	1.039	80
	Unknown							20	2.023	184
	WORLD TOTAL							5.235	265.061	21.987

Source : ISL January-February 2019

With respect to the owner countries, German shipowners control by far the largest part of the world container fleet, namely 3,9 million TEU (1121 container vessels) followed by

China 3,4 million TEU (645 container vessels) and Denmark 2.4 million TEU (344 container vessels).

Graph 24: World Full Container Fleet by Country of Domicile (*1000 GT and over*) 2019 (1000 TEU)



TEU based container transportations in 2019 realized as follows in their respective subgroups; exports became 4 million TEU, imports 4.2 million TEU, cabotage loading-unloading 935.661 TEU and transit 1.4 million TEU.

Transportation volume of Turkey's container transports by seaway was 4.4 million TEU in 2009; in 2019 it became 10,8 million TEU, at the same period imports cargoes increased to 4,5 million TEU from 2.1 million TEU and the exports cargoes increased to 4.5 million TEU when compared with 2.1 million TEU in 2009.

Table 36: Container Handling 2006-2017 (TEU)

Year	LOADING (TEU)			UNLOADING (TEU)			SEA BORN TRADE (TEU)			Change %
	Cabotage	Export	Total	Cabotage	Import	Total	Export + Import	Transit Handling	Total	
2009	70.329	2.131.948	2.2.02.277	71.696	2.117.764	2.189.460	4.391.737	12.542	4.404.279	-15%
2010	104.278	2.306.587	2.410.865	104.047	2.354.304	2.458.351	4.869.216	874.239	5.743.455	30%
2011	154.338	2.690.889	2.845.227	305.256	2.770.190	3.075.446	5.461.079	757.171	6.218.250	8%
2012	236.905	2.879.122	3.116.027	235.440	2.942.562	3.178.001	5.821.683	898.368	6.720.051	8%
2013	274.589	3.165.653	3.440.242	269.908	3.199.969	3.469.877	6.365.622	989.815	7.355.437	9%
2014	266.997	3.488.008	3.755.005	260.067	3.581.811	3.841.878	7.069.819	754.238	7.824.057	6%
2015	305.882	3.394.508	3.700.390	300.182	3.454.345	3.754.527	6.848.854	691.481	7.540.335	-4%
2016	365.517	3.543.804	3.909.321	372.795	3.607.086	3.979.881	7.150.890	872.772	8.023.662	6%
2017	467.384	3.866.874	4.334.258	468.137	3.975.205	4.443.341	7.842.079	1.232.937	9.075.015	13%
2018	453.030	4.160.124	4.613.154	482.631	4.259.029	4.741.661	8.419.153	1.489.184	9.908.337	9%
2019	359.958	4.594.647	4.954.605	393.309	4.540.201	4.933.510	9.134.849	1.703.722	10.838.571	9%
2019 Container Handling **11.591.838 TEU**										

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 25: Yearly Change of Foreign Trade Between 2009-2019 (TEU %)

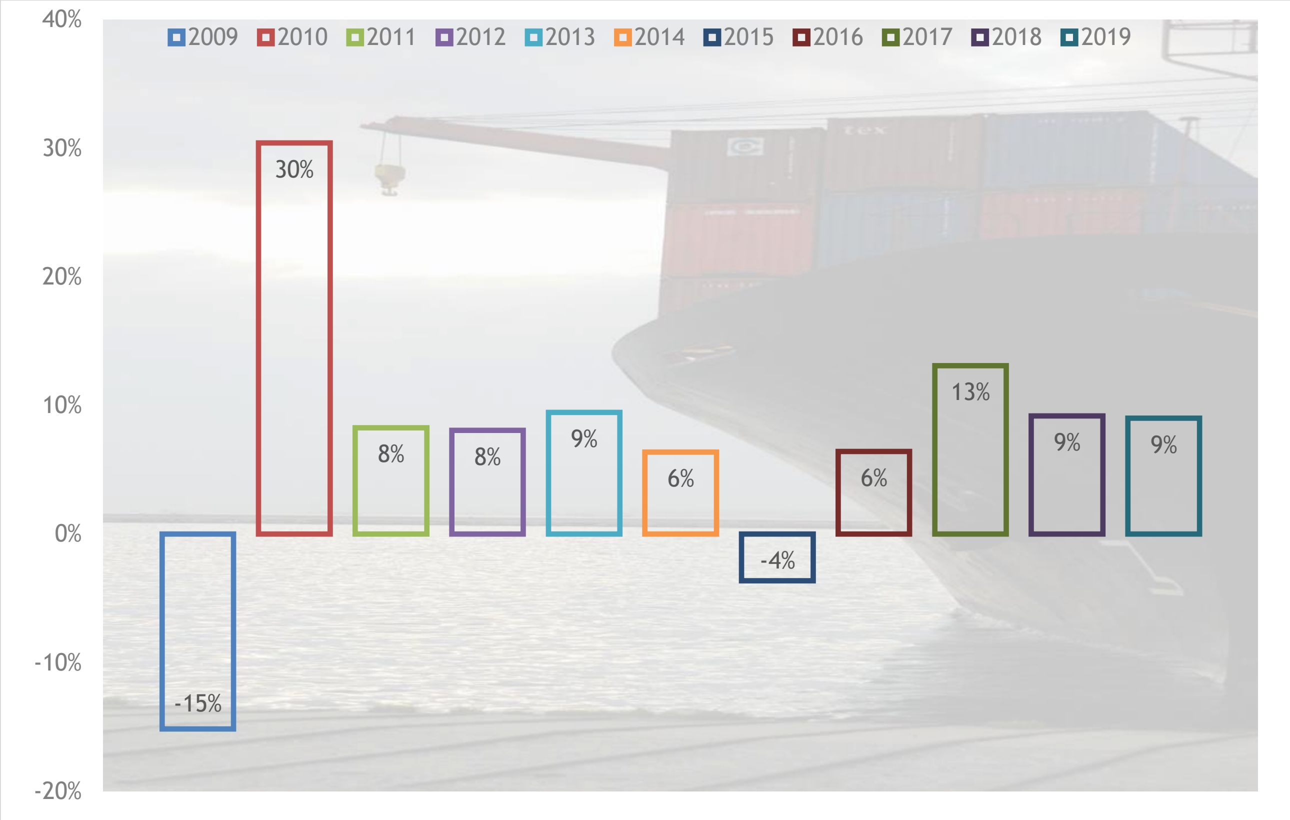


Table 37 : Port Authority Handled Container (TEU)

Port Authority	Export	Import	Cabotage Handling	Transit Handling	Total
AMBARLI	1.046.937	1.144.339	32.539	3.906	2.227.720
MERSIN	921.595	863.830	181.200	732.408	2.699.032
KOCAELI	786.999	778.750	45.425	0	1.611.174
TEKİRDAĞ	220.225	188.409	18.091	0	426.725
ALIAGA	592.472	503.563	131.080	1.119	1.228.234
GEMLİK	370.281	359.177	0	0	729.458
ISKENDERUN	331.047	341.575	1.835	5.663	680.120
IZMIR	253.586	261.207	10.414	1.047	526.254
ANTALYA	39.548	65.705	26.886	0	132.139
SAMSUN	19.670	13.279	466	0	33.415
İSTANBUL	12.060	19.717	0	0	31.776
BANDIRMA	2	127	66.633	82.812	149.574
TRABZON	165	162	1.319	0	1.646
MARMARA ADASI	0	0	34.569	34.318	68.887
KARABIGA	0	0	34.477	0	34.477
YALOVA	45	330	162.878	842.450	1.005.703
KARASU	16	25	5.456	0	5.497
IGNEADA	0	7	0	0	7
Total	4.594.647	4.540.201	753.267	1.703.722	11.591.838

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 38: Seaborne Export and Import,Transit Handling of Turkey and Country 2019 (TEU)

Country	Export	Import	Seaborn Trade	Transit Loading	Transit Unloading	Total Handling
Greece	413.419	784.976	1.198.395	42.624	53.606	1.294.625
Egypt	455.889	645.454	1.101.344	51.408	51.438	1.204.189
Israel	289.605	517.732	807.337	19.967	31.815	859.119
Spain	493.464	222.835	716.299	36.662	30.081	783.042
Belgium	332.245	206.503	538.748	11.858	57.808	608.414
Italy	316.310	175.397	491.707	27.898	8.054	527.658
Saudi Arabia	330.896	73.381	404.277	72.815	20.735	497.827
Chine	195.170	165.491	360.662	35.321	88.196	484.179
Georgia	77.036	163.130	240.165	156.621	27.396	424.182
Lebanon	89.180	255.668	344.848	8.043	6.255	359.146
Russia	94.478	118.680	213.158	60.247	85.237	358.642
Singapore	147.406	161.568	308.974	25.087	10.185	344.246
Ukrania	56.696	57.142	113.838	93.800	67.038	274.676
Malta	138.462	111.322	249.784	6.029	2.756	258.569
Romania	77.174	57.139	134.313	57.954	61.170	253.436
Libya	113.908	128.438	242.346	10.006	844	253.196
U.K.	151.783	58.554	210.337	10.588	5.013	225.938
Bulgaria	49.444	48.165	97.609	55.438	41.068	194.115
Korea Rep.of	72.788	85.145	157.933	1.382	21.669	180.984
U.A.E.	106.522	30.833	137.354	36.865	5.591	179.811
U.S.	87.126	64.069	151.195	5.910	14.824	171.929
Algeria	60.193	82.260	142.453	27.258	1.583	171.293
Morocco	75.829	66.997	142.826	11.600	7.567	161.993
Portugal	66.913	32.644	99.557	8.451	2.951	110.959
Germany	49.703	21.595	71.298	1.459	12.083	84.840
France	55.921	17.247	73.168	6.092	1.572	80.832
Holland	24.036	22.945	46.981	338	6.549	53.868
Tunisia	19.706	23.413	43.118	7.481	2.417	53.016
Syria	7.872	38.747	46.619	3.496	2.737	52.852
Other	145.477	102.734	248.211	41.041	40.998	330.250
Total	4.594.647	4.540.201	9.134.849	933.737	769.236	10.837.822

Source: Republic of Turkey Ministry of Transport and Infrastructure

As of 2019, the countries which Turkey performed foreign trade with / conducted transit container transportation are as follows: Greece Egypt and Israel. The data of the foreign trade/transit container transportation of top 29 countries are shown in the Table 38.

2.8. Vehicle Transportation Through Ro-Ro Lines

Ro-Ro lines of Turkey in 2019 are shown below. Table 39 above shows the amounts of the transported full vehicles (export and import) in the years 2019.

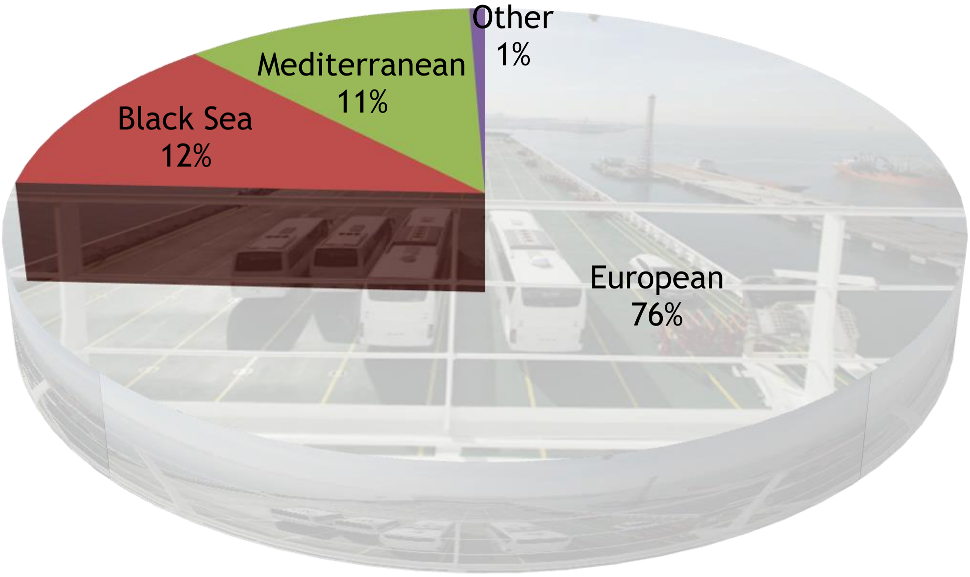
Table 39 : Ro-Ro Lines Transported Vehicles 2019

Regions	Ro-Ro Lines	2019 Incoming Vehicle	2019 Outbound Vehicle	2019 Total Vehicle
European	TUZLA(PENDİK) - TRIESTE	94.296	77.639	171.935
	ÇEŞME - TRIESTE	28.148	30.121	58.269
	TUZLA(PENDİK) - TOULON	35.009	28.633	63.642
	MERSİN - TRIESTE	18.113	16.617	34.730
	YALOVA-LAVRIO - TRIESTE	13.585	23.616	37.201
	AMBARLI - TRIESTE	2.543	17.081	19.624
	ÇEŞME - SETE	5.855	7.100	12.955
	TUZLA(PENDİK) - SETE	6.447	4.585	11.032
	YALOVA-SETE	13.620	9.365	22.985
	YALOVA-BARİ	464	2.921	3.385
	TUZLA(PENDİK) - BARİ	372	2.106	2.478
	TUZLA(PENDİK) - PATRAS	10.633	1.480	12.113
	ÇEŞME - SAKIZ ADASI	250	841	1.091
	İZMİT- ZEEBRUGGE	0	846	846
	Total	229.335	222.951	452.286
Black Sea	SAMSUN - TUAPSE	626	31.839	32.465
	ZONGULDAK - CHORNOMORSK (ILYICHEVSKY)	7.118	5.964	13.082
	İSTANBUL(HAYDARPAŞA) - CHORNOMORSK (ILYICHEVSKY)	3.839	5.744	9.583
	SAMSUN - NOVOROSSİYSK	252	7.876	8.128
	KARASU - CHORNOMORSK (ILYICHEVSKY)	3.600	4.775	8.375
	Total	15.435	56.198	71.633
Mediterranean	MERSİN - GAZİMAĞUSA	10.183	19.921	30.104
	TAŞUCU - GİRNE	9.512	10.574	20.086
	TAŞUCU - TRİPOLİ	6.014	5.967	11.981
	MERSİN - HAYFA	1.742	1.908	3.650
	İSKENDERUN - DUBA	1.395	1.404	2.799
	MERSİN- DAR ES SALAAM	0	524	524
	TOTAL	28.846	40.298	69.144
DİĞER	Other	1.500	2.253	3.753
GENEL TOPLAM	Total	275.116	321.700	596.816

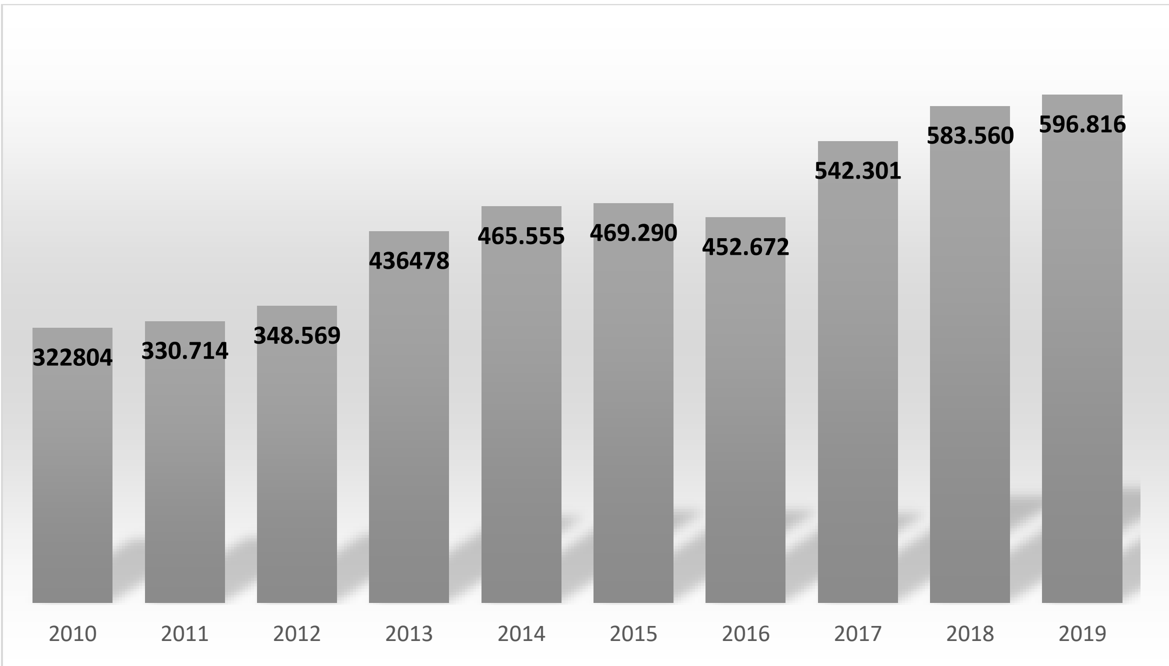
Source: Republic of Turkey Ministry of Transport and Infrastructure

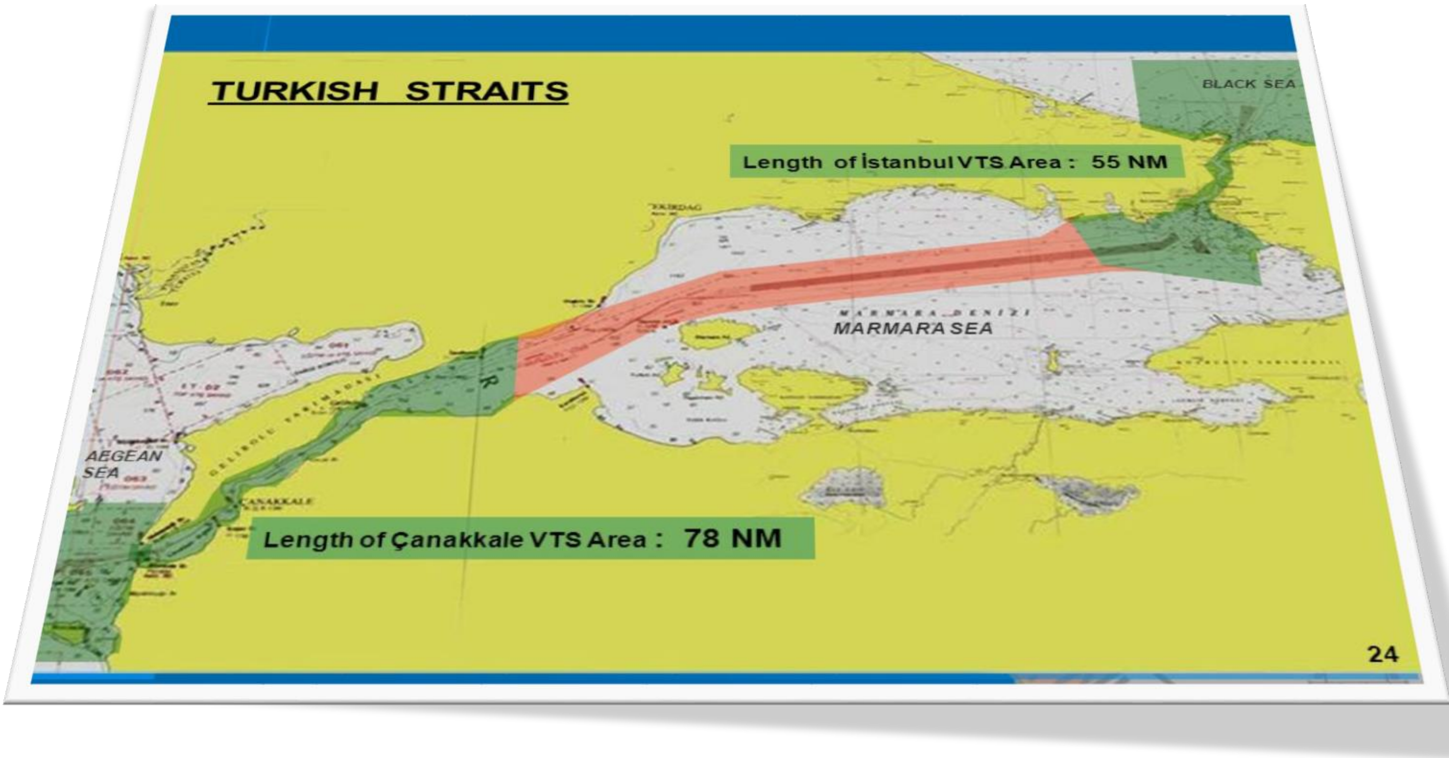
In the 14 European lines 452.286 vehicles have been transported in 2019. (76%)
In the 5 Black Sea lines 71.633 vehicles have been transported in 2019. (12%)
In the 6 Mediterranean lines 69.144 vehicles have been transported in 2019. (11%)

Graph 26: RO-RO Lines Transported Vehicles (2018)



Graph 27: Ro-Ro Lines Transported Vehicles (2010-2019)



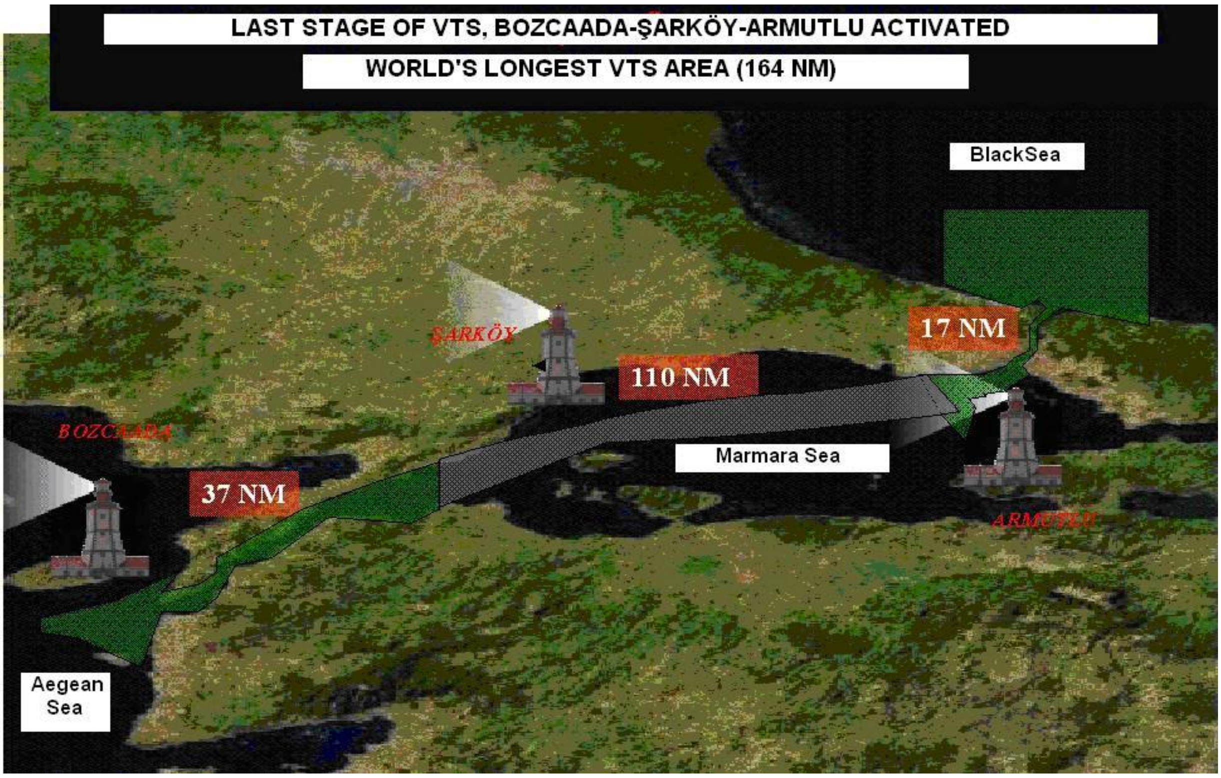


CHAPTER III

THE TURKISH STRAITS AND MARITIME TRAFFIC SYSTEMS

3. THE TURKISH STRAITS AND MARITIME TRAFFIC SYSTEMS

3.1. THE TURKISH STRAITS



The region consisting of the Turkish Straits, called Istanbul and Çanakkale Straits and the Sea of Marmara, is one of the regions that has the highest concentration of maritime traffic in the World.

Turkish Straits consist of the Istanbul Strait 17 nm in length, 110 nm the vessels navigating area in Marmara Sea and Çanakkale Strait in length 37 nm. Total length of the Turkish Straits is 164 nm and it is opened to international maritime vessel traffic under the Turkish governmental control.

This 164 nm long seaway, starting from the north entrance of Istanbul Strait and ending at the south exit of Çanakkale Strait, is a region that should be given high importance both from geomorphological and hydrographical aspects, especially for having 12 sharp turning points with 45º in front of Istanbul Strait-Kandilli and 80º in front of Yeniköy and with complex currents which reach to a relative speed of 7-8 knots.
The Strait of Istanbul is unique as it runs through the city of İstanbul with more than 15 million inhabitants. The shoreline of Istanbul is densely populated. Vessels approach frequently as close as 50 meters to these inhabited areas. Excluding the vessel traffic, the local traffic such as leisure crafts and fishing vessels, daily domestic vessel movement alone in the Strait of Istanbul is more than 2500. More than 2.5 million people are daily in a movement at sea crossing from one side to another in Istanbul. Istanbul is a city with 3000 years of history. It is declared as a “world heritage city” by UNESCO.
Besides their geopolitical and strategical importance, the Turkish Straits are highly congested with international maritime traffic due to being the only waterway between the Black Sea and The Mediterranean without any alternative.

The number of vessels that passed through the Turkish Straits between the years 2006-2019 are shown in Table below.

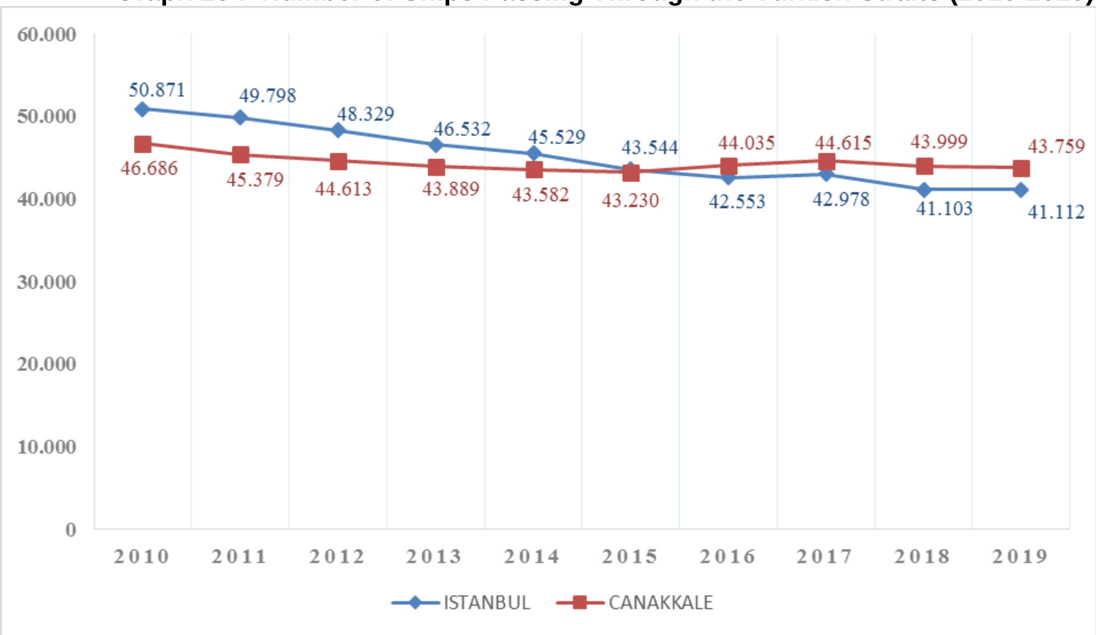
Table 40 : Ships Passing Through the Turkish Straits (2006-2019)

YEARS	ISTANBUL			CANAKKALE		
	Number Of Vessels	GT	Number Of Vessels Change	Number Of Vessels	GT	Number Of Vessels Change
2006	54.880	475.796.880	-	48.915	595.826.240	-
2007	56.606	484.867.696	3,15%	49.913	611.885.819	2,04%
2008	54.396	515.639.614	-3,90%	48.978	657.396.892	-1,87%
2009	51.422	514.656.446	-5,47%	49.453	667.412.661	0,97%
2010	50.871	505.615.881	-1,07%	46.686	672.843.533	-5,60%
2011	49.798	523.543.509	-2,11%	45.379	705.412.518	-2,80%
2012	48.329	550.526.579	-2,95%	44.613	735.728.537	-1,69%
2013	46.532	551.771.780	-3,72%	43.889	745.567.671	-1,62%
2014	45.529	582.468.334	-2,16%	43.582	761.631.756	-0,70%
2015	43.544	565.216.784	-4,36%	43.230	777.989.382	-0,81%
2016	42.553	565.282.287	-2,28%	44.035	772.922.682	1,86%
2017	42.978	599.324.748	1,00%	44.615	823.460.636	1,32%
2018	41.103	613.088.166	-4,36%	43.999	849.140.218	-1,38%
2019	41.112	638.892.062	0,02%	43.759	872.314.222	-0,55%

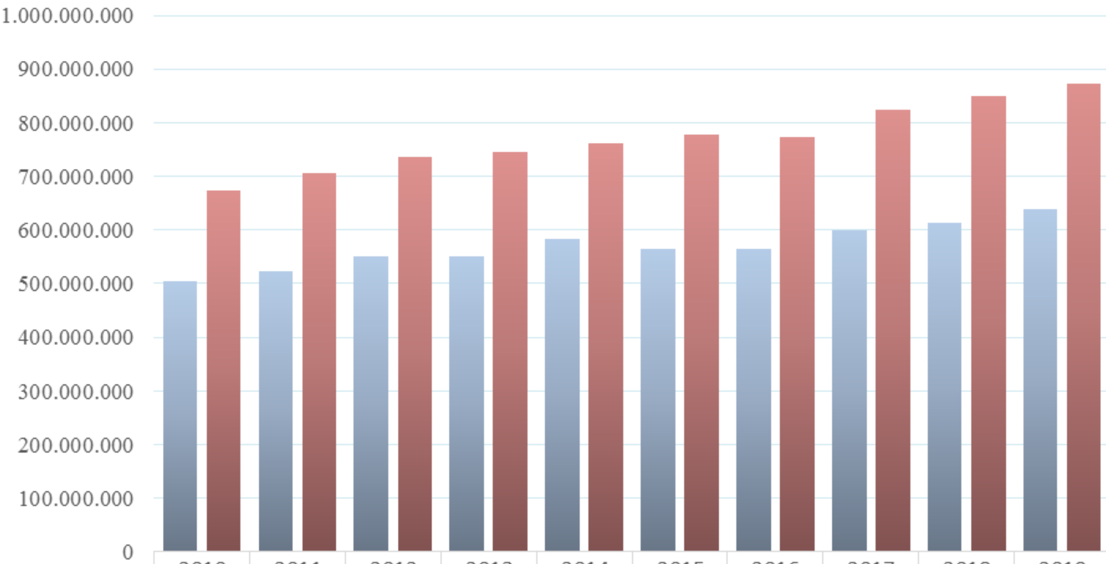
Source: Republic of Turkey Ministry of Transport and Infrastructure

In the year 2019, 41.112 ships in total have passed through the Istanbul Strait with a monthly average of 3.426 ships; 43.759 ships in total have passed through the Çanakkale Strait with a monthly average of 3.647 ships.

Graph 28 : Number of Ships Passing Through the Turkish Straits (2010-2019)



Graph 29: Ships Passing Through the Turkish Straits GT(2010-2019)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ISTANBUL	505.615.	523.543.	550.526.	551.771.	582.468.	565.216.	565.282.	599.324.	613.088.	638.892.
CANAKKALE	672.843.	705.412.	735.728.	745.567.	761.631.	777.989.	772.922.	823.460.	849.140.	872.314.

A significant part of the ships passing through the Turkish Straits carries toxic, hazardous and explosive substances (such as crude oil, ammonia, liquefied gas, radioactive substances, hazardous wastes). Especially in the 1990s, parallel to the increase in the oil flow to the ports in the Black Sea, the number of ships carrying dangerous goods and oil from the Turkish Straits also increased.

Table 41: Dangerous Passing Through the Turkish Straits

YEARS	ISTANBUL		CANAKKALE	
	Total Tankers Carrying Dangerous Substances	Oil and Dangerous Cargoes (ton)	Total Tankers Carrying Dangerous Substances	Oil and Dangerous Cargoes (ton)
2006	10.153	143.452.500	9.567	152.726.000
2007	10.054	143.939.500	9.271	149.320.000
2008	9.303	140.357.500	8.758	149.052.000
2009	9.299	144.660.000	9.567	152.105.500
2010	9.274	146.750.500	9.252	156.929.000
2011	9.103	138.496.500	8.818	154.606.000
2012	9.028	131.123.000	8.998	151.040.000
2013	9.006	134.444.000	9.299	149.091.000
2014	8.745	133.961.000	9.250	152.286.000
2015	8.633	135.952.000	9.524	155.531.000
2016	8.703	136.100.000	9.481	156.203.000
2017	8.832	146.943.000	9.478	166.729.000
2018	8.587	147.375.459	9.247	164.583.997
2019	8.957	159.499.000	9.843	171.685.000

Source: Republic of Turkey Ministry of Transport and Infrastructure

The statistics of ships passing through İstanbul and Çanakkale Straits, according to length, piloting and on country basis are shown in the following tables.

Table 42 : The Monthly Statistics of Vessels Passed Istanbul Strait According to Their Length and Pilot Request

MONTHS	Number Of Vessels	Total Gross Tonnage	With Pilot	Sp1 Given	Non Call In Vessels	LOA Longer Than 200 M	Lower Than 500 GT	Total Tankers			Towaged
								TTA	LPG/ LNG	TCH	
January	3.355	50.859.558	2.110	3.344	2.162	335	17	540	59	197	6
February	3.009	47.960.616	1.939	2.999	1.978	339	15	474	59	184	6
March	3.583	54.521.492	2.266	3.559	2.250	364	37	531	70	204	6
April	3.330	46.663.070	2.077	3.307	2.001	296	37	460	46	184	10
May	3.407	49.429.977	2.192	3.396	1.982	335	36	517	58	185	10
June	3.170	48.946.429	2.072	3.154	1.971	328	21	481	36	200	12
July	3.545	58.413.832	2.320	3.505	2.375	411	43	538	39	218	11
August	3.528	57.295.849	2.308	3.503	2.314	410	36	473	36	216	9
September	3.425	53.046.831	2.232	3.410	2.194	352	18	445	45	218	4
October	3.830	59.540.423	2.479	3.807	2.488	422	31	506	45	218	3
November	3.277	54.444.095	2.167	3.253	2.127	387	24	436	31	210	8
December	3.653	57.769.890	2.470	3.633	2.296	421	18	533	37	228	4
TOTAL	**41.112**	**638.892.062**	**26.632**	**40.870**	**26.138**	**4.400**	**333**	**5.934**	**561**	**2.462**	**89**

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 43 : The Monthly Statistics of Vessels Passed Çanakkale Strait According to Their Length and Pilot Request

MONTHS	Number Of Vessels	Total Gross Tonnage	With Pilot	Sp1 Given	Non Call In Vessels	LOA Longer Than 200 M	Lower Than 500 GT	Total Tankers			Towaged
								TTA	LPG /LNG	TCH	
January	3.502	67.674.371	1.647	3.488	2.148	514	27	515	77	230	13
February	3.257	64.768.935	1.578	3.246	2.016	496	32	487	62	212	10
March	3.782	76.736.251	1.859	3.751	2.238	609	47	586	68	265	9
April	3.558	67.789.328	1.741	3.521	2.016	544	66	512	48	228	14
May	3.575	70.072.552	1.880	3.550	2.003	556	74	531	57	208	10
June	3.352	66.446.827	1.654	3.307	1.955	528	63	506	38	240	15
July	3.912	79.433.032	1.923	3.844	2.395	640	93	577	55	286	16
August	3.766	76.069.347	1.853	3.728	2.332	610	64	478	51	283	13
September	3.710	73.158.356	1.833	3.668	2.186	587	75	500	49	226	12
October	4.044	79.921.184	1.982	3.974	2.483	664	87	532	61	277	9
November	3.692	75.301.088	1.841	3.664	2.185	628	40	477	52	274	8
December	3.609	74.942.951	1.825	3.580	2.227	634	46	477	51	267	9
TOTAL	**43.759**	**872.314.222**	**21.616**	**43.321**	**26.184**	**7.010**	**714**	**6.178**	**669**	**2.996**	**138**

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 44 : (2015-2019) Statistics of Vessels Passed Istanbul Strait According to Their Ship Type

SHIP TYPES	2015	2016	2017	2018	2019
General Cargo Ship	22.412	21.344	21.163	19.269	18.637
Bulk Carrier	7.485	7.664	8.206	8.501	8.811
Other Tanker, TTA	5.825	6.033	6.212	6.014	5.934
Container Ship	2.664	2.734	2.659	2.561	2.642
Chemical Tanker, TCH	1.576	1.681	1.878	1.950	2.462
Liquefied Petroleum Gas/Natural Gas Tanker, LPG/LNG	1.232	989	742	623	561
Livestock Carrier	434	585	544	508	530
Tug	282	237	262	384	270
Roll on Roll of Vessel	377	352	396	245	266
Passenger Ship	444	291	336	367	250
Naval	318	342	237	176	178
Vehicle Carrier	17	16	45	88	113
Refrigerated Cargo Carrier	24	40	46	34	59
Barge / Barge Carrier	17	6	18	3	9
Cement Carrier	8	4	6	12	9
Ferry	2	1	1	1	2
Other	427	234	227	367	379

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 45 : (2015-2019) Statistics of Vessels Passed Çanakkale Strait According to Their Ship Type

SHIP TYPES	2015	2016	2017	2018	2019
General Cargo Ship	16.282	16.680	16.485	15.764	14.771
Bulk Carrier	7.714	8.060	8.585	8.916	9.204
Other Tanker, TTA	6.009	6.041	6.145	6.181	6.178
Container Ship	4.346	4.728	4.957	5.123	5.238
Chemical Tanker, TCH	2.479	2.559	2.599	2.368	2.996
Roll on Roll of Vessel	2.373	2.473	2.479	2.243	1.957
Vehicle Carrier	415	433	576	670	644
Livestock Carrier	478	653	627	601	592
Liquefied Petroleum Gas Tanker, LPG	915	755	652	595	539
Tug	328	365	365	398	365
Naval	341	335	271	217	216
Liquefied Natural Gas Tanker, LNG	121	126	82	103	130
Passenger Ship	783	190	49	55	101
Refrigerated Cargo Carrier	91	125	113	67	83
Barge / Barge Carrier	34	29	89	57	75
Ferry	14	29	24	30	26
Cement Carrier	4	0	6	14	10
Other	503	454	511	597	634

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 46 : 2006-2019 Years of Vessels Passed Istanbul Strait According to Their Length and Pilot Request

YEARS	Number Of Vessels	Total Gross Tonnage	With Pılot	Sp1 Given	Non Call In Vessels	LOA Longer Than 200 M	Lower Than 500 GT	Total Tankers			Towaged
								TTA	LPG/LNG	TCH	
2006	54.880	475.796.880	26.589	53.324	31.880	3.653	2.176	7.659	814	1.680	111
2007	56.606	484.867.696	26.685	55.132	31.826	3.653	2.138	7.204	800	2.050	105
2008	54.396	515.639.614	27.001	53.232	31.762	3.911	1.800	6.564	764	1.975	119
2009	51.422	514.656.446	24.977	50.712	32.297	3.871	1.128	6.557	866	1.876	122
2010	50.871	505.615.881	26.035	50.020	28.668	3.623	1.377	6.464	1.099	1.711	115
2011	49.798	523.543.509	26.011	49.179	27.938	3.800	1.046	6.216	1.227	1.660	93
2012	48.329	550.526.579	24.812	47.638	27.345	3.866	1.064	5.913	1.336	1.779	98
2013	46.532	551.771.780	24.023	45.616	26.577	3.801	1.192	5.685	1.741	1.580	87
2014	45.529	582.468.334	24.508	44.928	26.212	4.295	928	5.587	1.540	1.618	90
2015	43.544	565.216.784	23.349	43.039	25.243	3.930	879	5.825	1.232	1.576	71
2016	42.553	565.282.287	22.356	42.132	26.050	3.873	522	6.033	989	1.681	73
2017	42.978	599.324.748	24.059	42.700	26.111	4.005	436	6.212	742	1.878	88
2018	41.103	613.088.166	23.565	40.844	25.884	4.106	508	6.014	623	1.950	116
2019	41.112	638.892.062	26.632	40.870	26.138	4.400	333	5.934	561	2.462	89

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 30 : The Statistics Summary of Vessels Passed Istanbul Strait Number Of Vessel, With Pilot and Non Call in Vessel

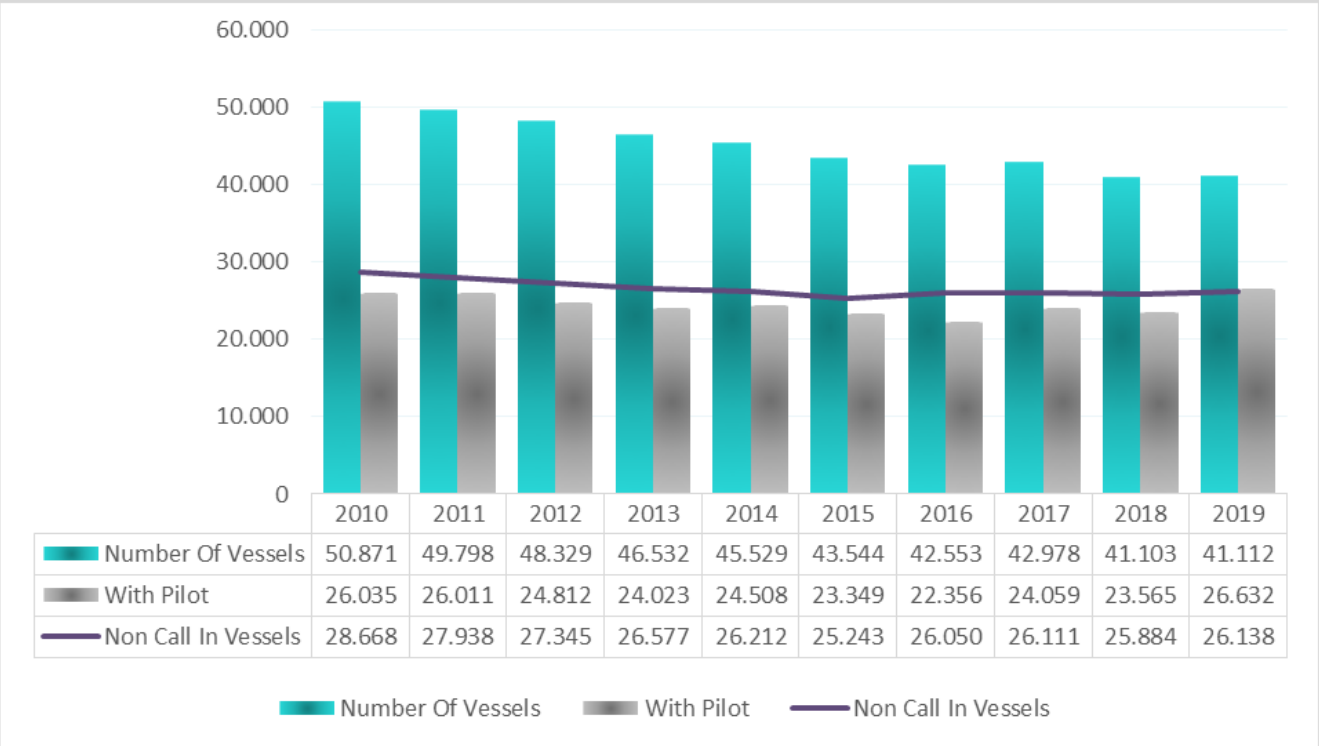
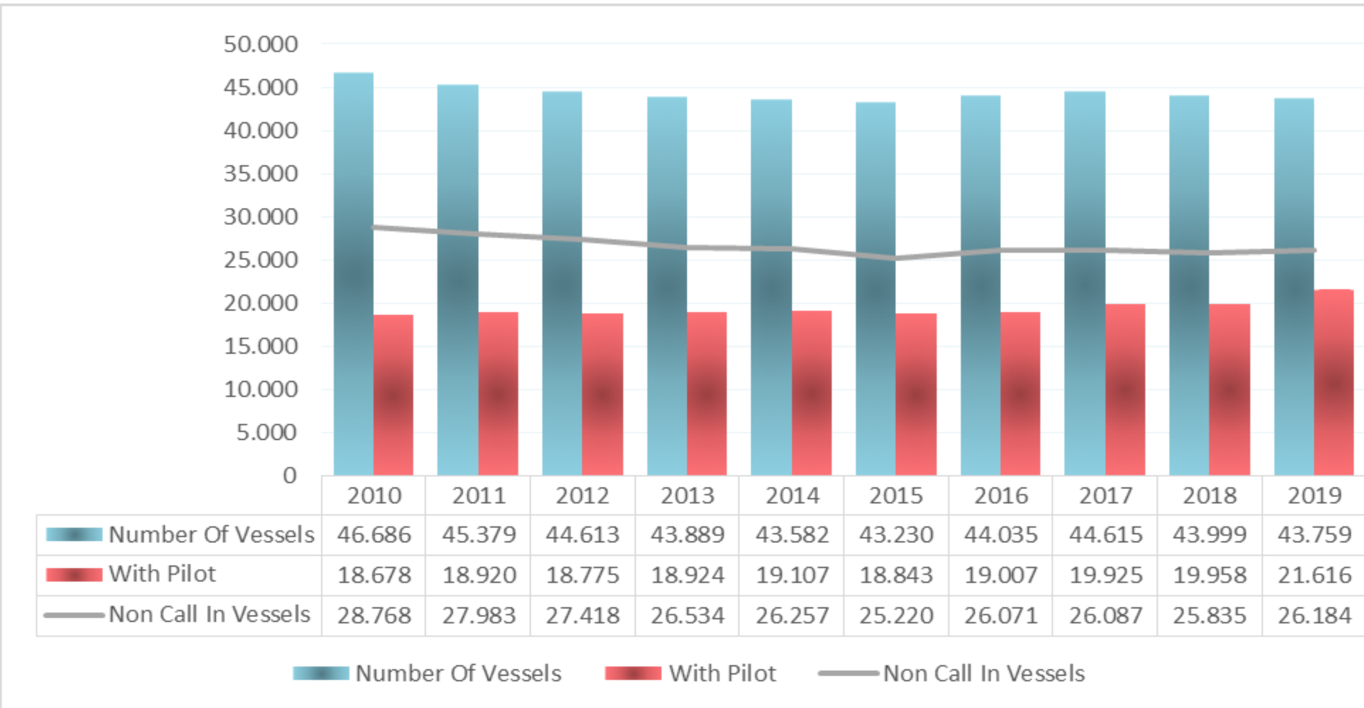


Table 47 : 2006-2019 Years of Vessels Passed Çanakkale Strait According to Their Length and Pilot Request

YEARS	Number Of Vessels	Total Gross Tonnage	With Pılot	Sp1 Given	Non Call In Vessels	LOA Longer Than 200 M	Lower Than 500 GT	Total Tankers			Towaged
								TTA	LPG/LNG	TCH	
2006	48.915	595.826.240	16.871	48.264	32.061	4.845	1.404	7.204	798	1.565	131
2007	49.913	611.885.819	16.885	48.802	31.981	4.945	1.873	6.527	754	1.990	138
2008	48.978	657.396.892	18.334	48.565	31.981	5.223	844	5.990	777	1.991	162
2009	49.453	667.412.661	18.588	49.210	32.559	5.176	615	6.293	842	2.432	146
2010	46.686	672.843.533	18.678	46.469	28.768	5.098	598	6.017	902	2.333	138
2011	45.379	705.412.518	18.920	45.196	27.983	5.494	572	5.661	974	2.183	159
2012	44.613	735.728.537	18.775	44.416	27.418	5.919	519	5.656	1.038	2.304	134
2013	43.889	745.567.671	18.924	43.579	26.534	5.824	448	5.822	1.380	2.097	123
2014	43.582	761.631.756	19.107	43.238	26.257	5.902	512	5.875	1.206	2.169	116
2015	43.230	777.989.382	18.843	42.755	25.220	5.842	581	6.009	1.036	2.479	122
2016	44.035	772.922.682	19.007	43.543	26.071	5.665	661	6.041	881	2.559	139
2017	44.615	823.460.636	19.925	43.888	26.087	6.197	755	6.145	734	2.599	149
2018	43.999	849.140.218	19.958	43.513	25.835	6.612	732	6.181	698	2.368	156
2019	43.759	872.314.222	21.616	43.321	26.184	7.010	714	6.178	669	2.996	138

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 31 : The Statistics Summary of Vessels Passed Çanakkale Strait Number of Vessel, With Pilot and Non Call in Vessel



3.2.Turkish Straits Vessel Traffic Services

Turkish Straits VTS, comprised of the Straits of Istanbul and Çanakkale and the Sea of Marmara, has been established in order to enhance maritime safety, minimize the risks of the possible threats and protect the marine environment in line with national legislation and the international regulations, by using the latest technology on 30th December 2003 and now it serves the safe navigation to 44000 vessels yearly.

Upgrade of Turkish Straits Vessel Traffic Services System

In order to continue to operate the mentioned system in an optimum way and without interruption; a need has appeared for the renewal and betterment of the software and hardware of sub system of data processing and also with the purpose of adding to the system the necessary applications, additional equipments, operational and management characteristics, plans have been made for adjudication concerning the said work. Modernization process is going on.

Vessel Traffic Management and Information System (VTMIS) Project

Within the scope of the Project for Vessel Traffic Management and Information System (VTMIS) the installation of which is continued by the related Ministry, it is planned that Regional Vessel Traffic Services (VTS) will be built in order to increase the navigation safety in İzmit, İzmir, Iskenderun and Mersin regions, in which vessel traffic is intense and risky.

Regional VTS Systems; it is aimed to increase the sea traffic safety and efficiency and to monitor, arrange, organize and manage the vessel traffic movements in interaction with vessels with a view to protect the sea environment as well as to provide one or more of the services of information, navigation assistance and traffic organization in some or all of the regional VTS areas. Regional VTS Systems consist of 24 Traffic Monitoring Stations and 3 Vessel Traffic Services Centers.

The main components of the system are, x-band microwave radars, closed circuit tv cameras, automatic weather stations, VHF/direction finder stations, VHF/ MF/ HF/ Inmarsat-C communication equipment's, record and replay units and Automatic Identification System base stations.

In these new VTS's, in addition to the existing TSVTS there will be some improved features such as, port management and information module which will be established in order to monitor and manage all the movements of the vessels and cargoes in the territorial waters of Turkey.

Automatic Identification System (AIS)

As another safety and security arrangement, AIS based traffic monitoring and management system covering all Turkish coastal waters and beyond provides a complete picture of traffic in Turkey's surrounding seas with all the pertinent details and contains several additional searches, backtracking and viewing functions was established on 9th July 2007.

System provides opportunity to monitor all vessels and marine vehicles having AIS transponder within the coverage area and also to obtain detailed information, a number of goals, such as increasing navigation safety and maritime security through our coasts; to make contribution to Search and Rescue activities; to prevent maritime accidents and to intervene maritime accidents immediately; to cooperate with other institutions concerning illegal migration and violations of fishing boats in foreign territorial waters and prevention of illegal fishing activities are aimed. The centre of this system which covers all over the Turkish coasts with 27 Coastal Base Station is in Ankara and thereby the moves of all ships are monitored momentary.

Upgrade of AIS

In order to continue to operate the mentioned system in an optimum way and without interruption; a need has appeared for the renewal and betterment of the software and hardware of sub system of data processing and also with the purpose of adding to the system the necessary applications, additional equipments, operational and management characteristics, plans have been made for adjudication concerning the said work. Upgrading process is going on.

Long Range Identification and Tracking (LRIT) System

Turkey has invested significant amount of effort, time and financial resources to ensure the timely implementation of its National LRIT Data Centre. Moreover, Turkey actively participated in all Ad Hoc LRIT Group meetings and followed all LRIT related developments with great interest and desire. Turkey's National LRIT Data Centre is established and Application Service Provider (ASP) of Turkey is provided by TURKSAT A.S, which is the National Satellite Company of Turkey. Turkey's National LRIT Data Center (TRNDC) has passed the developmental and integration test phases conducted by IMO satisfactorily to participate into the LRIT production environment on 8 March 2010.

Istanbul Local Traffic Control Centre

In order to enhance maritime safety and security in the boundaries of Harbour Master of İstanbul and in order to monitor the local traffic in the Strait of Istanbul, a Local Traffic Control Centre was established at the end of 2018.

CHAPTER IV

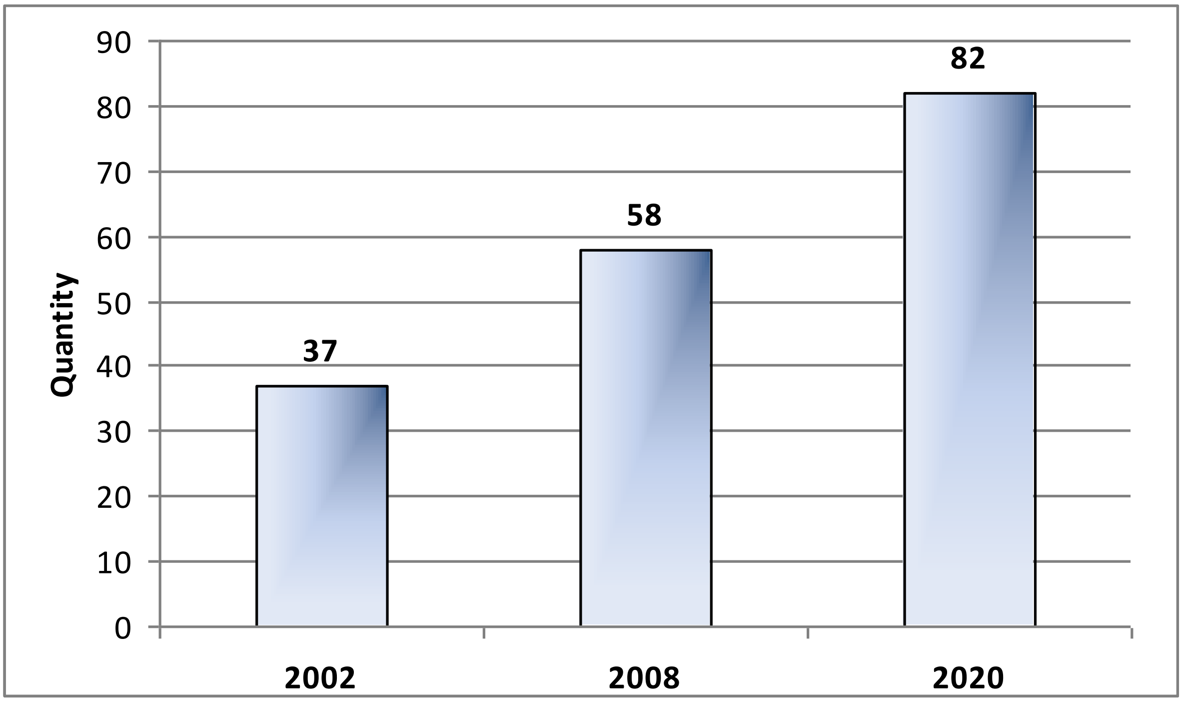
SHIPBUILDING INDUSTRY

4. SHIPBUILDING INDUSTRY

4.1. General Outlook of the Turkish Shipbuilding Industry

The shipyards, according to the facility definition in the local regulations, the under operation raised up to 82 as of March 2020 while it was only 37 in 2002. The quantity of shipyards under construction are 22 and 15 areas that are defined as shipyard investment areas of the same date mentioned above.

Graph 32: 2002 / 2020 Shipyards Under Operation



Source: Ministry of Transport and Infrastrucure 03/2020

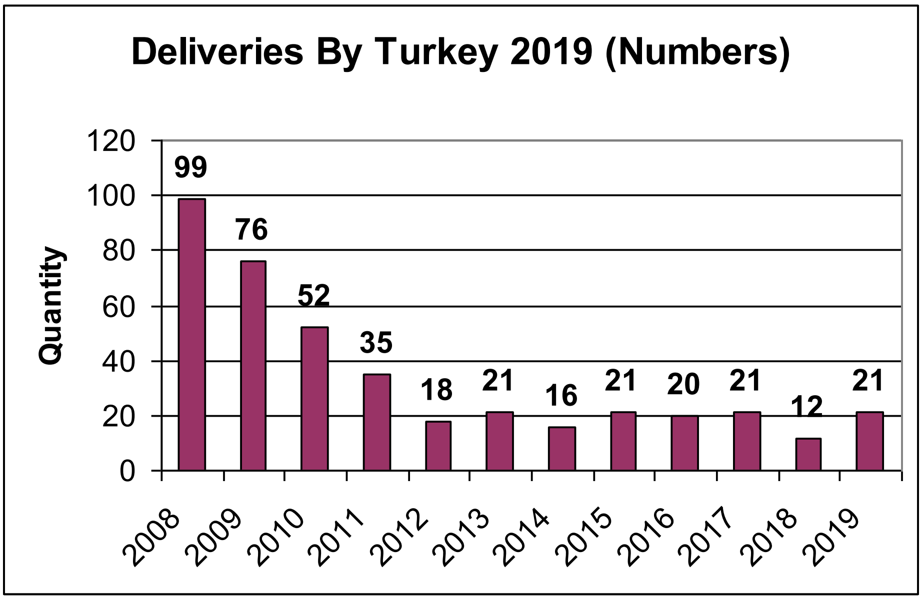
Shipbuilding industry is a branch of heavy industry which provides;

- Progress in sub-industry
- Increase in employment and the population of the neighbourhood
- Rising the standards of quality of sub-industry
- Increase of qualified productive power
- Progress in growth and strength of regional trade
- Rising the living circumstances and the cultural level of labour
- Employment in ratio 1 to 7 including sub-industry.

Turkish Shipyards delivered 166 ships, DWT of 836.000, between1995-2001. Also, between the years 2002 and 2007, 443 ships with total DWT of 3.051.000 had been delivered.

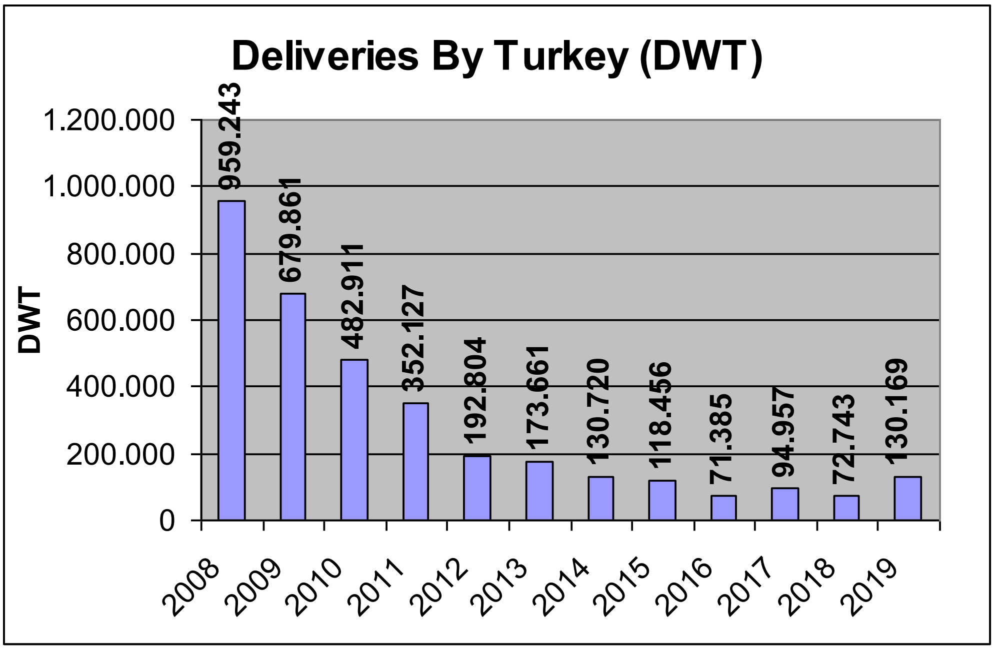
In 2019, 21 ships DWT of 130.169 tons have been delivered.

Graph 33: Number of Ships Delivered Between 2008-2019



Source: Clarkson Research Services 01/2020

Graph 34: DWT of Ships Delivered Between 2004-2018

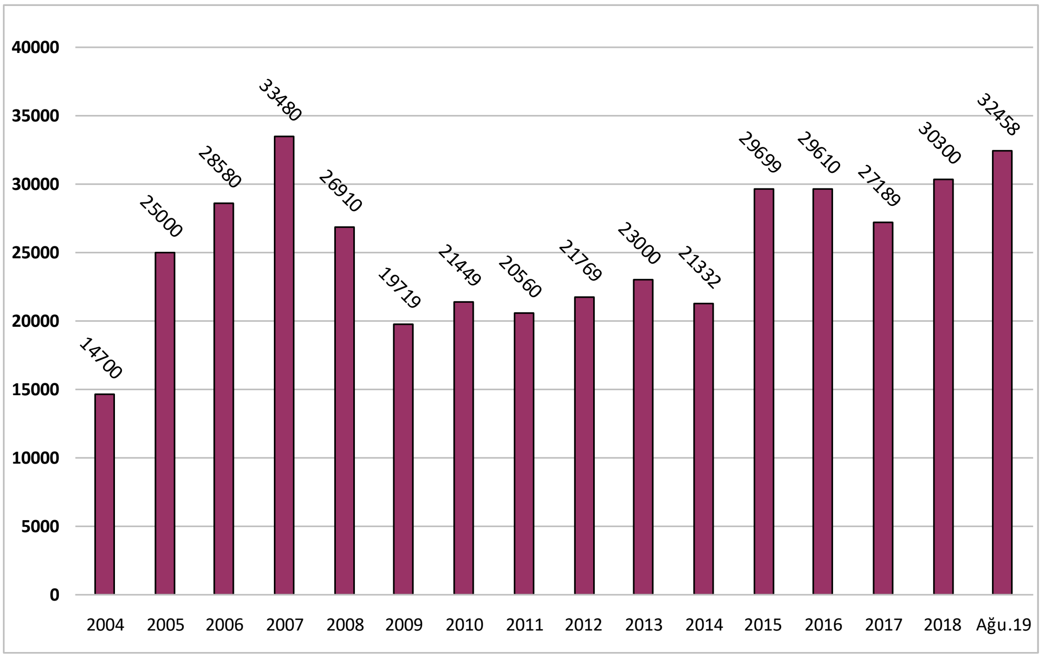


Source: Clarkson Research Services 01/2020

Some of the operative shipyards in Turkey still continue the modernization and extension operations but on the other hand, due to the global economic crisis, some of them suspend or cancel their modernization or extension projects because of the sanctions applied by the banks on the shipyards.

Furthermore, shipyards which are under construction in different cities of Turkey, have been also affected from the global economic crisis.

Graph 35: Employee Numbers in Turkish Shipyards by 2019



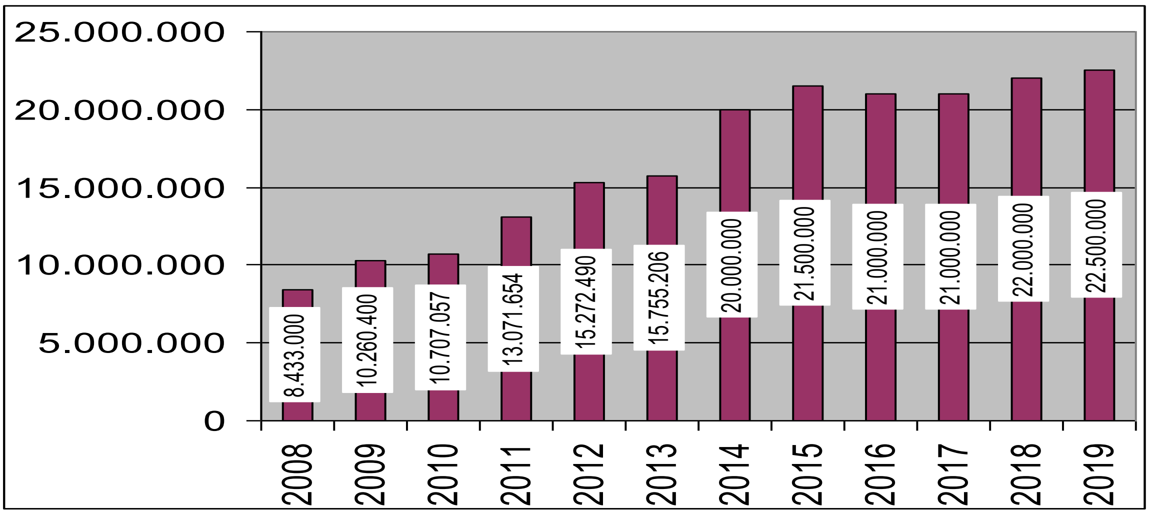
Source: Ministry of Transport and Infrastrucure 08/2019

Before 2003; maximum tonnage of 16.000 DWT ship orders (as in one piece) could be taken. By 2007, it has raised up to 180.000 DWT but unfortunately the new building construction did not start due to the economic crisis.

Most of the ships constructed in Turkish shipyards are built for export. Especially between 2002-2009, almost the total amount of these ships were exported to the EU member countries.

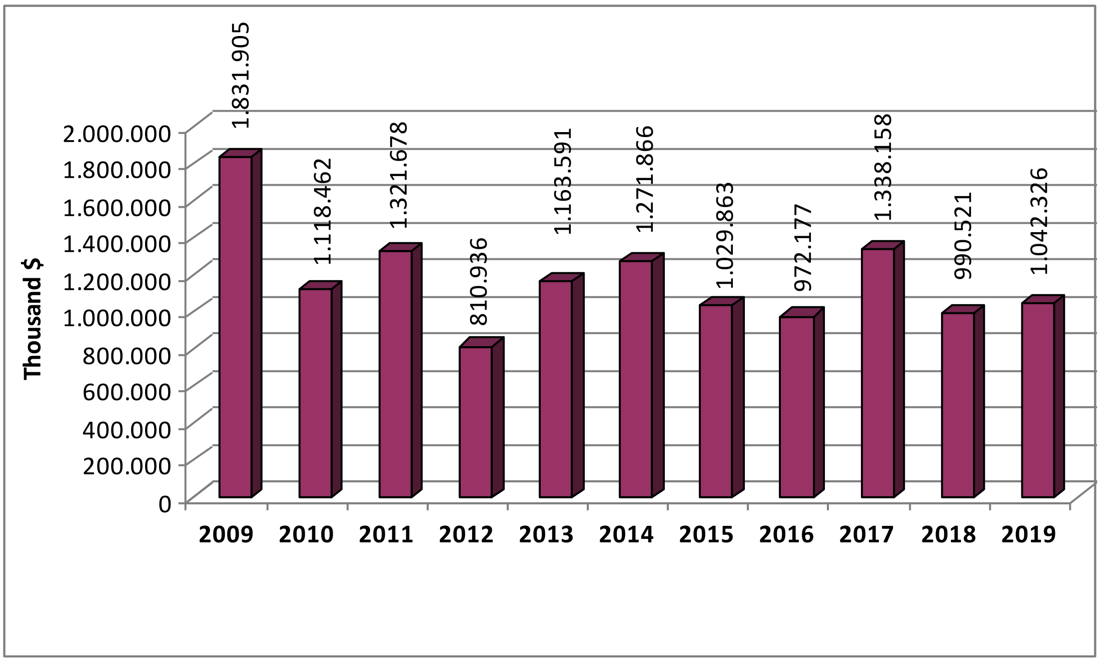
By the end of 2012, orders in our yards was decreased to 0,5 million DWT. Due to the lack of new orders, the shipyards are now mostly concerned, with repair and maintenance facilities. In 2013, in Turkish shipyards 15.755.206 DWT of repair and maintenance had been done. As of 2014, it was approximate 20.000.000 DWT and in 2019 it raised up to 22.500.000 DWT.

Graph 36: Repair and Maintenance Facilities According to Years (2019)



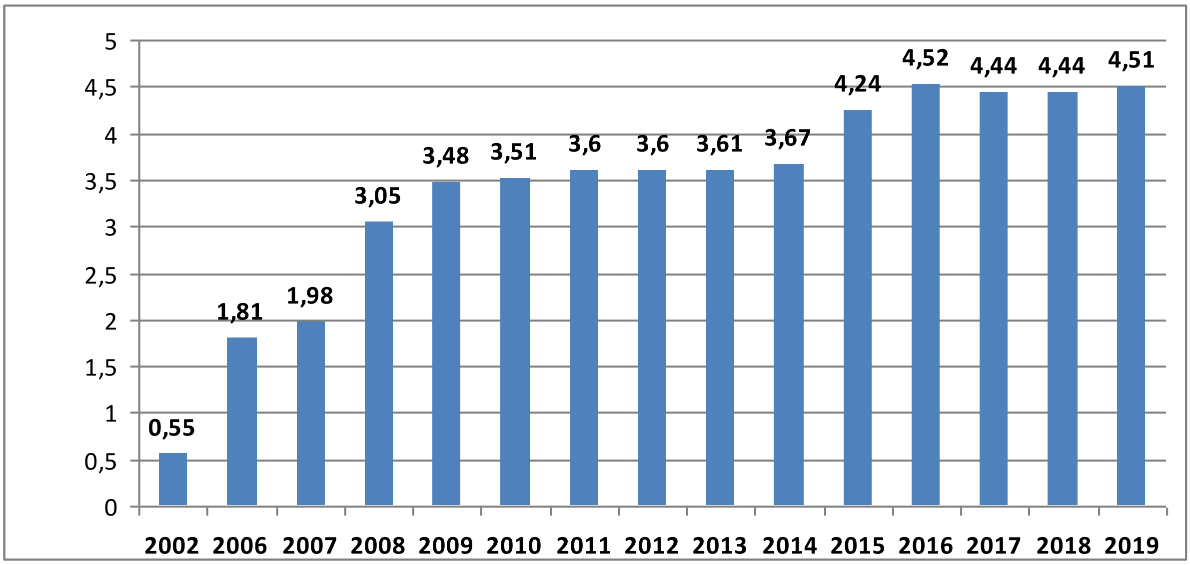
Source: Turkish Shipbuilders'Association (GİSBİR)

Graph 37: Export Figures of Turkish Shipbuilding Industry (2009-2019)



Source: Ship and Yacht Exporters Association (e-birlik.net)

Graph 38: Shipyards Project Capacities Between 2002-2019 (Million DWT)



Source: Ministry of Transport and Infrastrucure 03/2020

In 2002, our shipyard's capacity was 550.000 DWT. In 2017 it has reached up to 4,51 million DWT which means a growth more over 6 times than 2002.

As of March 2020, 32 floating docks and 10 dry docks are operative in Turkey.

Table 48: Floating and Dry Docks in Turkey

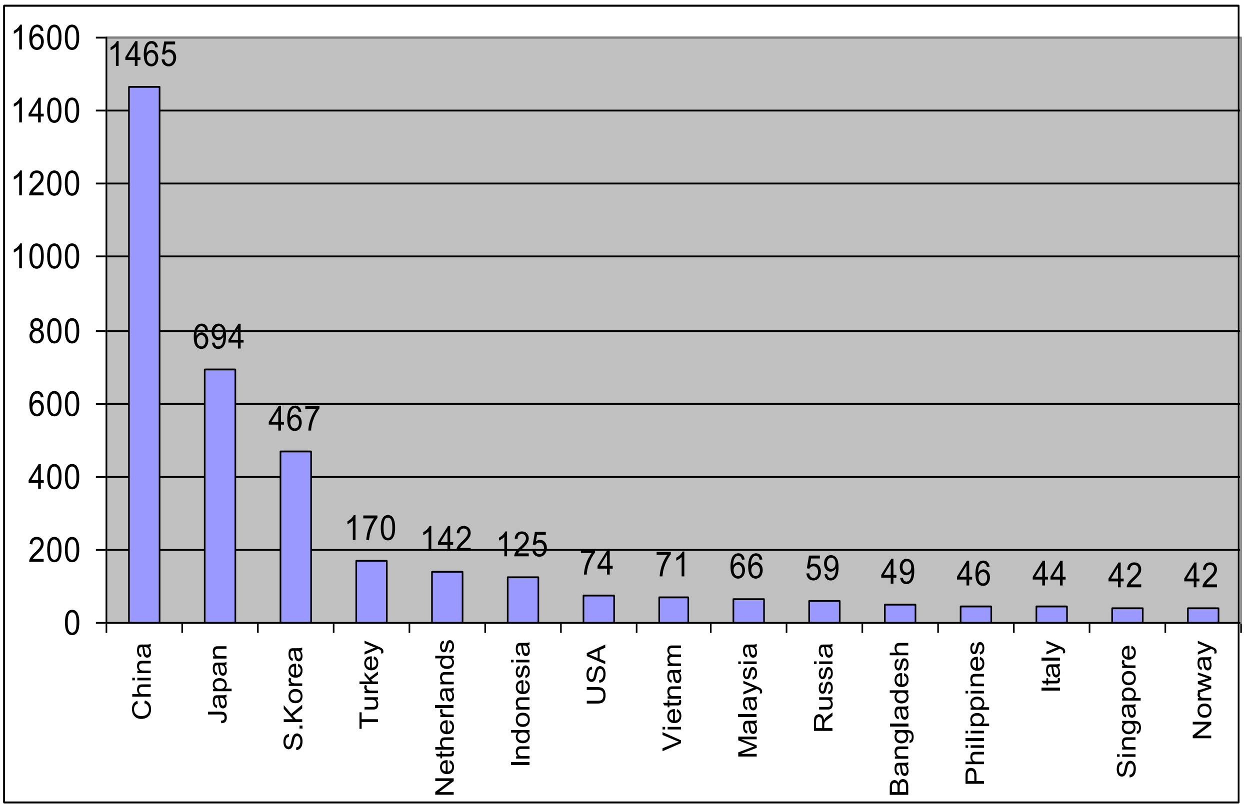
NO	City	Operator	Floating /Dry Dock	Dimensions	Lifting Capacity (Tons)
1	İSTANBUL	DENTAŞ İNŞA ve ONARIM SAN. A.Ş.	Floating Dock	128x30 m	5,000
2	İSTANBUL	GİSAN GEMİ İNŞA SAN. ve A.Ş.	Floating Dock	167x34 m	9,000
3	İSTANBUL	ÇEKSAN GEMİ İNŞA ÇELİK KONS. SAN. ve TİC. A.Ş.	Floating Dock	130x29 m	7,000
4	İSTANBUL	YARDIMCI GEMİ İNŞA A.Ş.	Floating Dock	155x36 m	8,500
5	İSTANBUL	KUZEYSTAR SHİPYARD	Floating Dock	217,5x14,81 m	80,000
6	İSTANBUL	KUZEYSTAR SHİPYARD	Floating Dock	197x39,6 m	45,000
7	İSTANBUL	TORLAK DENİZCİLİK SAN ve TİC. A.Ş.	Floating Dock	67x28,4 m	7,500
8	İSTANBUL	İSTANBUL DENİZCİLİK GEMİ İNŞA SAN.ve TİC. A.Ş.	Floating Dock	93x28 m	4,200
9	İSTANBUL	SNR GEMİ İNŞA SANAYİ A.Ş.	Floating Dock	129x38 m	8,600
10	İSTANBUL	DESAN DENİZ İNŞAAT SANAYİ A.Ş.	Floating Dock	172x36 m	19,000
11	İSTANBUL	DESAN DENİZ İNŞAAT SANAYİ A.Ş.	Floating Dock	232x52	49,500
12	İSTANBUL	DESAN 5442 NOLU PARSEL	Floating Dock	178x36 m	19,000
13	İSTANBUL	GEMAK GEMİ İNŞAAT SANAYİ ve TİC.A.Ş.	Floating Dock	233x45 m	28,000
14	İSTANBUL	GEMAK GEMİ İNŞAAT SANAYİ ve TİC.A.Ş.	Floating Dock	170x33 m	9,000
15	İSTANBUL	HİDRODİNAMİK GEMİ SAN. ve TİC. A.Ş.	Floating Dock	115x22 m	2,750
16	İSTANBUL	GEMSAN GEMİ ve GEMİ İŞLT.SAN. ve TİC. LTD. ŞTİ.	Floating Dock	220x45 m	20,000
17	İSTANBUL	ÇİNDEMİR MAKİNE GEMİ ONARIM ve TER. A.Ş.	Floating Dock	123x28 m	5,000
18	İSTANBUL	ERKAL ULUSLARARASI NAKLİYAT ve TİC. A.Ş.	Floating Dock	350x80 m	100,000
19	İSTANBUL	TORGEM GEMI INSAAT SAN. VE TIC. A.S.	Floating Dock	53x20 m	2,500
20	İSTANBUL	TURQUOISE YAT SAN. AŞ	Floating Dock	66x27 m	2,500
21	İSTANBUL	TERSAN TERSANECİLİK ve TAŞ. SAN. ve TİC. A.Ş.	Floating Dock	130x30 m	7,100
22	YALOVA	BEŞİKTAŞ GEMİ	Floating Dock	230x37 m	22,000
23	YALOVA	BEŞİKTAŞ GEMİ	Floating Dock	382x66 m	70,000
24	YALOVA	TERSAN TERSANECİLİK SAN ve TİC AŞ	Floating Dock	178x35 m	9,000
25	YALOVA	TERSAN TERSANECİLİK SAN ve TİC AŞ	Floating Dock	253x60,9 m	11,370
26	YALOVA	DOĞRUYOL TERSANECİLİK SAN. ve TİC.A.Ş.	Floating Dock	123x30 m	5,500
27	YALOVA	HAT-SAN GEMİ İNŞAA BAKIM-ONARIM DEMİR NAK. SAN. ve TİC. A.Ş.	Floating Dock	180x30 m	10,000
28	YALOVA	SANMAR TERSANESİ	Floating Dock	84x34 m	3,500
29	YALOVA	SEFİNE DEN. TERSANESİ SAN. Ve TİC.A.Ş.	Floating Dock	240x57 m	11,227
30	YALOVA	YAŞARSAN GEMİ İNŞAA SAN. VE TİC.LTD. ŞTİ.	Floating Dock	183x33	10,000
31	KOCAELİ	UZMAR GEMİ İNŞ. SAN. ve TİC. A.Ş.	Floating Dock	68x38 m	2,000
32	KASTAMONU	INEBOLU DENIZCILIK SAN. ve TIC. A.S.	Floating Dock	118x29 m	4,500
TOTAL CAPACITY: 598,247 Tonnes					

NO	City	Operator	Floating / Dry Dock	Dimensions
1	İSTANBUL	İSTANBUL ŞEHİR HATLARI (HALİÇ)	Dry Dock	109x22,5
2	İSTANBUL	İSTANBUL ŞEHİR HATLARI (HALİÇ)	Dry Dock	81,5x17
3	İSTANBUL	İSTANBUL ŞEHİR HATLARI (HALİÇ)	Dry Dock	151x16
4	İSTANBUL	URSA GEMİCİLİK BAKIM ONARIM TERSANECİLİK SAN. TİC. AŞ.	Dry Dock	56x14 m
5	İSTANBUL	İSTANBUL TERSANE KOMUTANLIĞI (PENDİK TERSANESİ)	Dry Dock	300X69
6	İSTANBUL	TUZLA GEMİ ENDÜSTRİSİ AŞ.	Dry Dock	300x53 m
7	İSTANBUL	SEDEF GEMİ İNŞAATI AŞ.	Dry Dock	315x50 m
8	İSTANBUL	DENİZ ENDÜSTRİSİ AŞ.	Dry Dock	210x37 m
9	YALOVA	SEFİNE DENİZCİLİK TERSANECİLİK TURİZM SAN. ve TİC. AŞ.	Dry Dock	240x40 m
10	YALOVA	BEŞİKTAŞ GEMİ (A-10)	Dry Dock	235x40x6,5 m

Source: Ministry of Transport and Infrastrucure 03/2020

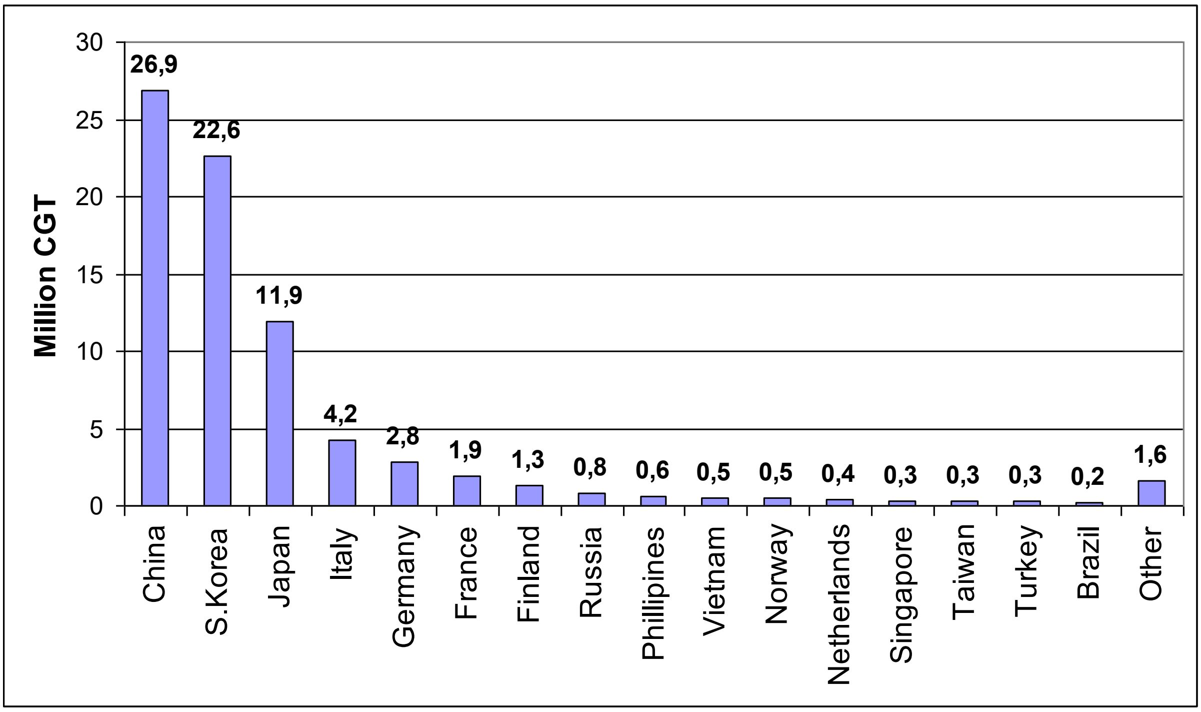
According to quantity, Turkish shipyards are in the 4th place in the world ranking.

Graph 39: Orderbook by Builder Country (Quantity-Numbers)



Source: Clarkson Research Services 01/2020

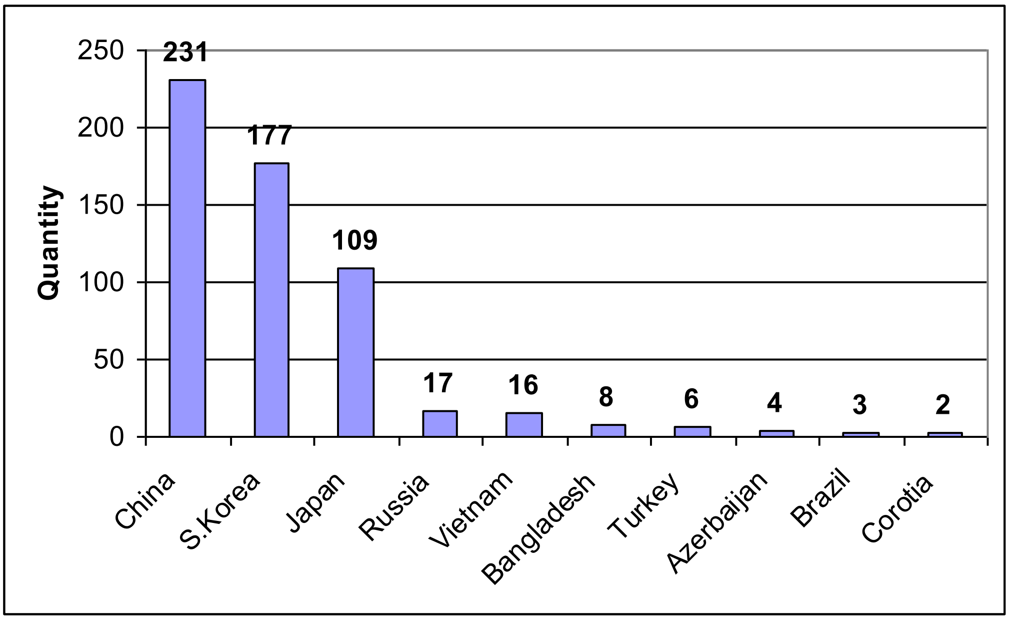
Graph 40: Orderbook by Builder Country (Quantity/Tonnage - Million CGT)



Source: Clarkson Research Services 01/2020

Our shipyards have a good reputation in building of small and medium tonnage chemical tankers. By January 2020, Turkey was in the 7th place according to quantity among the countries which take tanker orders.

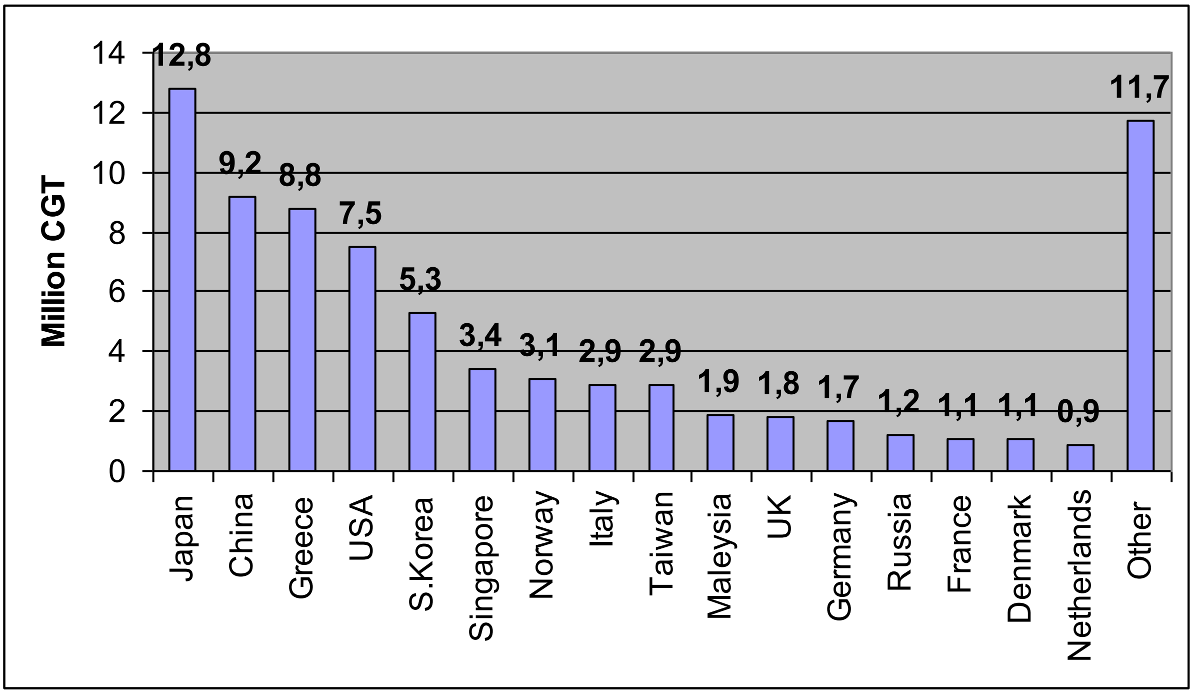
Graph 41: Tanker Orders by Builder Country



Source: Clarkson Research Services 01/2020

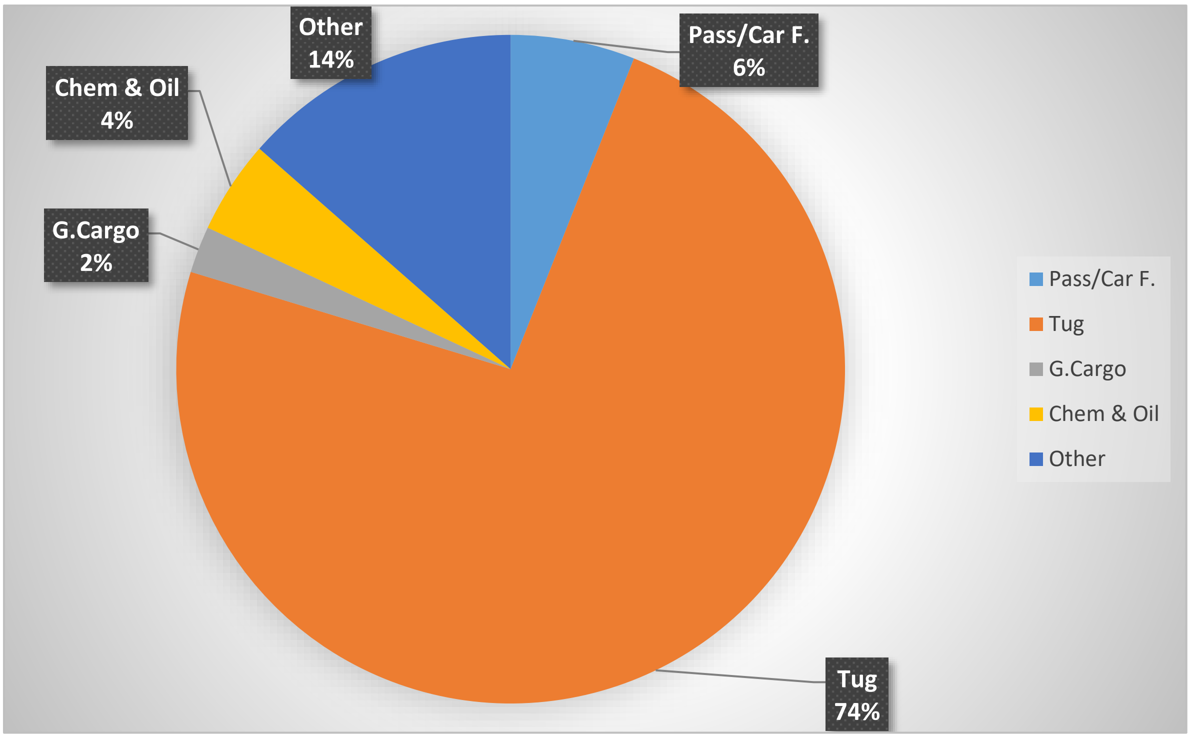
Turkish shipowners worldwide orders consist of 119 ships about 1,3 million DWT as of January 2020.

Graph 42: Orderbook by Owner Country



Source: Clarkson Research Services 01/2020

Graph 43: Distribution of Orders According to Shiptype in Turkish Shipyards



Source: Clarkson Research Services 04/2019

4.2. Defence Industry Projects

Projects about the defence industry have gained a great accelaration within the last few years. Especially with the significiant achivements of the MİLGEM Project, Turkish shipyards have started to take orders from abroad for the naval shipbuilding projects in which high ratio of local industry participation exists. It is known that there are approximately 162 countries which have the naval forces around the World. Turkey is one of the 10 countries which has the ability of designing, building and maintaining a naval ship.The progress in the field of defence industry projects, that was mostly foreign-dependent in the past, can be clearly seen correspondingly with the level that Turkish Shipbuilding industry has been reached now. Today Turkey's naval needs are provided by the Shipyards of its own country.
Naval platform projects in the defence industry;

1. **MİLGEM (National Ship)**

Our source of pride, TCG-HEYBELIADA in 2011, TCG-BÜYÜKADA in 2013, TCG-BURGAZADA in 2018 and TCG-KINALIADA in 2019 were launched and started to serving for the Turkish Navy. There are ongoing works within the MİLGEM Project that to procure 5. Ship of MİLGEM that will be, unlike the first four corvette class ships, it will be frigate class. Conctract for the procurement of the 5. Ship which is the first ship in this concept has been signed between SSB and STM A.Ş. as of 27th of September 2019, the Project calender has been launched.

2. **Multi-Purpose Amphibious Assault Ship (LHD)**

The Multi-Purpose Amphibious Assault Ship is planned to be built with a total/full displacement of 27,436 tons, 231 meters in length and will be the largest naval platform in the inventory of our Armed Forces.

3. **Amphibious Ship (LST)**

While the construction of the first ship, the TCG-BAYRAKTAR, was realized with 70.68% domestic industry participation, the share of SME's in domestic industry participation was approximately 48%.
The second vessel in the program, the TCG SANCAKTAR, is planned to be delivered to the Turkish Naval Forces in 2017 upon the completion of sea acceptance tests.

4. **Submarine Rescue Mother Ship (MOSHIP)**

The building of the TCG ALEMDAR Submarine Rescue Mother Ship (MOSHIP) started in 2011 and it has the most advanced technologies in the world.

5. **Coast Guard Search & Rescue Boat**

6. **New Type Patrol Boat (YTKB)**

Within the scope of the Project, preliminary and final deliveries of all sixteen New Type Patrol Boats have been completed. Contracting activities will continue until March 2018.

**Based on the information of Presidency of The Republic of Turkey Presidency of Defence Industries web site. (https://www.ssb.gov.tr/WebSite/contentlist.aspx?PageID=88&LangID=2)*

7. **New Type Submarine Project**

Within the scope of the Project, based on the need of Turkish Naval Force, to meet Submarine Operation Concept criterion, it is aimed to construct 6 submarine with air independent propulsion system with maximum participation of Turkish industry at Gölcük Shipyard Command. These submarines will be equipped with modern command systems, due to the ability of submergence for a longer period than its peers will give our Turkish Naval Force a great advantage in terms of Submarine Operation Concept.

Construction of the first 4 submarine has begun. At the begining of 2022 the first submarine, at the begining of 2027 the last submarine are planned to be delivered to Turkish Naval Force.

8. **Barbaros Class Frigate Half-Life Modernization Project**

Within the scope of the Project, current war systems will be replaced by the new and advanced systems developed locally and nationally by Aselsan – Havelsan Partnership in accordance with the requirements of the necessities of the time for the 4 BARBAROS Class Frigate registered in the Turkish Naval Force's inventory.

9. **Preveza Class Submarine Half-Life Modernization Project**

Within the scope of the Project, current war systems will be replaced by the new systems developed locally and nationally by STM, Aselsan and Havelsan Partnership in accordance with the requirements of the necessities of the time for the 4 PREVEZE class submarine registered in the invertory of Turkish Naval Force.

4.3. Yacht and Boat Building Industry

Yacht and boat building is one of the most important sectors with its high accretion value, high export ratio and it provides employment. This industry is the combination of the sectors in yards dealing with ironing, painting, electric-electronic, textile, decoration etc.

Yacht and boat building industry is quite different from the shipbuilding because of its concept, scope and technology. In shipbuilding industry long term investments and big coastal areas are needed for production, but in boat & yacht building, relatively less investments, areas and time are needed. Boat&yacht building comparatively does not need very big investments but has a big accretion value.

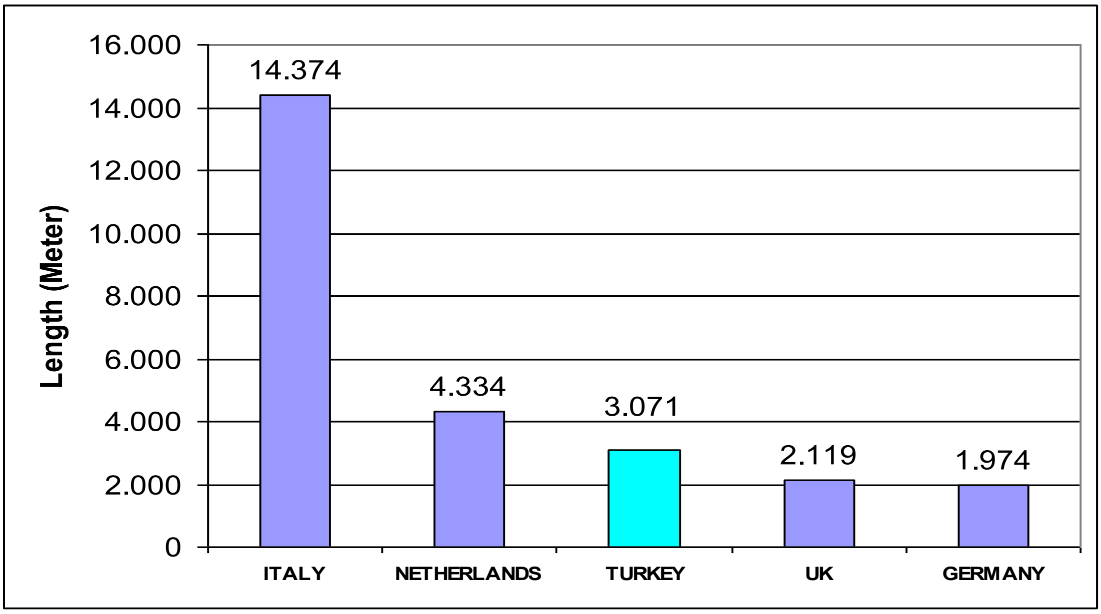
Turkey; with its beautiful coasts, cultural and historical resources, has a great market potential not only for yachts but also especially for mega-yacht tourism. Inclusion of mega-yacht mooring places to the projects which are planning to be constructed in Ataköy and Zeytinburnu, will be a great prestige and income for our marine tourism.

To summarize the advantages of our boat&yacht building industry, the main positive aspects are;

Educated and competent labour
Production quality in accordance with international standards
Reasonable costs
Adequate sub industry with quality
Technology basis production
Closeness to the international markets
Appropriate climate
Our country's potential in boat&yacht building
Main disadvantages are;
Heavy taxes of special consumption, value added and motor vehicle collected from boats.
Long bureaucratic procedures during the registering operations.

Turkey was in the third place in global order book by the total length of 3594 meters at the end of 2017. By 2019, moved to fourth place with the total length of 3000 meters. And in the February 2020, Turkey back in the 3rd position in world ranking of order and under construction of yachts with 3071 meters of length.

Graph 44 : 24 Meters and Above Yacht Orders by Country (Length)



Source: Boat International Turkey-Global Orderbook Feb.2020

4.4.Sub-Industry

In parallel with to the improvements of the recent years, theTurkish sub-industry is in progress, but still some of the items are imported by the shipyards due to the lack of production. Sub-industry which is 20% percent of the ship's price, is one of the most important branches in the shipbuilding industry. It has the highest employment value in sub-sectors. Main problem of sub-industry in Turkey is to be made by local and small enterprises which cause problems about standardizing and approving the products.

Turkish sub-industry regarded as one of the best in supplying anchor, chain, bollard, electric cables, and hydraulic units, but in electronic equipment especially in navigational systems, due to their producers are a few worldwide, sector needs to obtain them from the import resources. Steel sheet production in Turkey can also meet onlythe small amount of the requests.

Turkish Sub-industry is able to produce;

Anchor, chain, bollard, locking equipments - Windlass and equipments - Valves and Central heating Systems - Electric Panels and Tables - Fire Fighting Systems - Pumps - Isolation Equipments - Pipes – Refrigerated Units - Hatch Covers - Diesel generator – Boiler - Carpenter and furnishings.

Main items imported in sub-industry can be summarized as;

Sheet steel/iron and profiles – Holland profiles – Telecommunication systems – Rudder Systems – Bow/Stern thrusters.

Sub-industry creates employment as 1 to 3. In 2002 employment in sub-industry was 30.000 people and it raised to 103.500 but unfortunately due to the global economic crisis it decreased to 57.537 by the end of 2009. By August 2019, employment in the sub-industry declared to be 84.000 persons.

CHAPTER V

PORT DEVELOPMENTS

5. PORT DEVELOPMENTS

5.1. Ports Information in General

The coastline of Anatolia is 8333 Km long. Total numbers of ports are 180 along the coastline. 6 ports are operated by Turkish Maritime Administrations and 2 ports are operated by Turkish State Railways.

According to regions determined by Republic of Turkey Ministry of Transport, Maritime Affairs and Communications;
Ports are operated by;

GOVERNMENT	20 PORTS
MUNICIPALITY	23 PORTS
PRIVATE	137 PORTS

The major part of international trade is being realized through maritime transportation in Turkey.
Existing Theoretical Capacity of Turkish Ports *(Acc.to 2015 Backfield of Ports, Road and Railway Connections Master Plan)* are as below;

Cargo Type	Theoretical Capacity
Container	**25.543.028 TEU**
General Cargo + Dry Bulk Cargo	**318.246.892 Tons**
Liquid Bulk Cargo	**254.896.000 Tons**
Vehicle	**31.471.560 Tons**

Turkish ports should go into an expertising process on certain types of cargoes and/or new port projects for container handling so as to become more competitive in the Mediterranean and Black Sea markets. Recently private container terminals increased specially in the Marmara Region.
Turkish ports hold stratejic position within the Eastern Mediterranean and Black Sea Shipping Lines and at the intersection point of East-West and North-South directional international transport corridors. They are in an advantageous position to attract transshipment/transit cargoes. Ports in all regions of Turkey are so located that they can serve to different transportation nets. The Mediterranean and Aegean Sea ports are located with little miss distance and have ability to attract Asian-European main shipping lines' cargoes passing through the Mediterranean. Specially, the Mediterranean ports are in a position to operate as transshipment/transit ports for delivering cargoes coming from main shipping lines to Middle East and Central Asian countries. Meanwhile Ports in the Marmara Region are important in terms of Turkish connection of Trans-European and Pan-European transport corridors formed by EU and extending those corridors to East. As a result of growing trade and transport volume in Black Sea which is the most important means of access for trading among the landlocked Central Asian countries with Europe, the importance of our ports in the area have increased.

484.168.412 tons of cargo is realized at Turkish ports in 2019.

- % 27,2 of handling is export with 131.676.578 tons.
- % 45,7 of handling is import with 221.404.812 tons.
- % 11,6 of handling is cabotage with 56.112.724 tons.
- % 15,5 of handling is transit with 74.974.298 tons.

Table below shows total cargo handled at Turkish ports according to type of transportation in the last five years.

TABLE 49: CARGO HANDLING FIGURES AT TURKISH PORTS (ACC. TO TRANSPORT MODE)

MODE OF TRANSPORT		2015	2016	2017	2018	2019
EXPORT	TURKISH	**13.754.810**	**15.272.855**	**15.138.335**	**15.660.122**	**14.132.161**
	FOREIGN	**78.397.812**	**79.532.265**	**98.553.733**	**94.764.513**	**117.544.417**
	TOTAL	92.152.622	94.805.120	113.692.068	110.424.635	131.676.578
IMPORT	TURKISH	**22.724.776**	**23.350.424**	**21.677.485**	**19.850.109**	**13.763.576**
	FOREIGN	**185.601.532**	**191.782.095**	**211.978.539**	**198.694.711**	**207.641.236**
	TOTAL	208.326.308	215.132.519	233.656.024	218.544.820	221.404.812
CABOTAGE	LOADING	**25.894.384**	**26.249.991**	**29.898.010**	**29.550.554**	**28.251.017**
	UNLOADING	**26.578.284**	**27.050.225**	**30.498.069**	**30.005.291**	**27.861.707**
	TOTAL	52.472.668	53.300.216	60.396.079	59.555.845	56.112.724
TRANSIT	LOADING	**58.597.204**	**61.436.179**	**55.544.396**	**63.081.077**	**64.960.731**
	UNLOADING	**4.487.893**	**5.527.128**	**7.885.329**	**8.547.183**	**10.013.567**
	TOTAL	63.085.097	66.963.307	63.429.725	71.628.260	74.974.298
GR.TOTAL	LOADING	**176.644.210**	**182.491.290**	**199.134.474**	**203.056.266**	**224.888.326**
	UNLOADING	**239.392.485**	**247.709.872**	**272.039.422**	**257.097.294**	**259.280.086**
	TOTAL	416.036.695	430.201.162	471.173.896	460.153.560	484.168.412

Source: Republic of Turkey Ministry of Transport, Maritime Affairs and Communications

Graph 45: Cargo Handling Figures According To Years

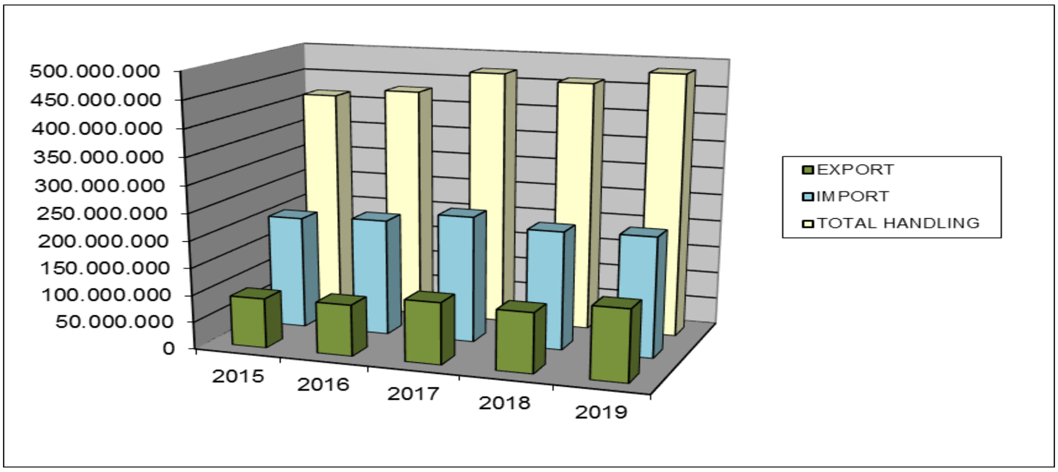
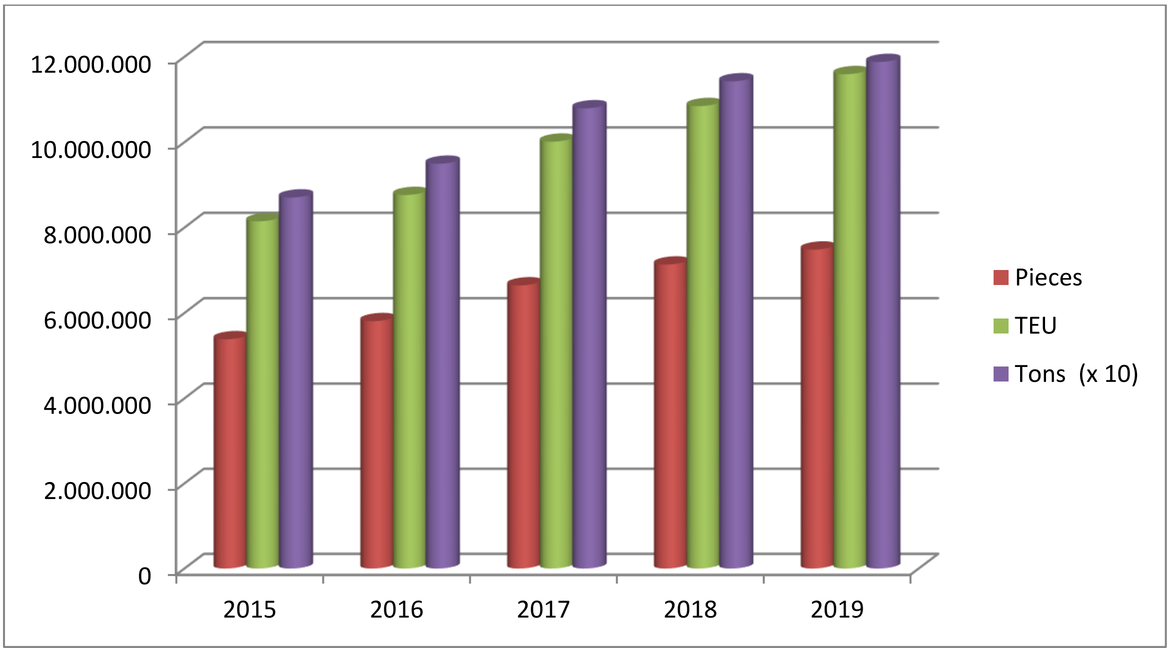


TABLE 50: CONTAİNER HANDLİNG FİGURES AT TURKİSH PORTS

MODE OF TRANSPORT		2015	2016	2017	2018	2019
EXPORT	**PCS**	**2.198.508**	**2.309.172**	**2.490.272**	**2.665.729**	**2.896.688**
	TEU	**3.394.508**	**3.543.804**	**3.866.874**	**4.160.124**	**4.594.647**
	TONS	**38.419.925**	**41.444.254**	**44.433.316**	**48.624.398**	**51.276.523**
IMPORT	**PCS**	**2.248.636**	**2.352.515**	**2.580.351**	**2.751.631**	**2.883.295**
	TEU	**3.454.345**	**3.607.086**	**3.975.205**	**4.259.029**	**4.540.201**
	TONS	**34.007.962**	**35.608.597**	**37.275.863**	**36.336.606**	**37.602.959**
CABOTAGE	**PCS**	**454.012**	**543.526**	**703.324**	**689.215**	**558.623**
	TEU	**606.064**	**738.312**	**935.521**	**935.661**	**753.267**
	TONS	**5.869.320**	**7.032.995**	**10.059.528**	**10.200.874**	**9.061.639**
TRANSIT	**PCS**	**481.454**	**601.662**	**870.356**	**1.026.230**	**1.143.982**
	TEU	**691.481**	**872.772**	**1.232.937**	**1.489.184**	**1.703.722**
	TONS	**8.728.650**	**10.842.751**	**16.149.201**	**19.069.587**	**20.826.889**
GRAND TOTAL	**PCS**	5.382.610	5.806.875	6.644.303	7.132.805	7.482.588
	TEU	8.146.398	8.761.974	10.010.537	10.843.998	11.591.838
	TONS	87.025.857	94.928.597	107.917.908	114.231.465	118.768.010

Source: Republic of Turkey Ministry of Transport, Maritime Affairs and Communications

Graph 46: Container Handling Figures According to Years



Port sector is a very dynamic sector in Turkey as it is in all World. Developments in world economy, directly influence goods and service trade and specially expectations on goods' trade effect investment plans of ports that are most important transportation infrastructures. Increasing expactations on goods and service trade in medium and long term speed up port investments as well as decline in these expectations may cause to postpone investments.

Nowadays ports, in classic terms are not the loading/discharging point of ships, they have become Logistic Centers where, with development of multimodal shipping, various transportation modes intersect. Ports are in a dynamic development, growth and renewing trend as they are obliged to cover the expectations and demands of partners in this system. However this trend might come to a halt by reasons like economic crisis. Thus in crisis period many port operators suspended their investments in Turkey. But since the last quarter of 2009 increase in goods and service trade, encouraged port operators to make investments. There are two options for increasing the capacity of Ports, these are: Existing ports' increasing their efficiency and making physical investments. The physical investments consist;

- Developing physical conditions of port by adding new jetties and back fields,
- Increasing handling capacity of port by having new equipments.

Both options ultimately provides increase of port's cargo and ship reception capacity. Within these two coverages, explained capacity and improvings in the forthcoming years for the existing and newly planned ports are shown below.

Port/Facility	Load Type	Existing Capacity	Project End
Limak İskenderun	Container	1,000,000 TEU	3,000,000 TEU
Toros Tarım (Samsun)	Bulk Solid/General Cargo	3,300,000 Tons	8,500,000 Tons
Aksa	General Cargo	600,000 Tons	4,000,000 Tons
Petkim Container Terminal (Petlim)	Container	800.000 TEU	1,500,000 TEU *(might be increased to 4,000,000 TEU subject to cargo demand in the area in future)*

State Investments

Presently 3 large scale (mega) projects are planned as state investments.

- Northern Aegean Çandarlı Port is under construction whereas others are at the stage of research and projection. Located at İzmir/Bergama, 1500 meters long breakwater's construction was completed, realizing remaining substructures and superstructures gradually first stage is foreseen to be completed by 2018 at Northern Aegean Çandarlı port. Çandarlı Port construction was divided into two phase. The first phase will be built in three stages (1 m. TEU + 1m. TEU. + 2 m. TEU). The second phase has not been planned yet.
- Located on the east of existing Mersin MIP, new Mersin container port is planned in 5 phases, which aims to provide 1.7-1.9 million TEU in its first phase, followed by further expansion to take total 10 - 11.4 million TEU upon completion.
- Being located in the boundries of Zonguldak/west Black Sea region, Filyos Port will serve to the industrial zone which is planned to be assembled on the background. Upon completion, port will be able to handle 700.000 TEU container and 16 million tons general/bulk cargo.

Besides those projects;

- Derince Container Terminal which will be built on the fill area east of existing Derince Port, will provide 1.000.000 TEU capacity *increase (Derince Container Terminal is a part of Safi Derince Port which has been privatizated.)*
- Capacity of Izmir Port is planned to reach 2.500.000 TEU after privatization.

5.2. TDI Ports and Privatizations

Table 51: The Ports Operated by Turkish Maritime Administrations (TDI)

PORTS	PIER LENGTH (Meters)	DEPTH (Meters)	HANDLING (000x ton/year)	SHIP CAPACITY (number/years)	STORAGE CAPACITY (000x ton/year)	CONTAINER CAPACITY (Teu/year)	PASSANGER CAPACITY (person/years)
SARAYBURNU Pier 1 and 2	**242**	**(-8,-12)**	**-**	**130**	**-**	**-**	**250.000**
KURUÇEŞME **Pier 1**	**129**	**(-6,-8)**	**-**	**200**	**-**	**-**	**-**
KURUÇEŞME **Pier 2**	**161**	**(-6,-8)**	**-**	**200**	**-**	**-**	**-**
KABATEPE	**295**	**(-4,-5)**	**-**	**365**	**-**		**90.000**
GÖKÇEADA **(Port of Kuzu)**	**900**	**(-6,-7)**	**400**	**700**	**-**		**200.000**
GÖKÇEADA **(Uğurlu Pier)**	**76**	**(-6,-8)**	**-**	**365**	**-**	**-**	**-**
TAŞUCU	**610**	**(-6, -10)**	**1.200**	**1500**	**127**	**-**	**-**
TOTAL	2.413		1.600	3.460	127	-	2.040.000

Source: TDI

- In 1997, Ports of Rize, Ordu, Sinop, Giresun and Hopa,In 1998, Port of Antalya, In 2000, Ports of Marmaris and Alanya, In 2003, Ports of Çeşme, Kuşadası, Trabzon and Dikili, In 2014, Port of Salıpazarı

have been privatized,by the method of conveying the right of exploitation for 30 years.

- In 2014, Port of Kemerköy
- In 2015, Port of İnebolu
- In 2016, Bodrum Gökçebel Marina

have been privatized,by the method of conveying the right of exploitation for 49 years.

- In 2018, Port of Tekirdağ has been privatized,by the method of conveying the right of exploitation for 36 years.

5.3. TCDD Ports and Privatizations:

Table 52 : Ports Operated by TCDD

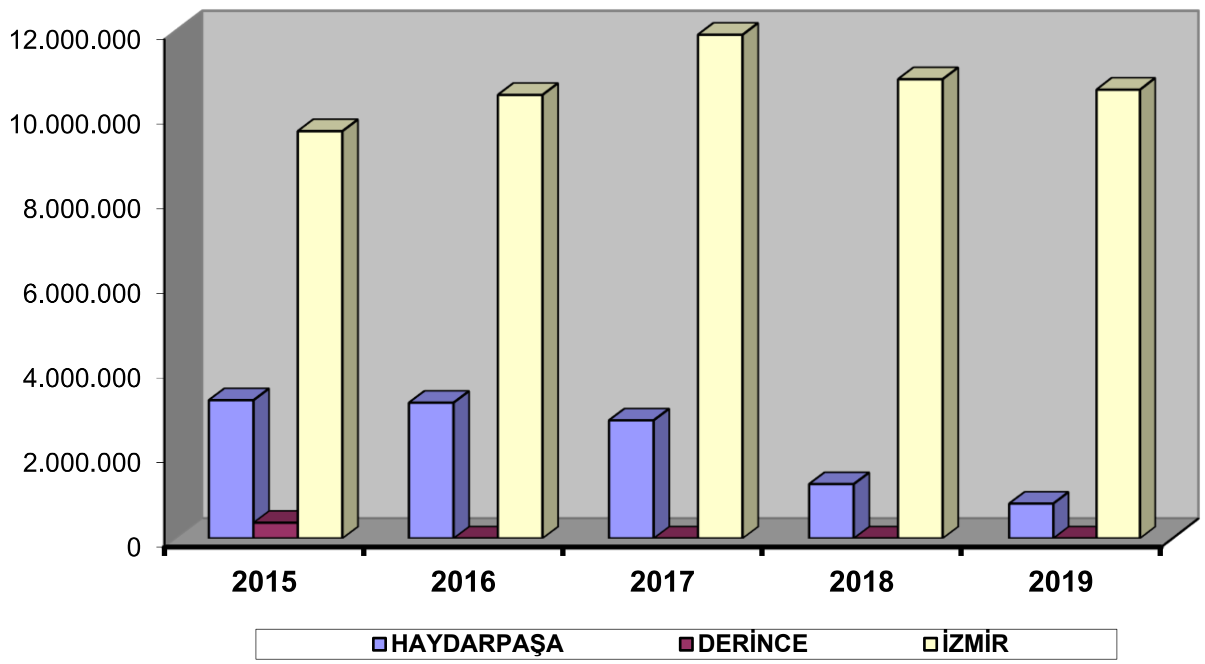
PORTS / CAPACITY	İZMİR Theoretical Cap.	İZMİR Current Cap.	İZMİR Improvable	HAYDARPAŞA Theoretical Cap.	HAYDARPAŞA Current Cap.	HAYDARPAŞA Improvable
Total Wharf Length (m)	**3.386**	--	--	**3.413**	--	--
Depths (m)	**6-10**	--	--	**5-12**	--	--
Port Area (m²)	**525.000**	--	--	**343.420**	--	--
Ship Acceptance Capacity (ship/year)	**1.305**	**3.588**	**2.503**	**1.169**	**1.944**	**5.435**
HANDLING CAPACITY						
Container (Teu/Year)	**810.208**	**1.025.624**	**1.984.018**	**654.637**	**481.008**	**1.217.047**
G.Cargo & D.Bulk Cargo (Tons/Year)	**1.317.104**	**4.597.883**	**5.814.420**	**1.913.111**	**231.912**	**16.374.641**
Ro-Ro (Vehicle-Truck / Year)	**350.000 V**	**884.500 V**	--	**149.100 T**	**143.988 T**	--
Liquid Bulk Cargo (Tons/Year)	--	--	--	--	--	--
STORAGE CAPACITY						
Container (Teu/Year)	**611.000**	--	--	**426.181**	--	--
G.Cargo & D.Bulk Cargo (Closed) (Tons/Year)	--	--	--	**225.115**	--	--
G.Cargo & D.Bulk Cargo (Open) (Tons/Year)	**1.299.375**	--	--	**1.620.000**	--	--
Ro-Ro (Vehicle-Truck / Year)	**104.354 V**	--	--	**45.600 T**	--	--
Liquid Bulk Cargo (m³/Year)	--	--	--	--	--	--

Table 53: TCDD Ports 2015-2019 Handling Figures Acc. to Cargo Groups

TCDD PORTS 2015 - 2019 Handling Figures Acc. to Cargo Groups						
PORT	YEAR	GENERAL CARGO	CONTAINER	DRY BULK	LIQUID BULK	TOTAL
HAYDARPAŞA	2015	2.630.004	661.552	0	0	3.291.556
	2016	2.678.024	553.116	0	0	3.231.140
	2017	2.383.960	427.334	0	0	2.811.294
	2018	952.197	340.971	0	0	1.293.168
	2019	539.395	289.633	0	0	829.028
DERİNCE	2015	219.011	1.788	149.273	2.977	373.049
	2016	0	0	0	0	0
	2017	0	0	0	0	0
	2018	0	0	0	0	0
	2019	0	0	0	0	0
İZMİR	2015	763.370	6.656.669	1.969.201	247.710	9.636.950
	2016	912.554	7.602.048	1.714.695	261.588	10.490.885
	2017	938.274	7.895.352	2.750.898	324.206	11.908.730
	2018	775.529	7.392.536	2.407.474	285.396	10.860.935
	2019	387.531	6.487.304	3.432.134	307.290	10.614.259
TOTAL	2015	3.612.385	7.320.009	2.118.474	250.687	13.301.555
	2016	3.590.578	8.155.164	1.714.695	261.588	13.722.025
	2017	3.322.234	8.322.686	2.750.898	324.206	14.720.024
	2018	1.727.726	7.733.507	2.407.474	285.396	12.154.103
	2019	926.926	6.776.937	3.432.134	307.290	11.443.287

** Derince Port 2015 Tonnage is till end of February*

Graph 47: TCDD Ports 2015 – 2019 Handling Figures



Graph 48: 2019 TCDD Ports Handling Acc. to Cargo Groups

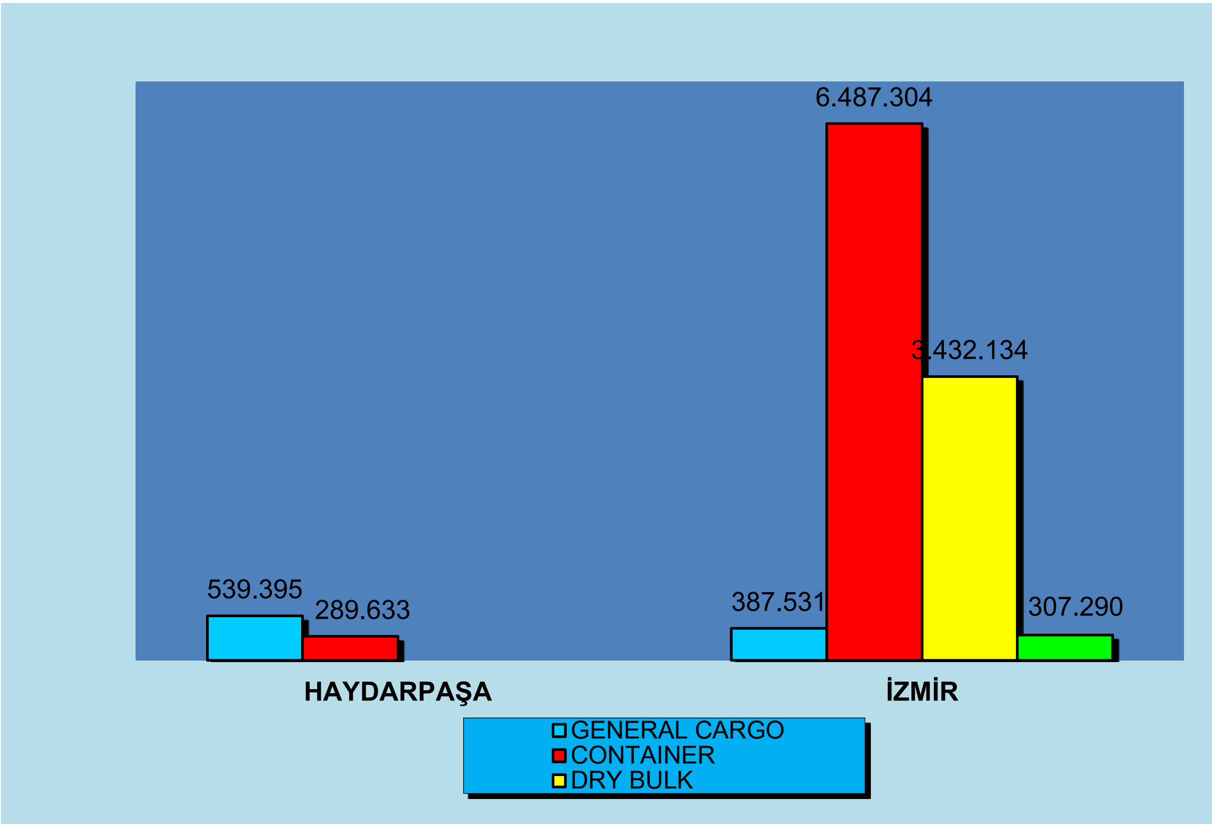
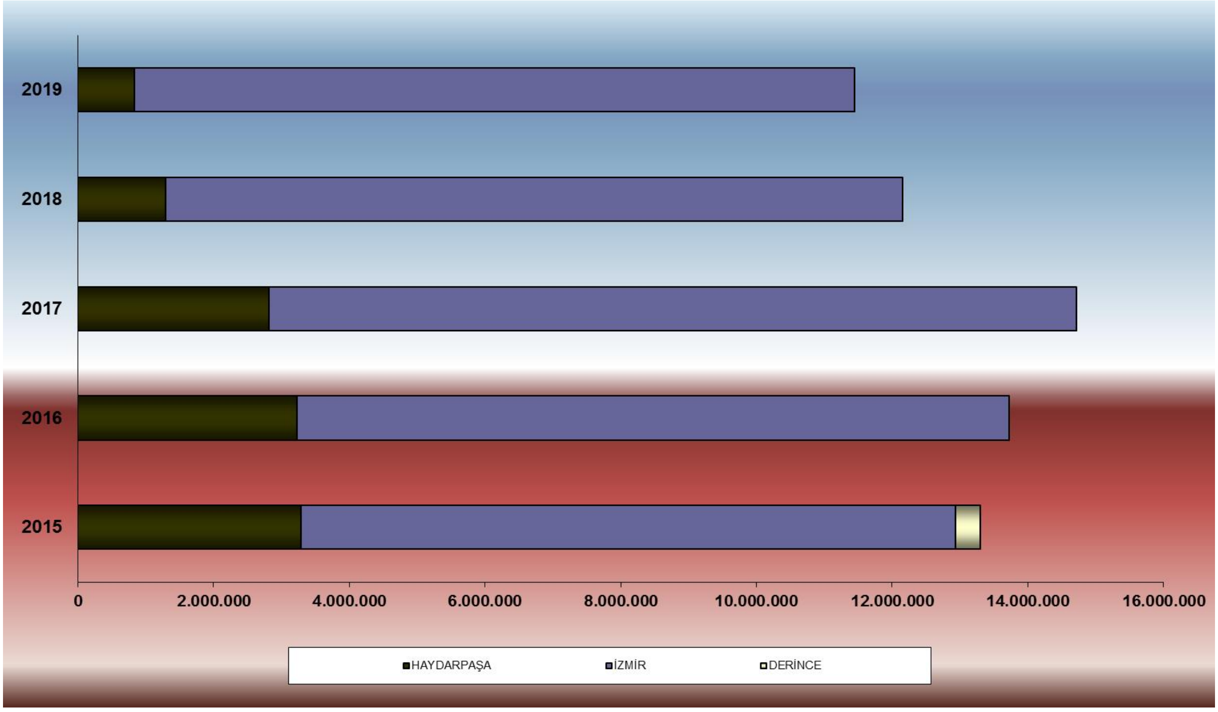


Table 54: TCDD Ports Loading and Unloading Figures

TCDD Ports Loading and Unloading Figures							
YEARS	LOADING			UNLOADING			TOTAL
	EXPORT	DOMESTIC	TRANSIT	IMPORT	DOMESTIC	TRANSIT	
HAYDARPAŞA							
2015	1.415.146	0	0	1.875.954	456	0	3.291.556
2016	1.507.124	0	0	1.724.016	0	0	3.231.140
2017	1.301.059	0	0	1.510.235	0	0	2.811.294
2018	566.243	0	0	726.765	160	0	1.293.168
2019	**343.500**	**0**	**0**	**485.528**	**0**	**0**	**829.028**
İZMİR							
2015	4.967.082	0	0	4.397.228	272.640	0	9.636.950
2016	5.555.580	0	0	4.677.439	257.866	0	10.490.885
2017	6.020.876	31.553	0	5.480.171	376.130	0	11.908.730
2018	5.453.110	21.002	0	4.884.092	502.731	0	10.860.935
2019	**5.147.286**	**0**	**0**	**5.036.336**	**430.637**	**0**	**10.614.259**
DERİNCE							
2015	243.045	130	0	123.329	6.545	0	373.049
2016	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0
2019	**0**	**0**	**0**	**0**	**0**	**0**	**0**
TOTAL							
2015	6.625.273	130	0	6.396.511	279.641	0	13.301.555
2016	7.062.704	0	0	6.401.455	257.866	0	13.722.025
2017	7.321.935	31.553	0	6.990.406	376.130	0	14.720.024
2018	6.019.353	21.002	0	5.610.857	502.891	0	12.154.103
2019	**5.490.786**	**0**	**0**	**5.521.864**	**430.637**	**0**	**11.443.287**

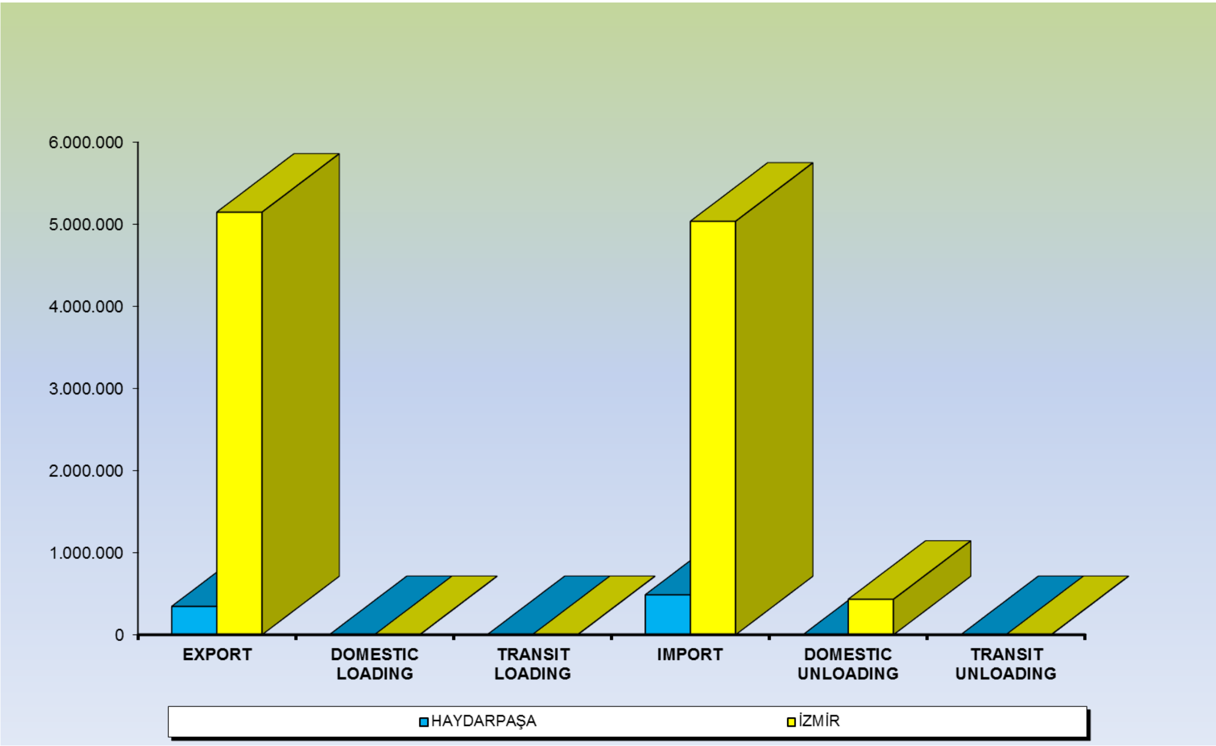
** Derince Port 2015 Tonnage is till end of February*

Graph 49: TCDD Ports Handling Acc. to Years (Tons)



Source: TCDD

Graph 50: 2019 TCDD Ports Cargo Handling Acc. to Transportation Modes



Source: TCDD

HAYDARPAŞA PORT

Haydarpaşa Port is in the province of Istanbul which is one of the most important metropolises. İstanbul is not only the most industrialized region but it has also the foremost cultural sightseeing and fascinating historical artifacts. İstanbul is known as an open air museum in the world.

Haydarpaşa is in the meeting point of and in the area covering Black Sea Countries and the waterway of Rhein-Main-Danube Canal and it is gaining substantial importance in this aspect.

Haydarpaşa port has all modes of transport such as sea, rail and land road. It renders services 24 hours, the length of berths is 2,675 meters, ships receipt capacity is 2,213 per year, and also container handling capacity is 360.000 TEU.

Port Capacities	*Ship Receipt Ships/Year*	*Berth Length (m)*	*Max. Depth (-m)*
GENERAL CARGO	1,134	1,688	6, 10
Container	1,200	650	12
Dry Bulk	79	190	10
Ro-Ro	238	141	8
Total	2,651	2,669	

Storage Area	m²	Capacity
Open (Tons/Year)	17,390	417,360
Closed (Tons/Year)	20,502	329,152
Container (TEU/Year)	164,360	211,200
InlandTerminal(TEU /Year)	55,000	542,800

Izmir Port

İzmir Port faces the Aegean Sea and is situated at the pivotal point of the sea trade between Western Europe and North Africa. It has a vast agricultural and industrial hinterland, plays a substantial role not only essential core for the industry and agricultural trade in the Aegean Region but also as a vital function in the Turkish exports.

İzmir port, having a modern container terminal, maintains all the services for general, dry and liquid bulk cargoes, Ro-Ro and cruises with its infrastucture and skilled manpower.

Port Capacities

Port Capacities	**Ships/Year**	**Berth Lenght (m)**	**Max. Depth (-m)**
Dry Cargo	**810**	**1,429**	**7, 10.5**
Container	**1,500**	**1,050**	**13**
Dry Bulk	**79**	**150**	**10.5**
Passenger	**1,246**	**330**	**8, 10.5**
Total	**3,635**	**2,959**	

Storage Area	**m²**	**Capacity**
Open (Tons/Year)	**23,580**	**565,000**
Closed (Tons/Year)	**24,678**	**394,848**
Container (TEU/Year)	**192,360**	**266,000**

5.4. Port Privatizations of Turkish Railways ; Privatization Completed Ports

PORT NAME	DATE OF APPR.	DATE OF SIGN.	PRICE ($)
MERSİN	07.11.2005	11.05.2007	755 MILLION USD
BANDIRMA	19.09.2008	18.05.2010	175,5 MILLION USD
SAMSUN	19.09.2008	31.03.2010	125,2 MILLION USD
İSKENDERUN	07.01.2011	30.12.2011	372 MILLION USD
DERINCE	12.08.2014	25.02.2015	543 MILLION USD

Privatization Tender Cancelled Ports

PORT NAME	DATE OF TENDER	CANCELLING DATE OF TENDER
İZMİR	03.05.2007	28.04.2010

Source: TCDD & Privatization Adm.

5.5. Privatized TCDD Ports

Mersin International Port (MIP)

Strategic Location

MIP is an international port embracing The Middle East and Europe in The Eastern Mediterranean Sea.

Mersin International Port (MIP) serves all the trading regimes including import, export, transit, transshipment and cabotage. Mersin is situated in Mersin Bay, a broad body of water that is open southward to The Mediterranean. It is the main port for the Eastern Mediterranean Region's industry and agriculture. The port's rail link and its easy access to the international highway makes it an ideal transit port for trade to the Middle East and Black Sea regions. With its modern infrastructure and equipments, efficient cargo handling, vast storage areas and its proximity to the Free Trade Zone, Mersin is one the most important ports in Eastern Mediterranean.

Mersin International Port (MIP) is linked by railway and highways to Turkey's industrialized cities such as Gaziantep, Kayseri, Kahramanmaraş, Konya and to countries at borders such as Syria, Iraq and Iran. MIP is one of the most important container gateways in the Mediterranean Region with excellent transshipment and hinterland connections to the Middle East and Black Sea. Parallel to the development of logistics sector across the world, efforts are in progress to make Mersin a leading logistics centre.

By being one of the most important ports in The Eastern Mediterranean and with its vast hinterland, committed human resources and easy access, MIP handles a considerable portion of Turkey's export & import volumes. Eastern Anatolia, Southeastern and Central Anatolia Regions choose MIP for their import and export activities. MIP is a port of choice for transit and transshipment operations fulfilled by dedicated and experienced staff with a service quality being at international standards.

Access by railroad

MIP is connected directly to the Turkish rail network providing connection to the major industrialised cities such as Gaziantep, Kayseri, Kahramanmaraş and Konya, as well as to international destinations. MIP has constructed a dedicated rail terminal with 4 railway lines of 2 km in length for container operations.

Access by highway

MIP has highway connections to the major industrialised cities such as Gaziantep, Kayseri, Kahramanmaraş and Konya. Highway serves also as efficient transportation mechanism in the international destinations.

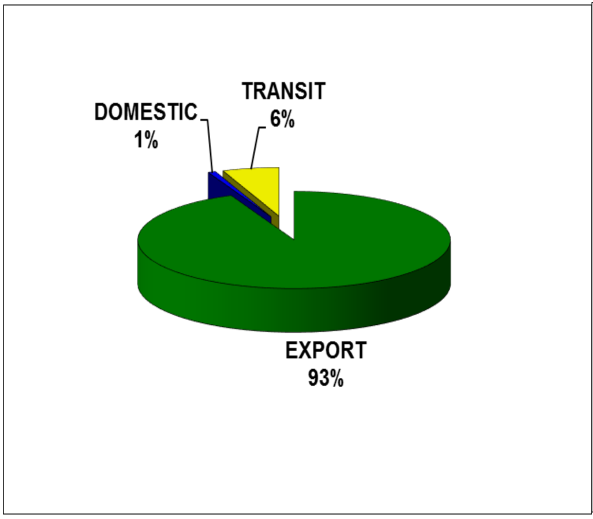
Free Port Zone

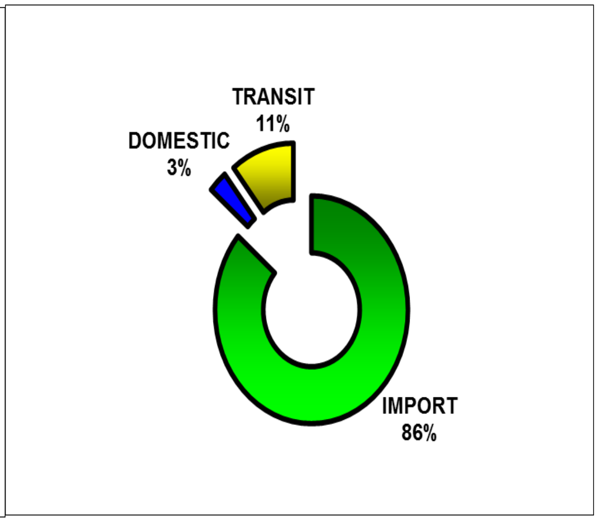
The Mersin Free Port Zone is located adjacent to MIP and is connected by a direct road for convenience.

Table 55: Handling Figures – Port of Mersin (2019)

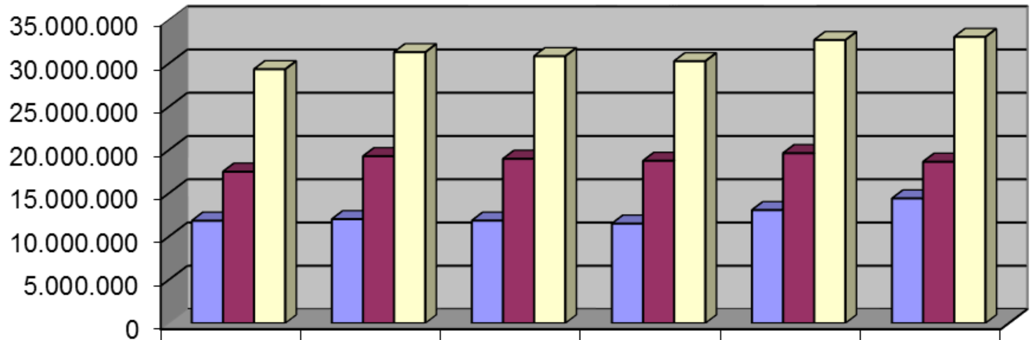
MERSIN INTERNATIONAL PORT							
TYPE OF CARGO	LOADING (Tonnes)			UNLOADING (Tonnes)			TOTAL
	EXPORT	DOMESTIC	TRANSIT	IMPORT	DOMESTIC	TRANSIT	
CEMENT	1.859.955	20.758	35.042	10.866		847	1.927.468
CEREALS	231.894	18.685	16.050	821.273		16.053	1.103.955
CHEMICALS	1.289.347	28.853	82.549	1.752.357	107	204.987	3.358.200
CITRUS	172.958		8.922	49.302		10.122	241.304
CNTR			186.860			601.642	788.502
CONST. MACHINERY	13.334		1.148	43.185		6.395	64.062
COTTON	114.971	150	3.831	122.536		5.092	246.580
FERTILIZERS	200.184	16.300	2.996	349.560	28.449	19.573	617.062
FOOD STUFF	1.927.274	423	52.964	981.703	477	100.232	3.063.073
FROZEN MEAT	12.009		1.133	67.294		46.897	127.333
FRUITS	160.175		2.469	200.064	41	395.295	758.044
GENERAL CARGO	3.726.151	1.458	357.585	3.181.747	14.480	433.983	7.715.404
GLASS	144.049	274	20.510	32.626		12.060	209.519
LEGUMES	297.264	119	3.315	840.218	22	7.844	1.148.782
LIVESTOCK	146			60.029		4.811	64.986
MACHINERY	139.637	62	5.286	141.267	37	13.310	299.599
MINERALS	1.837.685	17.614	11.711	747.234	5.646	11.171	2.631.061
PETR. PRODUCTS	18.039	6.295	4.054	4.940.012	533.119	4.644	5.506.163
RICE	82.509		2.557	301.743		17.128	403.937
SODIUM CARB.	636.150		71	10.031		22	646.274
SUGAR	2.637		5.024	33.825		1.029	42.515
TEXTILE	424.513	69	10.308	490.801	349	25.121	951.161
TIMBER	21.382		8.870	95.931	71	6.092	132.346
VEGETABLE OIL	128.702		4.795	583.269		9.792	726.558
VEHICLES	33.457	3	13.301	232.962		37.486	317.209
TOTAL	13.474.422	111.063	841.351	16.089.835	582.798	1.991.628	33.091.097

Graph 51: Mersin Port 2019 Loading & Unloading





Graph 52: Mersin Handling Figures Acc. to Years (Tons)



	2013	2014	2015	2016	2017	2018
LOADING	11.845.82	12.025.45	11.859.04	11.513.42	13.072.52	14.426.83
UNLOADING	17.515.01	19.303.22	19.006.86	18.774.24	19.657.18	18.664.26
TOTAL HANDLING	29.360.83	31.328.67	30.865.90	30.287.67	32.729.70	33.091.09

Source: Mersin DTO, MIP

Samsunport (Samsun)

Samsun port carries out sea transport with Georgia's ports of Batumi, Poti and Suchumi; Russia's ports of Sochi, Tuapse, Novorossiysk, Azov Sea ports of Azov, Taganrog, Jdanov, Yalta, Berdyansk, Genichesk; Crimea's ports of Feodosiya, Yalta, Todor, Sevastopol, Yevpatorskiy; Ukraine's ports of Nikolayev, Odesa, Ilyichevsk; Romania's port of Constanta and Bulgaria's port of Varna. Samsunport also have connections with Istanbul and all world ports.

Samsunport is the biggest port of Turkey in Black Sea region and also it has a large hinterland. Because of this feature, the said port is a popular place for cargoes which come from and will go to Anatolia. Samsun port has railway and road connections with Kastamonu, Ankara, Kirsehir, Kayseri, Nigde, Konya, Malatya, Sinop, Corum, Amasya, Ordu, Sivas, Erzincan, Yozgat, Tokat. Samsun port aims to achieve top quality and speedy service by renewing vehicle park, making the revision of the present vehicles, construction of new warehouses, silos and liquid tanks.

Storage and port services are provided within 350.000 sqm port area of 445.000 sqm. In Samsun port, there are steel cereal silos, warehouses and general cargo storage areas.

Main Port
Dock numbers 1-2-3-4-5 have a total length of 776 meters and a draft of 10,5 meters.
Dock number 6 has a length of 180 meters and drafts of 6,5 / 7 meters.
Dock numbers 7-8-9 have lentgh of 400 meters and drafts of 6,5 / 7 meters.

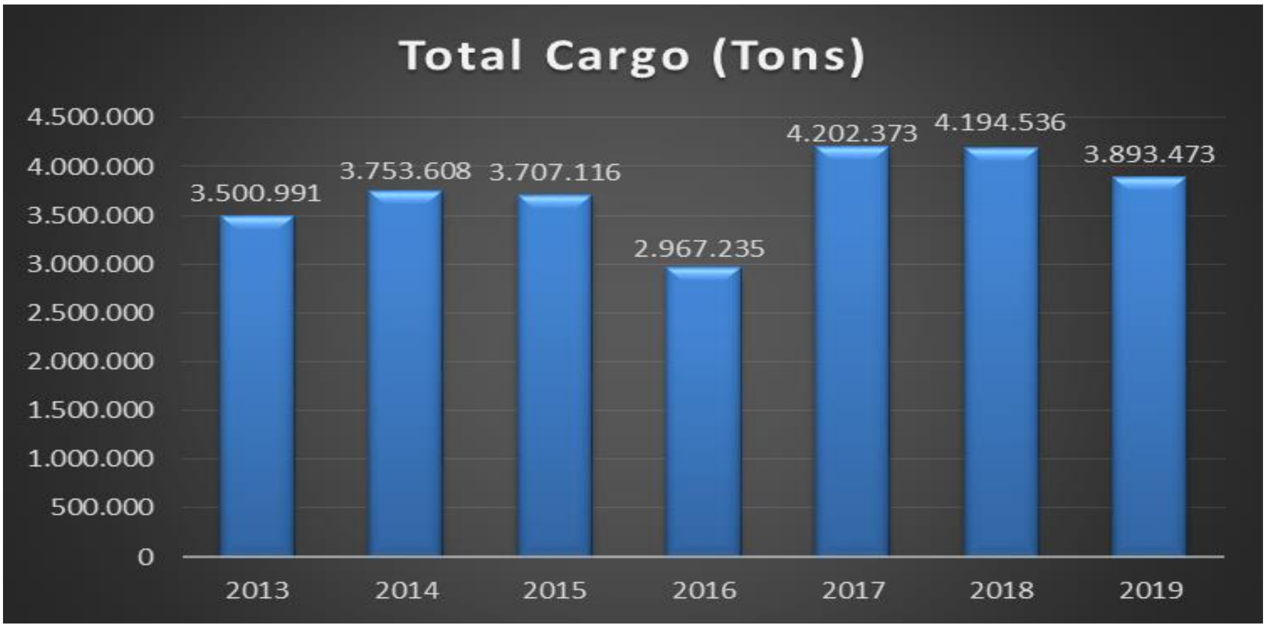
Industry Dock
Dock numbers 10-11-12 have length of 400 meters and a draft of 11 meters.
Dock number 8 is Rail ferry Ramp, suitable for 1520 mm rail cars.
1166 vessels called Samsun Port in 2019. Handling Figures of Samsun Port according to cargo groups are as below;

Table 56: Handling Figures of Samsun port Acc. to Years

Year	No. of Ships	Dry Bulk (Tons)	Liquid Bulk (Tons)	General Cargo (Tons)	Container (Tons)	Ro-Ro (Tons)	Wagon Ferry (Tons)	**Total (Tons)**
2019	1.166	2.154.381	54.329	312.408	806.816	565.539	0	3.893.473
2018	1253	2.211.998	43.586	661.099	740.195	534.171	3.487	4.194.536
2017	1334	2.092.909	42.824	784.884	721.580	530.384	29.792	4.202.373
2016	986	1.459.473	38.936	569.239	627.007	266.376	6.206	2.967.235
2015	1484	1.543.466	56.470	802.569	658.451	629.874	16.287	3.707.116
2014	1423	1.665.403	48.559	794.776	589.552	617.128	38.190	3.753.608
2013	1250	1.657.680	61.558	761.662	486.623	491.547	41.921	3.500.991

Source: Samsunport

Graph 53: Samsun Port Handling Figures Acc. to Years (Tons)



Çelebi Bandırma Port

Port Features	
Coordinates	40 º 21' 45'' N - 027º 57' 50'' E
Types of Cargo	Bulk, General, Liquid, Ro-Ro, Container
Area Capacity	
Total Port Area	268.348 m²
Total Storage Area	215.569 m²
Customs Area	268.348 m²
Car - Truck Parking Area	42.000 m²
CFS	8.250 m²
Total Dock Length	2.974 m
Cargo Capacity	
Containers (Teu/Year)	350.000
Bulk and General (Tons/Year)	12.000.000
Liquid Bulk (Tons/Year)	4.320.000
Vehicle (Vehicle/Year)	700.000
Storage Capacity	
Containers (TEU)	4.195
Bulk / Open Area (Tons)	165.000
Bulk / Closed Area (Tons)	35.000
General (Tons)	110.000
Liquid Bulk / Temporary Stor. Transhipment Facility	345 m³
Vessel Acceptance Capacity	
Container (Vessel/Year)	330
Dry Bulk (Vessel/Year)	3.240
Liquid Bulk (Vessel/Year)	216
General Cargo (Vessel/Year)	216
Ro-Ro (Vessel/Year)	13.140

The port has connections to Istanbul, Turkey's business and industrial center, to the Southern Marmara and Aegean Region and has a strategic location at the south coast of Marmara. It offers bulk load, ro-ro and mixed load handling services. Çelebi, thanks to the railway and highway connections and wide warehouses of Port of Bandırma, is considered the port that can provide the greatest benefit to the Southern Marmara, Central Anatolia and the Aegean Sea Regions.

At the port's 20 docks with a total length of 2,974 meters and with depths ranging from 6 to 12 meters, the facility handles bulk cargo, breakbulk cargo, containers, liquid cargo and Ro-Ro vessels. Loading and unloading services are carried out by high-technology mobile cranes, excavators and conveyor system.

The port has two breakwaters, one with a length of 1,000 meters and the other 500 meters, with a clearing of 225 meters between.

The port of Bandırma boasts the capability to meet the needs of all types of cargoes with 1 Liebherr LHM 400, 2 Reggiane MHC 200, 1 Gottwald HMK 170,1 Sennebogen 880 EQ, 1 Sennebogen 870 R Special, 2 Sennebogen 835R Special, 3 Sennebogen 835M Special, 1 Sennebogen 305, 1 Hyster Block Marble loader with capacity 32 tons, five forklifts, two stackers with carrying capacities of 45 tons, one side lifter with a capacity of 8 tons, three mini loaders, 2 loaders and other equipment.

Table 57: Handling Figures of Çelebi Bandırma Port Acc. To Years & Cargo Groups

Year	General Cargo (Tons)	Dry Bulk (Tons)	Liquid Bulk (Tons)	Container (TEU)	Ro-Ro (Pcs)	Passenger (Pcs)
2019	356.578	4.150.641	438.337	18.581	193.382	796.886
2018	442.841	3.063.734	505.910	35.695	196.192	941.610
2017	588.084	3.607.944	486.521	28.838	244.584	1.014.897
2016	407.894	3.210.578	394.026	11.471	215.090	951.788
2015	449.275	3.035.469	324.024	18.613	205.890	1.052.971
2014	406.026	3.906.540	257.143	25.163	220.534	1.028.496
2013	330.778	3.521.039	217.981	23.628	213.201	966.739
2012	367.221	3.485.486	225.189	9.748	205.462	821.008

Source: Çelebi Bandırma Port

Limakport Iskenderun

Coordinates	36° 36' N, 36° 11' E
Port Area	1.000.000 (m2)
Number of Berths	8
Berthing Place Lengths	1.652 (m)
General Cargo Berths Length	732 (m)
Container Berths Length	920
Berthing Place Water Depths	Maks. 10-15.5 (m)
Container Berth Water Depth	15,5 (m)
Reefer Plugs	600
Container Capacity	1.000.000 TEU/Year
Dry Bulk Capacity	2.500.000 Ton/Year
General Cargo Capacity	600.000 Ton/Year
Ro-Ro Capacity	120.000 Vehicle/Year
Ro-Pax Capacity	30.000 Truck/Year

LimakPort Iskenderun is located on the Northeast of the Mediterranean Sea. It renders services for transit traffic to Middle East countries as well as East and Southeast Anatolian territories. In this regard it occupies an important place as a transit port. The Port has become a very important and advantageous location for all the manufacturers, traders and exporters of a wide hinterland extending from Mersin to Şırnak and from Malatya to Kilis. Furthermore, the Port plays a big role in transit trade for Middle East, particularly Northern Iraq.

The Port has a breakwater of 1375 m long. The depth at the port entrance is 12 m. The port is also connected with state railway and highway network. As a multi-purpose port, serves different type of commodities and cargo groups such as general cargo, dry/liquid bulk, container handling, and Ro-Ro vessels.

Table 58: Handling Figures of Limakport Iskenderun

Bulk Cargo/General Cargo/ Container

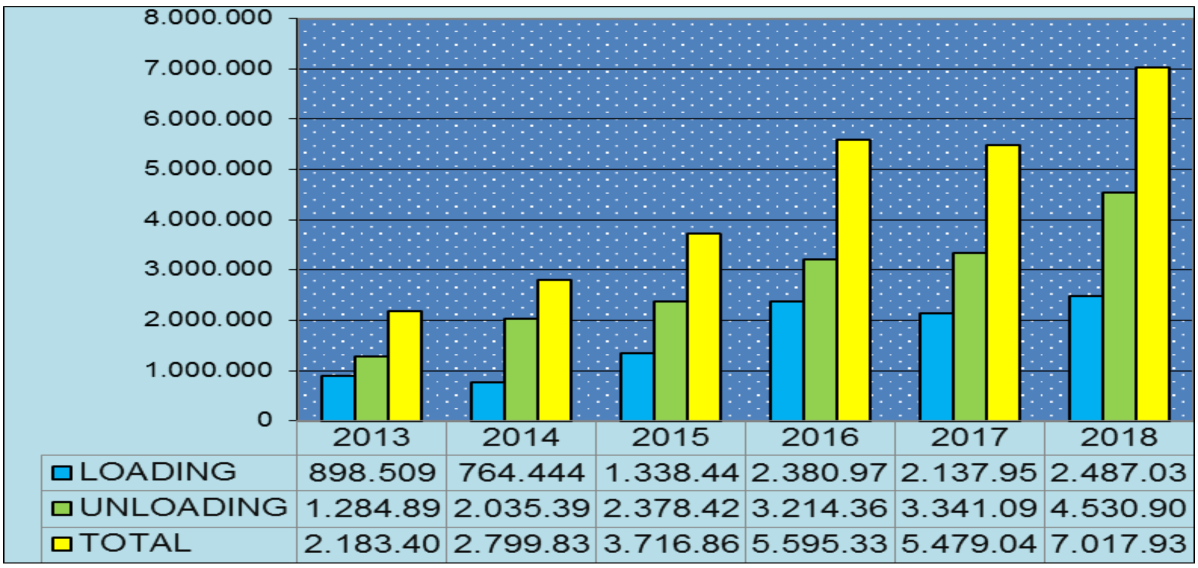
Year	Loading (Tons)	Unloading (Tons)	**Total (Tons)**
2013	898.509	1.284.899	**2.183.408**
2014	764.444	2.035.390	**2.799.834**
2015	1.338.443	2.378.422	**3.716.865**
2016	2.380.977	3.214.362	**5.595.339**
2017	2.137.952	3.341.090	**5.479.042**
2018	2.487.032	4.530.902	**7.017.934**

Ro-Ro / Ro-Pax

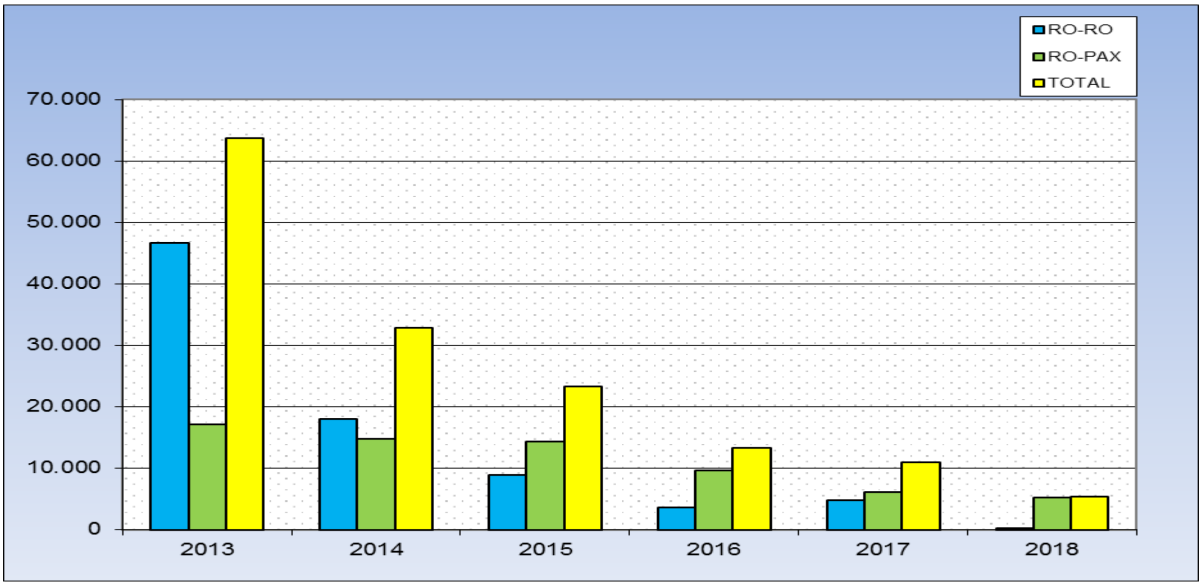
Year	Ro-Ro	Ro-Pax	**Total**
2013	46.602	17.087	**63.689**
2014	18.066	14.736	**32.802**
2015	8.888	14.355	**23.243**
2016	3.648	9.635	**13.283**
2017	4.784	6.127	**10.911**
2018	169	5179	**5348**

Source: Limakport İskenderun

Graph 54: Limakport Bulk Cargo / General Cargo / Container



Graph 55: Limakport Ro-Ro / Ro-Pax



Safi Derince International Port

Located in the Marmara Region, to the northern part of Izmit Gulf; Safi Derince International Port serves different type of commodities and cargo groups including Ro-Ro, project cargo, dry bulk, general cargo, liquid cargo, containers and railway carriages.

Port Area	1.200.000 m²
Tank Capacity	1.500.000 m³
Container Handling Capacity	2.500.000 TEU
Dry Bulk Cargo Handling Capacity	10.000.000 Tons
Ro-Ro Capacity	1.500.000 Vehicle/Unit

Berths	Length(m)	Depth(m)
1-2	90	14
3-4	440	15
5-6	550	12
7	160	10
8	120	5,5

The currently existing open storage area is 450.000 m². There are two new enclosed warehouses (1800 m² and 2500 m²) completed and third one (5000 m²) to be completed.

Equipments
- Mobile Cranes (35tons/200tons)
- Forklifts (3tons/35tons)
- Mini Loader
- Reachstacker / Emptystacker
- Excavators
- Warehouses (35 tons overhead crane)
- Gottwald (2x125 tons)
- Sennebogen 870 Serial Excavator Crane
- Tractors
- Trailer
- Tug Master (90tons/150tons)
- STS/RTG/RMG

Table 59: Handling Figures of Safi Derince International Port Acc. To Years And Cargo Groups

Year	Dry Bulk (Tons)	Liquid Bulk (Tons)	General Cargo (Tons)	Container (TEU)	Ro-Ro (Pcs)
2015	1.675.290	18.533	510.241	1.983	450.860
2016	1.876.300	16.865	626.400	6.750	422.350
2017	1.930.000	0	340.686	1.495	397.391
2018	3.200.520	0	567.680	800	366.684

5.6. Private Ports' List and Geographical Distribution of Main Ports in Turkey

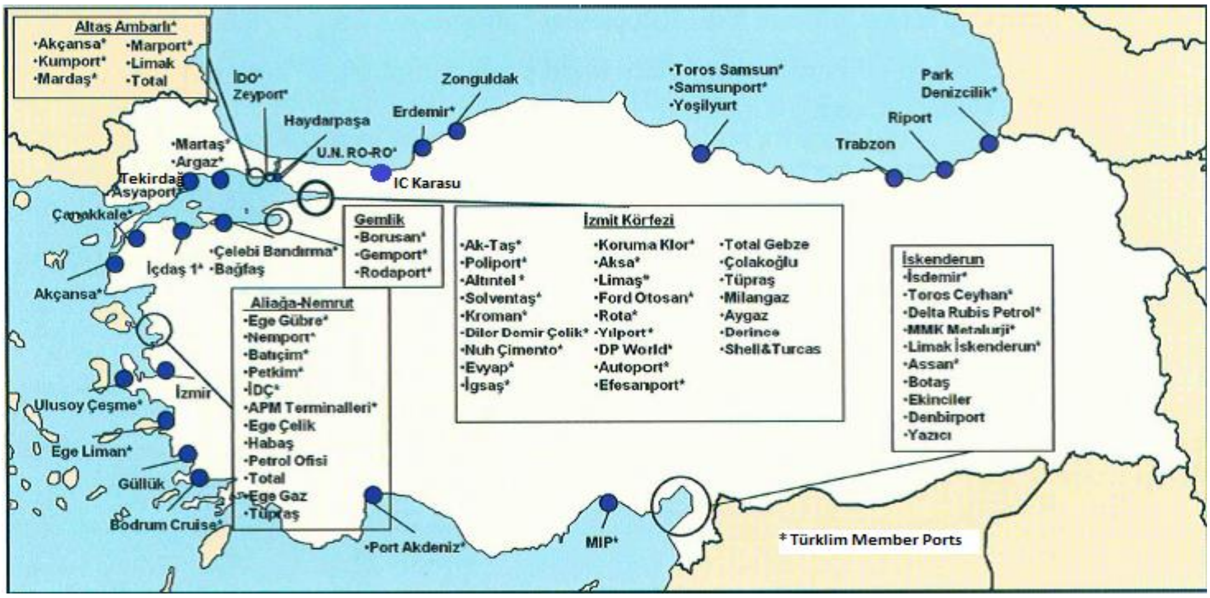
Table 60: Private Ports List

1) ALİDAŞ ALANYA LİMANI **2) ANTALYA LİMANI SERBEST BÖLGE RIHTIMI** **3) ÇEKİSAN ŞAMANDIRASI** **4) MOİL ŞAMANDIRA PLATFORMU** **5) ORTADOĞU ANTALYA LİMAN İŞLETMELERİ A.Ş. (PORT AKDENİZ)** **6) POAŞ ANTALYA ŞAMANDIRA TERMİNALİ**
7) AKÇANSA ÇANAKKALE LİMANI

8) BAGFAŞ İSKELESİ 9) ÇELEBİ BANDIRMA LİMANI 10) BORUSAN LİMANI 11) BP GEMLİK TERMİNALİ 12) GEMLİK GÜBRE LİMANI 13) GEMPORT 14) RODA LİMANI 15) İÇDAŞ İSKELESİ 16) DOLAMİT MADENCİLİK RIHTIMI 17) ÖZGÜMÜŞ MADENCİLİK RIHTIMI
18) ASYAPORT 19) CEYPORT TEKİRDAĞ 20) AUTOPORT LİMAN İŞLETMELERİ A.Ş. 21) AKÇANSA AMBARLI LİMANI 22) AMBARLI DEPOLAMA TESİSLERİ 23) ANADOLU ÇİMENTO TESİSLERİ 24) LİMAK AMBARLI TERMİNALİ 25) AYGAZ LPG DEPOLAMA VE DOLUM TESİSLERİ 26) ÇEKİSAN ÇEKMECE DEPOLAMA 27) KUMPORT LİMANI 28) MARDAŞ 29) MARPORT 30) PETROL OFİSİ HARAMİDERE TESİSLERİ 31) TOTAL HARAMİDERE İSKELESİ 32) ANADOLU YAKASI KUMCULARI İSKELELERİ 33) MOBIL OIL SERVİBURNU İSKELESİ 34) PETROL OFİSİ ÇUBUKLU TESİSLERİ 35) ZEYPORT 36) AKÇANSA YALOVA ÇİMENTO TERMİNALİ İSKELESİ 37) AKSA AKRİLİK KİMYA SANAYİ A.Ş. 38) AKTAŞ TERMİNALİ 39) ALEMDAR DİLİSKELESİ 40) ALTINTEL İSKELESİ 41) AYGAZ YARIMCA DOLUM TESİSİ 42) ARGAZ LPG AKARYAKIT DOLUM VE DEPOLAMA TESİSİ 43) ÇOLAKOĞLU METALURJİ TESİSLERİ 44) DİLER LİMAN TESİSLERİ 45) EVYAP DENİZ İŞLETMECİLİĞİ LOJİSTİK VE İNŞAAT A.Ş. 46) FORD OTOSAN YENİKÖY İSKELESİ 47) GÜBRETAŞ TESİSLERİ 48) HABAŞ TERMİNALİ 49) İGSAŞ İSTANBUL GÜBRE SANAYİ A.Ş. 50) EFESAN PORT 51) KIZILKAYA LİMANI 52) KORUMA KLOR ALKALİ SAN. VE TİC. A.Ş. 53) KROMAN ÇELİK LİMAN TESİSLERİ 54) LAFARGE ASLAN ÇİMENTO İSKELESİ 55) LİMAŞ İZMİT TERMİNALİ 56) MARMARA TRANSPORT İSKELESİ 57) MİLANGAZ ŞAMANDIRA TESİSLERİ 58) NUH ÇİMENTO SAN. A.Ş. (NUHPORT) 59) OPAY PLATFORM İSKELESİ 60) PETLINE PLATFORMU 61) PETROL OFİSİ DERİNCE İSKELESİ 62) POLİPORT

63) SEDEF KONTEYNER TERMİNALİ VE LİMAN İŞLETMELERİ 64) SHELL DERİNCE TESİSLERİ 65) SOLVENTAŞ 66) TOTAL GEBZE TERMİNALİ 67) TURKUAZ İSKELESİ 68) TÜPRAŞ İZMİT RAFİNERİ TESİSLERİ 69) TÜPRAŞ KÖRFEZ SIVI YÜK İSKELESİ 70) YALOVA ELYAF İSKELESİ 71) YARIMCA ROTA LİMANI 72) SAFİ DERİNCE LİMANI 73) DP WORLD YARIMCA LİMANI 74) ERDEM EREĞLİ ÇİMENTO ÖZEL LİMANI 75) ERDEMİR LİMANI 76) EREN HOLDİNG LİMANI 77) BÜTANGAZ TERMİNALİ 78) OPET MARMARA TERMİNALİ İSKELE VE PLATFORMU 79) SALIPAZARI KRUVAZİYER LİMANI 80) MARTAŞ MARMARA EREĞLİSİ LİMAN TESİSLERİ 81) ÇAYIROVA CAM SANAYİ İSKELESİ 82) GİSAŞ TUZLA İSKELESİ 83) U.N. RO-RO PENDİK LİMANI 84) YILPORT
85) AKDENİZ KİMYA NEMPORT LİMANI 86) EGE ÇELİK LİMANI 87) EGE GÜBRE LİMANI 88) EGE GAZ LNG TERMİNALİ 89) HABAŞ İSKELESİ 90) BATIÇİM A.Ş. BATI LİMAN TESİSLERİ 91) İDÇ LİMANI 92) PETROL OFİSİ ALİAĞA TESİSLERİ 93) TOTAL OIL İSKELESİ 94) TÜPRAŞ LİMANI 95) PETKİM LİMANI 96) PETLİM KONTEYNER LİMANI 97) BODRUM CRUISE PORT 98) GÜLLÜK LİMANI 99) ÇEŞME LİMANI 100) DİKİLİ İSKELESİ 101) MOPAK İSKELESİ 102) KUŞADASI YOLCU LİMANI 103) MARMARİS LİMANI
104) LİMAKPORT İSKENDERUN 105) TOROS CEYHAN TERMİNALİ 106) SAVKA MERSİN TERMİNALİ 107) ADVANSA SASA POLYESTER TESİSLERİ 108) ÇEKİSAN ŞAMANDIRASI 109) GÜBRETAŞ SARISEKİ İSKELESİ 110) İSDEMİR LİMANI 111) DELTA PETROL LİMANI 112) ORHAN EKİNCİ İSKELESİ 113) YAZICI İSKELESİ 114) ATAŞ TERMİNALİ 115) MERSİN LİMANI 116) MMK ATAKAŞ DÖRTYOL LİMAN İŞLETMESİ 117) MESBAŞ RIHTIMI

118) SAVKA PLATFORMU 119) SANKO LİMAN TESİSİ 120) ENERJİ MERSİN TERMİNALİ
121) IC KARASU LİMANI 122) SAMSUNPORT 123) TOROS TARIM SANAYİİ SAMSUN LİMAN İŞLETMESİ 124) SÜRSAN ŞAMANDIRASI 125) ORDU LİMANI 126) AYGAZ ŞAMANDIRALARI 127) PETROL OFİSİ ŞAMANDIRALARI 128) TOTAL OIL ŞAMANDIRASI 129) YILDIZ ENTEGRE AĞAÇ SAN. ŞAMANDIRASI 130) SİNOP LİMANI 131) YEŞİLYURT LİMANI
132) GİRESUN LİMANI 133) PARK DENİZCİLİK HOPA LİMAN İŞLETMELERİ A.Ş. 134) RİPORT 135) ÜNYE ÇİMENTO TESİSİ LİMANI 136) POAŞ ŞAMANDIRA TESİSLERİ 137) TRABZON LİMANI



Source: TURKLIM

CHAPTER VI

MARITIME EDUCATION

6. MARITIME EDUCATION

International Maritime Organization (IMO) accepts Ministry of Transport and Infrastructure (Administration) as respondent for maritime education. Our Administration transfered requirments brought by international conventions since 1990’s to our domestic law relating to the matter, in this context Republic of Turkey has kept its place in the “White List” on maritime education with MSC Circ. 1164/Rev 19 published by IMO on 25 May 2018. Besides as a result of audits carried out by European Maritime Safety Agency (EMSA) in our country, students who are graduated from our country’s maritime schools were given way to work on board of EU flagged ships.

Table 61: Maritime Faculties

NO	FACULTY	CITY
1	Bandırma Onyedi Eylül University	Balıkesir
2	Gaziantep University	Gaziantep
3	İskenderun Technical University	Hatay
4	İstanbul Technical University	İstanbul
5	İstanbul University -Cerrahpaşa	İstanbul
6	Piri Reis University	İstanbul
7	Yıldız Technical University	İstanbul
8	Dokuz Eylül University	İzmir
9	Ordu University	Ordu
10	Recep Tayyip Erdoğan University	Rize
11	Karadeniz Technical University	Trabzon
12	Van Yüzüncü Yıl University	Van

Table 62: Vocational Maritime School Of Higher Education

NO	SCHOOL NAME	CITY
1	Bandırma Onyedi Eylül University	Balıkesir
2	Bartın University	Bartın
3	Çanakkale Onsekiz Mart University	Çanakkale
4	Giresun University	Giresun
5	Bahçeşehir University	İstanbul
6	Galatasaray University	İstanbul
7	İstanbul Bilgi University	İstanbul
8	Nişantaşı University	İstanbul
9	Piri Reis University	İstanbul
10	Ege University	İzmir
11	Kocaeli University	Kocaeli
12	Mersin University	Mersin
13	Ordu University	Ordu
14	Karadeniz Technical University	Trabzon
15	Yalova University	Yalova
16	Zonguldak Bülent Ecevit University	Zonguldak

In our country, 12 faculties giving eductaion in maritime field, maritime transportation and management engineering, department of marine engineering, shipbuilding engineering and naval architecture and marine engineering, 16 vocational schools, 61 vocational and technical anatolian high schools and 34 private marine education courses giving education in marine electronics, marine communication, maritime transportation, ship's cookery, shipbuilding, ship's machinery, ship's machinery operation and deck departments, are maintaining maritime education activities.

Table 63: Maritime Vocational High Schools in Turkey

NO	HIGH SCHOOL NAME	CITY
1	Ceyhan Vocational And Technical Anatolian High School	Adana
2	Çakabey Vocational And Technical Anatolian High School	Adana
3	Fettah Tamince Vocational And Technical Anatolian High School	Antalya
4	Manavgat Ticaret ve Sanayi Odası Vocational And Technical Anatolian High School	Antalya
5	Adviye-Ertuğrul Acun Vocational And Technical Anatolian High School	Aydın
6	Didim Vocational And Technical Anatolian High School	Aydın
7	Bandırma Vocational And Technical Anatolian High School	Balıkesir
8	Karşıyaka Multi-Programmed Anatolian Hıgh School	Balıkesir
9	Pakmaya Kenan Kaptan Vocational And Technical Anatolian High School	Balıkesir
10	Bartın Vocational And Technical Anatolian High School	Bartın
11	Kurucaşile Multi-Programmed Anatolian Hıgh School	Bartın
12	Tatvan Seydi Ali Reis Vocational And Technical Anatolian High School	Bitlis
13	Gemlik Vocational And Technical Anatolian High School	Bursa
14	Armatör Yakup Aksoy Vocational And Technical Anatolian High School	Çanakkale
15	İçdaş Biga Vocational And Technical Anatolian High School	Çanakkale
16	Akçakoca Fedai Karabıyık Vocational And Technical Anatolian High School	Düzce
17	Bulancak Kaptan Ahmet Fatoğlu Vocational And Technical Anatolian High School	Giresun
18	Espiye ş. Cengiz sarıbaş Vocational And Technical Anatolian High School	Giresun
19	Tirebolu Piri Reis Vocational And Technical Anatolian High School	Giresun
20	Sefa Atakaş Vocational And Technical Anatolian High School	Hatay
21	Beykoz Barbaros Hayrettin Paşa Vocational And Technical Anatolian High School	İstanbul
22	Hacı Rahime Ulusoy Vocational And Technical Anatolian High School	İstanbul
23	İstanbul Technical University Vocational And Technical Anatolian High School	İstanbul
24	Private Eryetiş Reis Maritime And Seamen Education Course	İstanbul
25	Pendik Barbaros Hayrettin Paşa Vocational And Technical Anatolian High School	İstanbul
26	Pendik Halil Kaya Gedik Metal Technology Vocational And Technical Anatolian High School	İstanbul
27	Piri Reis Vocational And Technical Anatolian High School	İstanbul
28	Ziya Kalkavan Vocational And Technical Anatolian High School	İstanbul

29	Çeşme Ulusoy Maritime Technology Vocational And Technical Anatolian High School	İzmir
30	Güzelbahçe İMKB Vocational And Technical Anatolian High School	İzmir
31	Karaburun Mordoğan Fatma Emin Karaağaç Multi-Programmed Anatolian High School	İzmir
32	Konak Çınarlı Vocational And Technical Anatolian High School	İzmir
33	Konak Nevvar Salih İşgören Education Campus-4 Vocational And Technical Anatolian High School	İzmir
34	Şehit İdari Ataşe Çağlar Yücel Vocational And Technical Anatolian High School	İzmir
35	Piri Reis Vocational And Technical Anatolian High School	Kastamonu
36	Gölcük Vocational And Technical Anatolian High School	Kocaeli
37	Hereke Nuh Çimento Vocational And Technical Anatolian High School	Kocaeli
38	Akdeniz Mersin Deniz Ticaret Odası Vocational And Technical Anatolian High School	Mersin
39	Mersin Vocational And Technical Anatolian High School	Mersin
40	Taşucu Prof. Dr. Durmuş Tezcan Vocational And Technical Anatolian High School	Mersin
41	75. Yıl Vocational And Technical Anatolian High School	Muğla
42	Bodrum Vocational And Technical Anatolian High School	Muğla
43	Bodrum Turgut Reis Vocational And Technical Anatolian High School	Muğla
44	Bozburun Deniz Ticaret Odası Multi-Programmed Anatolian High School	Muğla
45	Gündoğan Fahriye Ilıcak Vocational And Technical Anatolian High School	Muğla
46	Köyceğiz Şehit Ömer Halisdemir Vocational And Technical Anatolian High School	Muğla
47	Milas Vocational And Technical Anatolian High School	Muğla
48	Mustafa Kemal Vocational And Technical Anatolian High School	Muğla
49	Atatürk Vocational And Technical Anatolian High School	Ordu
50	Mehmet Necati Vidinli Vocational And Technical Anatolian High School	Ordu
51	Çayeli Ahmet Hamdi İsakoğlu Vocational And Technical Anatolian High School	Rize
52	Hasan Kemal Yardımcı Vocational And Technical Anatolian High School	Rize
53	Işıklı Vocational And Technical Anatolian High School	Rize
54	Nedime Serap Ulusoy Vocational And Technical Anatolian High School	Samsun
55	Prof. Dr. Necmettin Erbakan Vocational And Technical Anatolian High School	Sinop
56	Kumbağ Vocational And Technical Anatolian High School	Tekirdağ
57	Of Hacı Mehmet Bahattin Ulusoy Vocational And Technical Anatolian High School	Trabzon
58	Sürmene Türk Telekom Vocational And Technical Anatolian High School	Trabzon
59	Van Piri Reis Vocational And Technical Anatolian High School	Van
60	Yalova Altınova Tersane Girişimcileri A.Ş. Vocational And Technical Anatolian High School	Yalova
61	Hatice Erdem Vocational And Technical Anatolian High School	Zonguldak

Table 64: Private Maritime Training Courses in Turkey

No	NAME OF ORGANISATION	CITY
1	Private Akten Maritime Training Center	İstanbul
2	Private Albatros Maritime And Yachtsman Training Center	Fethiye
3	Private Atılım Maritime And Seamen Course	İstanbul
4	Private Europe Maritime Seamen Education Course	İstanbul
5	Private Beyaz Erguvan Maritime And Seamen Course	İstanbul
6	Private Bilimsel Maritime Seamen Education Course Kadıköy Branch	İstanbul
7	Private Bosphorus Maritime And Seamen Education Course	İstanbul
8	Private Boncuk Maritime And Seamen Course	Mersin
9	Private Çapa Maritime And Seamen Course	Samsun
10	Private Dem Maritime Course	Antalya
11	Private Doğa Maritime And Seamen Course	Mersin
12	Private Dönence Maritime And Seamen Course	İzmir
13	Private Ekol Maritime Training Center	İstanbul
14	Private Eryetiş Reis Maritime And Seamen Education Course	Tuzla
15	Private Fethiye Maritime Course	Fethiye
16	Private Gülay Maritime Training Center	Çanakkale
17	Private Güllük Seamen Training Course	Güllük
18	Private İnci Maritime And Seamen Education Course	Kocaeli
19	Private İzmir Pusula Maritime And Seamen Course	İzmir
20	Private Kaptan Maritime And Seamen Course	Samsun
21	Private Marina Dragos Bodrum Maritime Training Course	Bodrum
22	Private Marmaris Maritime Training Course	Marmaris
23	Private Martı Maritime Training Center	Finike
24	Private Mercan Maritime And Seamen Course	İstanbul
25	Private Modern Maritime And Seamen Education Course	Mersin
26	Private Oyak Defence And Security Incorporated Company	Ankara
27	Private Rize Sahil Maritime Seamen Course	Rize
28	Private Samsun Maritime And Seamen Course	Samsun
29	Private Sancak Maritime Training Center	Trabzon
30	Private Turgutreis Seamen Course	Tuzla
31	Private Yeni Vira Maritime Saıl And Seamen Course	Göçek
32	Private Derin Deniz Seamen Education Course	Tekirdağ
33	Private Liskur Armada Maritime Training Center	İstanbul
34	Hergüner Maritime Course	Kocaeli

Member Oriented Educations

Member oriented education schedule has been prepared by evaluating members' demands and 6 education activities have been realized within the scope of education planning in 2019. 247 persons attended to educations and % 93,4 satisfaction ratio is recorded. Electronic documents related to relevant education schedule and seminars carried out can be found on our Chamber's website under tab of "Eğitim / Sunumlar" (https://www.denizticaretodasi.org.tr/tr/egitim/uyelere/tumu).

Table 65: Statistics of Member Oriented Educations

Date	Education Title	Number of Attendant	Satisfaction Ratio (%)
8 January 2019	Developments in the Aegean Sea and East Mediterranean from past to present	19	97,3
29 January 2019	Bill of Ladings and Seawaybills in Container Transportation	47	97,84
13 February 2019	Future of Autonomous Ships	56	96,69
26 February 2019	Marine Pollution Penalties	66	87,74
23 May 2019	Tax Advantages and Promotions Provided in Maritime Sector	39	90,86

Certificate of Competence for Operators of Pleasure Craft

Initiated by Ministry of Transportation and Infrastructure in 2018, within One Million Amateur Sailor Project, candidates have a maritime document that can be used for sailing boats up to 24 meters in international waters by getting at least 60 points from exam taken after one hour education.

Our Chamber realized 8 certificate of competence for operators of pleasure craft education and exams between 04 February 2019 and 28 January 2020 with 1626 attendants to support and participate in mentioned Project.

114 persons attended to first exam for short range radio operator on 28.01.2020.

CHAPTER VII

MARINE TOURISM

7. MARINE TOURISM

Marine Tourism consists of Yachting Tourism, Marina Administrations, Cruise Tourism and Ferryboat Administrations, Underwater Diving and Water Sports.

With over 8.333 kilometers of coastline along the four seas, Turkey is a treasure chest of coves, inlets, bays and beaches at which yachtsmen can choose a different and private anchorage each night.

The sailing paradise of Turkey is also home to the Blue Voyage. This idyllic cruise means sailing with the winds, into coves and over the seas and becoming one with nature. For lovers of the active life, sailing in clear waters provides great opportunities for swimming, fishing, skiing, surfing and diving.

Sailing in Turkey also allows tourists to experience a truly enriching cultural exchange with the hospi Table and gracious people of the coastal villages and towns. The tempered winds which generally blow from the west and northwest make the long summers ideal for yachting, and seem to encourage an appreciation of nature. From some of the turquoise coasts unpoint and sheltered bays mountain peaks rising to almost 3.000 meters above sea level can be seen.

In Turkey modern facilities and comfort have not overshadowed ancient hospitality and the slower pace of life.

Marine tourism revenue is 20 % percentage in the General Tourism

Place; Gocek in Fethiye (12 Islands)

As from the 1970's, taking in to consideration, firstly the contributions made to the Turkish economy by the yacht tourism and then by the other sea tourism elements, it has been decided to establish a "Maritime Tourism Working Group", administered by the Chairman of the Executive Committee of the Turkish Chamber of Shipping, also participated by the Chairmen of our Chamber's Professional Committees and Branches.

The Maritime Tourism Working Group established at the Turkish Chamber of Shipping began to perform its activities on 20 December 2000, after being approved by the Board of Directors of our Chamber. Maritime Tourism Working Group consists of the Chairmen of the Head Office, Antalya, Bodrum, Fethiye, İzmir Marmaris, and İskenderun Branches and also the

Chairmen of All Kinds of Passenger Transportation, Yacht Administrations, Daily Pleasure Boat Administrations, Marina Administrations, Chairmen of the Professional Committees of Underwater and Water Sports Professional Committees, the Representative of the Cruise Tourism, Maritime Tourism Ankara Representative of the Board of Directors. Maritime Tourism Working Group represents actively the Maritime Tourism in the name of the Turkish Chamber of Shipping.

The most prominent success of the Maritime Tourism Working Group has become to define and to establish the concept of “Maritime Tourism” which has not been mentioned sufficiently in the Shipping Sector and also at various platforms and especially almost not mentioned at all in the public sector.

7.1. Yacht Tourism

Yacht building industry in Turkey, is located mostly in Istanbul region and also in some parts of the Black Sea, Marmara Sea, Aegean Sea and the Mediterranean Region. The yachts, which are built in Aegean and the Mediterranean regions, are usually exported to Germany and Greece.

Apart from the traditional wooden yachts weal soprovideo there stypes of boat building in Turkey .For example Antalya has been announced as the 4th city in the World for Composite Boat Building in 2018

İstanbul Tuzla is the place where the Maltese Falcon has been built in 2008

Kocaeli Free Trade Zone and Bursa are also important centres.

As we mentioned the traditional wooden yachts are built in Aegean area, such as Bodrum, Bozburun, well known designers such as Andrea Hoek, Ron Holland, Ken Freivo are building projects here. There are still well known crafts man for wooden boats who continue building wooden boat seven in their backyards.

Table 66 : Yachting Companies Licenced by the Ministry of Culture and Tourism

YEARS	INVESTMENT LICENCED		OPERATION LICENCE					
			DOMESTIC YACHTS		FOREIGN YACTHS		TOTAL	
	Yat-Yachts	Yatak-Beds	Yat-Yachts	Yatak-Beds	Yat-Yachts	Yatak-Beds	Yat-Yachts	Yatak-Beds
1990	378	3.986	441	4.365	583	4.102	1.024	8.467
1991	397	4.281	460	4.559	403	2.846	863	7.405
1992	390	4.121	481	4.971	525	3.609	1.006	8.580
1993	400	4.253	474	5.034	553	3.732	1.027	8.766
1994	328	3.565	524	5.401	498	3.243	1.022	8.644
1995	336	3.655	547	5.567	412	2.616	959	8.183
1996	324	3.628	585	5.905	398	2.542	983	8.447
1997	321	3.605	606	6.071	393	2.470	999	8.550
1998	322	3.628	618	6.100	414	2.557	1.032	8.579
1999	323	3.625	612	6.013	410	2.573	1.022	8.586
2000	325	3.642	617	6.022	455	2.856	1.072	8.878
2001	307	3.551	821	7.404	480	2.977	1.301	10.381
2002	234	2.645	725	6.774	369	2.457	1.094	9.231
2003	234	2.645	725	6.905	333	2.329	1.058	9.234

2004	148	1.532	720	6.640	294	2.110	1.014	8.750
2005	97	874	723	6.394	345	2.486	1.068	8.880
2006	19	235	666	5.398	395	2.764	1.061	8.162
2007	19	235	845	6.764	381	2.748	1.133	9.512
2008	10	139	990	8.051	431	3.116	1.421	11.167
2009	10	139	964	7.841	433	3.191	1.397	11.032
2010	3	46	521	4.851	**438**	**3.240**	959	8.091
2011	4	48	992	10.292	**868**	**7.199**	1.860	17.491
2012	-	-	1.246	13.203	**829**	**6.567**	2.075	19.770
2013	-	-	1.529	15.312	**871**	**6.911**	2.400	22.223
2014	-	-	1.529	15.312	**838**	**6.674**	2.367	21.986
2015		-	1.529	15.312	**826**	**6.626**	2.355	21.938
2016		-	1.537	15.994	**608**	**5.100**	2.145	21.094
2017	1	26	1.542	16.055	**314**	**2.555**	1.856	18.610
2018			1.571	16.124	**220**	**2.043**	1.791	18.791
2019	-	-	1.819	17.917	**160**	**1.219**	1.979	19.136

Source; Ministry of Culter & Tourism

Table 67: MARINE TOURISM FACILITY & VESELLS WITH TOURISM ADMINISTRATION CERTIFICATE (2018)

MARINE TOURISM FACILITY

Mooring Capacity Number Of Facility	Number Of Facility	YachtCapacity Sea	Land	Total
Business Tourism Documentation of Yacht Harbour	28	9308	3.157	12.465
Business Tourism Documentation of Yacht Slipway	6	40	859	899
Investment Tourism Documentation of Yacht Harbour	6	1.842	438	2.280
GENERAL TOTAL:	**40**	**11. 190**	**4. 454**	**15.614**

MARINE TOURISM VESSELS

	Number of Business	Number of Yacht	Number of Beds
Business Tourism Documentation of Turkish Flag Yacht	1.344	1.819	17.917
Investment Tourism Documentation of Turkish Flag Yacht	11	160	1.219
Business Tourism Documentation of Foreign Flag Yacht	1	1	26
GENERAL TOTAL	**1. 356**	**1. 980**	19.162

	Number of Business	Number of Vessels	Passengers Capacity
Business Tourism Documentation of One a Day Trip	**2.093**	**2.278**	**136.744**

Summer-Winter	Number of Business	Number of Vessels	PassengerCapasity
Business Tourism Documentation of Restaurant Ship	39	39	**14.861 / 10.724**

Source ; Ministry of Culter & Tourism (31.12.2019)

7.2. Blue Voyage

“Blue Voyage" is the most authentic mode of travel of Turkey. The Gullet Tourism, other than bareboat concept, is a travel and vacation type that is derived from Blue Voyage tradition and peculiar to Turkey, which can be considered fully Turkish style. This is a type of yacht tourism performed with the vessels having permanent crew or multi-property yachts, which became famous at the classical, ultra-luxury or international races and then adapted to tourism, or in some exceptional cases, performed with yachts adapted from classical design basically.

Almost 75-80 % of the yacht fleet consists of traditional wooden or classical vessels sailing on the waters of Aegean and The Mediterranean for hundreds of years. The blue voyage has made an evolution in terms of boat building technologies by adapting tradition to tourism.

Since the 60’s Turkey protects sustain in the building of these traditional boats in many areas on our coasts.

In the 60’s the sponge fisherman used to use the same boats for fishing purposes. The first blue cruises that were done by the Fisherman of Halicarnassus and his friends, the esteemed intellectuals of the time, went on cruises where there was no electricity no bathroom and kitchen

It is known we have the famous ‘Blue Cruises’ in our country. This is a concept that began in the 60’s with our famous story teller and philosopher / author ‘Fisherman of Halicarnassus’ Sailing with a crew on the turquoise waters of Turkey would be a memorable experience. Together with 3 or 4 crew members, blue cruises are proven to be the most comfort Table and joy full way to explore our bays.

Blue Voyage Routes on The Aegean Routes

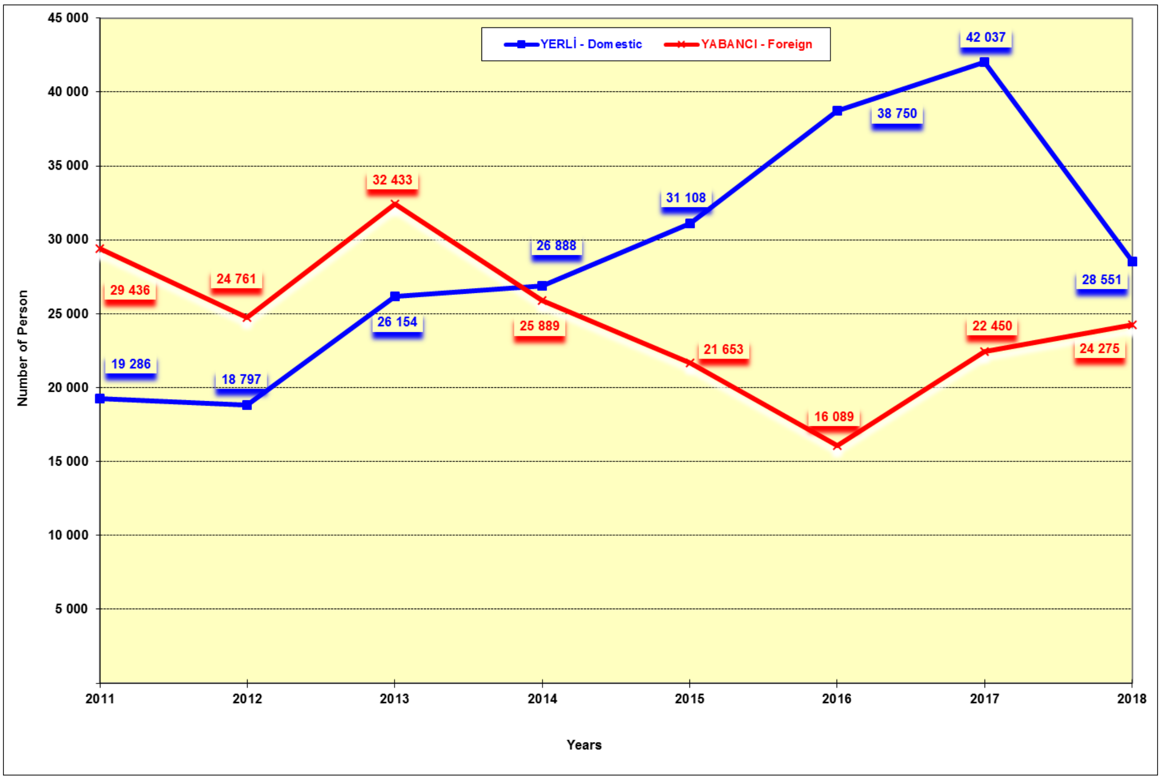
And this is how it became now: Convenience and pleasure on the boat They come in 3 different shapes: Gulets with her broad rounded stern, favorite of the blue cruise, ideal for relaxation.

Blue Voyage Routes on The Mediterraean Routes

Tirhandils are traditional boat type with a single mast pointed stern and fairly large hull. Once, favorite of thespongediversduetounclutteredspace on deck

Mirror sterns are expecially favorite with the flat stern allowing space for two extracabins at the rear.

Graph 56 : Distribution of the Yachtsmen and the Crew Members of the Flag Q Yacths (for Commercial + Private use) Arrived in Turkish Ports by Years



The route of the Blue Voyage from Kuşadası down to Antalya covers and area of 350 sea miles. This route is shortened or lengthened according to the wish of the guests from aboard. By choosing the most convenient cruise itinerary, one will experience the beauty of the Turkish cuisine and the congeniality of the traditional Turkish hospitality.

The best period to join the Blue Voyage is between April and November.

Table 68: Distribution of The Flag Q Yachts the Yachtsmen and The Crew Members Arrived in Turkish Ports by type of Yachts and Years

Years	No of Yachts						No of Yachtsmen						No of Crew Members					
	Domestic			Foreign			Domestic			Foreign			Domestic			Foreign		
	C	P	Total	C	P	Total	C	P	Total	C	P	Total	C	P	Total	C	P	Total
1989	333	93	**426**	881	2 253	**3 134**	287	337	**624**	5 331	8 495	**13 826**	1 063	316	**1 379**	1 621	1 762	**3 383**
1990	696	212	**908**	600	2 954	**3 554**	656	541	**1 197**	5 845	10 770	**16 615**	2 100	728	**2 828**	1 038	3 099	**4 137**
1991	360	96	**456**	278	1 576	**1 854**	352	286	**638**	2 828	5 368	**8 196**	1 126	285	**1 411**	411	1 540	**1 951**
1992	538	46	**584**	921	1 608	**2 529**	439	186	**625**	6 401	5 515	**11 916**	1 643	74	**1 717**	1 447	729	**2 176**
1993	335	32	**367**	645	1 949	**2 594**	346	200	**546**	4 622	6 636	**11 258**	1 043	67	**1 110**	1 219	745	**1 964**
1994	395	16	**411**	593	2 081	**2 674**	195	128	**323**	5 010	6 825	**11 835**	1 248	117	**1 365**	1 214	664	**1 878**
1995	447	13	**460**	793	1 787	**2 580**	324	82	**406**	6 165	5 251	**11 416**	1 466	41	**1 507**	1 468	463	**1 931**
1996	902	33	**935**	667	2 124	**2 791**	432	227	**659**	6 898	7 287	**14 185**	1 947	104	**2 051**	1 115	354	**1 469**
1997	693	38	**731**	391	2 421	**2 812**	480	288	**768**	3 481	7 514	**10 995**	1 631	205	**1 836**	675	1 350	**2 025**
1998	1 497	63	**1 560**	482	1 744	**2 226**	572	314	**886**	6 853	5 980	**12 833**	3 220	252	**3 472**	501	974	**1 475**
1999	369	60	**429**	340	1 805	**2 145**	389	454	**843**	3 142	5 521	**8 663**	1 280	31	**1 311**	831	81	**912**
2000	600	70	**670**	189	1 046	**1 235**	536	226	**762**	4 162	2 466	**6 628**	1 502	130	**1 632**	195	1 141	**1 336**
2001	723	85	**808**	345	2 089	**2 434**	750	260	**1 010**	5 577	4 300	**9 877**	2 190	219	**2 409**	600	3 665	**4 265**
2002	991	46	**1 037**	249	2 088	**2 337**	960	318	**1 278**	7 684	4 894	**12 578**	3 014	288	**3 302**	330	2 641	**2 971**
2003	1 023	71	**1 094**	767	3 397	**4 164**	1 048	513	**1 561**	6 836	2 727	**9 563**	3 688	1 251	**4 939**	2 473	8 277	**10 750**
2004	1 500	49	**1 549**	339	3 303	**3 642**	1 307	605	**1 912**	9 932	3 528	**13 460**	4 709	1 048	**5 757**	886	7 162	**8 048**
2005	1 911	68	**1 979**	627	3 604	**4 231**	1 511	675	**2 186**	13 574	3 660	**17 234**	5 667	1 563	**7 230**	1 259	7 421	**8 680**
2006	2 122	282	**2 404**	1 440	4 661	**6 101**	1 859	1 152	**3 011**	16 649	5 984	**22 633**	6 130	2 414	**8 544**	2 825	8 506	**11 331**
2007	2 061	754	**2 815**	1 358	6 360	**7 718**	2 155	2 159	**4 314**	15 456	10 627	**26 083**	6 453	5 122	**11 575**	2 771	10 562	**13 333**
2008	2 600	89	**2 689**	488	5 738	**6 226**	2 065	1 821	**3 886**	18 984	6 340	**25 324**	7 170	3 242	**10 412**	838	9 023	**9 861**
2009	1 969	186	**2 155**	1 199	7 914	**9 113**	2 467	3 746	**6 213**	15 104	9 419	**24 523**	6 365	4 614	**10 979**	2 093	10 840	**12 933**
2010	1 687	388	**2 075**	567	5 643	**6 210**	2 152	3 480	**5 632**	11 386	10 025	**21 411**	5 597	4 148	**9 745**	635	7 438	**8 073**
2011	1 799	405	**2 204**	606	6 247	**6 853**	2 797	4 673	**7 470**	12 042	8 780	**20 822**	6 541	5 242	**11 783**	686	7 961	**8 647**
2012	1 237	483	**1 720**	584	6 564	**7 148**	2 520	5 964	**8 484**	8 141	8 511	**16 652**	4 457	5 856	**10 313**	636	7 473	**8 109**
2013	1 966	550	**2 516**	1 287	6 493	**7 780**	4 726	7 619	**12 345**	15 086	8 404	**23 490**	7 234	6 575	**13 809**	3 101	5 842	**8 943**
2014	1 883	367	**2 250**	1 380	5 845	**7 225**	5 024	8 297	**13 321**	11 912	6 887	**18 799**	7 072	6 495	**13 567**	2 546	4 544	**7 090**
2015	2 371	397	**2 768**	1 717	6 097	**7 814**	6 312	7 852	**14 164**	10 752	5 224	**15 976**	8 438	8 506	**16 944**	1 991	3 686	**5 677**
2016	3 269	505	**3 774**	877	6 980	**7 857**	6 324	8 366	**14 690**	7 428	4 349	**11 777**	11 075	12 965	**24 040**	1 295	3 017	**4 312**
2017	3 295	2 300	**5 595**	703	4 356	**5 059**	6 800	11 400	**18 200**	11 362	6 228	**17 590**	12 366	11 471	**23 837**	1 582	3 278	**4 860**
2018	1 830	2 665	**4 495**	558	3 333	**3 891**	3 755	10 610	**14 365**	10 573	7 274	**17 847**	6 303	7 883	**14 186**	1 920	4 508	**6 428**

C : Commercial P : Private

Statistic: Ministery of Culture of Turkey

Five Blue Voyage Routes In Anatolia

Horizons drenched in a thousand shades of blue, hot golden beaches, the sound of the surf splashing against the broadside of the boat, and the sharp iodine smell of the sea—here are five summer routes in Anatolia.

Bodrum – Gökova

The most important stop on this route, which starts in the coves near Bodrum, is the island of Kara Ada. The island is known for its therapeutic hot water springs, and it is possible to have mud bath in its natural pools. Mersincik Harbour, in the Gulf of Gökova, is ideal for swimming—its waters are very clear. The coves of Büyük and Küçük Çatı present alternative options. Tuzla Cove, which cuts roughly three miles eastward into Koyun Point, resembles a lake, while Karacasöğüt is a well-protected cove surrounded by pine-forested hills. İngiliz Harbor is famous for its sunset. Sedir Island, one of the greatest spots on the route, is known for its deserted beaches. The island is peppered with the ruins of the ancient town of Kedreai. It is said that the Egyptian princess Cleopatra bathed in the small cove in the northwest of this olive tree-covered island. At dusk, the boats stop for the night in Akbük Harbor, whose sea is as clear as an aquarium. The next morning, after laying anchor in Çamaltı Cove and hiking over land for roughly half an hour, one reaches the ancient ruins of Keramos. Later, lunch is had at Çökertme Cove. After following a route that visits.
Orak Island, Çiftlik, and Bitez, the ships return to Bodrum.

Places; Bodrum İn Turkey.

The Blue Voyage can be taken as a day trip or with accommodation. The cabin charter tours range from three to eight days. Experts recommend one week as the ideal duration for a Blue Voyage.

Datça – Bozburun

The boats take off from Datça Harbor and follow the path of the coves buried like so many treasures in the peninsula. After a stop for breakfast, the boat moves on to the Gulf of Hisarönü. Dişlice Island, at the entrance of Bencik Harbor, conceals small beaches on its shores. Orhaniye, our first stop on the Bozburun Peninsula, shines like a blue bead amid lush green forests. The walls on the island located in the middle of the cove were used as watchtowers

during the Byzantine era. Kızkumu, one of the most favored beaches in the region, is a shallow sandbar that stretches out to the sea like an extended tongue. Selimiye, which boats reach after a dance with blue and green, is a small fishermen's village filled with seafood restaurants. After Bozburun—the center of the peninsula—the boats pass by Simi Island and reach Bozukkale. There are the ruins of the ancient city of Loryma in this cove, which is surrounded by steep hills. The next stop is Serçe Harbor, which has many sunken ships off its shores. After here, optionally, a route that visits Çiftlik, Kadırga, and Turunç respectively can be followed.
All Blue Voyage vessels that hold permits to carry passengers for touristic purposes must comply to standards set by the Ministry of Cultur and Tourism. No voyages take place in weather and sea conditions seen as unfit by the Port Authorities, Coast Guard, and Meteorological Service.

Marmaris – Fethiye

Starting in Marmaris, which is one of the most important Blue Voyage centers in Anatolia, this route first stops by Ekincik Cove. İztuzu Beach—one of the most important habitats of the loggerhead (carettacaretta) sea turtle—is the port of entrance to Dalyan, which resembles a giant marine labyrinth. By boarding smaller boats here, you can go all the way out to Lake Köyceğiz.


Places: Göcek in Turkey

The Kaunus Rock Tombs, with their marvelous panorama, are among the places worth seeing in the area. Dişibilmez Point and Manastır Point are two important stops before Göcek. It is known that ships were built on Tersane ("Shipyard") Island, located off the shores of Göcek, during the Byzantine era. Scattered among the olive trees of the shore of this bowl-shaped island are numerous ruins of houses. After such a pleasant day, the boats stop in Göcek for the night. The next day, the boats set out to the Ölüdeniz (the Blue Lagoon), gliding on the Mediterranean like white swans. It is forbidden to lay anchor in Ölüdeniz, a lagoon that resembles a giant lake with its clear, tranquil waters. It is possible to moor off its shores and go to the beach via boat. On Gemiler ("Ships") Island in the Gulf of Fethiye, there are ruins of an ancient church from the Byzantine era.

Capacity ranges from eight to twenty-five on cabin charter tours.

Antalya - Kaş

This route, which has received great interest in recent years, joins two important Mediterranean harbors. The Yediburunlar region, which falls between the two places, is unaccommodating of overnight stays due to generally having choppy seas. The true privilege of this route is that it includes the area of Kekova, which can be considered the most beautiful place along the Antalya–Kaş route. Continuing off the shores of Üçağız, which is studded with the ruins of the ancient harbor disguised amid carob trees, the voyage enters a brand-new, dreamlike realm in the Sunken City: ancient avenues shimmering beneath clear, turquoise-colored waters; elegant columns; ruins of buildings; stairs disappearing into the depths beneath; and fields of amphorae… The boats are floating above a mysterious Lycian town that is thought to have been plunged into the seas due to an earthquake in the second century BC. The journey continues, passing by rock tombs, monks' cells, and tiny coves, until Simena. The first long leg of the journey from here has a view of Kastelorizo (Meis) Island.

Places;Karolas-Kaş in Antalya

Antalya – Finike

The coves on this route promise a lovely voyage along which natural and historical beauties are intertwined. Starting in Antalya, which is one of the most important centers of tourism in the Mediterranean, the journey stops by a modern Anatolian marina in Kemer.

Places: Kaputaj Beach İn Antalya

The ancient Lycian town of Phaselis is reached right after Asar Point. Established as a triple-harbored seaside town by sailors from Rhodes in the seventh century BC, Phaselis was famed in Roman times—its golden age—for its high-quality perfumes. As you wander the ancient

streets connecting the harbors, your senses are delighted by a combination of the sound of the surf and the scent of the pines. Just a little ahead are Çıralı, Olimpos Beach, and Yanartaş, which are quite memorably beautiful. The name of the piece of land stretching northward from Taşlık Point is Çavuş Harbor. To the west of the bay, which is surrounded by green hills, there is a beach, and immediately behind it a plain. Finike, a protected harbor, is four miles northeast of Bunda Point.
Blue Voyage tours in Anatolia start in May and run through the end of October. Demand is at its most concentrated in the high season of July and August.

7.3. Statistics of The Yachts & Capacity of The Registered Yachting Facilities

Most of Turkey's marinas are located on the Southern Aegean and Mediterranean coasts. These well-equipped ports contain all the services and provisions any yacht would require.

Table below shows the yacht marinas registered by the Ministry of Tourism.

Table 69: Marine Tourism Facility with Tourism Administration Certificate (2019)

Business Tourism Documentation of Yacht Harbour				
			CAPACITY	
NO	PORT NAME	CITY OF	AT SEA	ON SHORE
1	Setur Kuşadası Yacht Port	Kuşadası/ Aydın	310	-
2	Ataköy Yacht Port	Ataköy/İSTANBUL	1.040	60
3	G-Marina Kemer	Kemer /ANTALYA	150	150
4	Marmaris Yacht Port	Marmaris/MUĞLA	676	122
5	Club Marinas	Göcek / MUĞLA	121	-
6	Setur Antalya Marinas	ANTALYA	200	150
7	Kumlubükü Yacht Club	Marmaris/MUĞLA	10	-
8	D-MarinTurgutreis Yacht Port	Bodrum/MUĞLA	455	100
9	Ece Marina	Fethiye / MUĞLA	230	-
10	Milta Bodrum Yacht Port	Bodrum / MUĞLA	425	50
11	My Marina Ekincik	Marmaris/MUĞLA	67	15
12	D-Marin Didim Marinas	Didim / AYDIN	576	600
13	D-Marin Port Göcek Marina s	Fethiye /MUĞLA	379	-
14	Alaçatı Yat limanı	Çeşme / İZMİR	260	100
15	Marintürk Göcek Village Port	Göcek-Fethiye/ MUĞLA	116	200
16	SETUR Yalova Yacht Port	YALOVA	240	80
17	Alanya Yacht Port	Alanya/ANTALYA	287	160
18	Teos Marinas	Seferihisar/İZMİR	480	80

19	Port Iasos	Milas/ MUĞLA	100	-
20	Skopea Marinas	Fethiye/MUĞLA	80	-
21	Marmaris Adaköy Marinas	Marmaris/MUĞLA	33	-
22	I&C Çeşme Yacht Port	Çeşme / İZMİR	377	100
23	West İstanbul Marinas	Beylikdüzü/ İSTANBUL	600	370
24	SETUR Ayvalık Marinas	Ayvalık/ BALIKESİR	200	150
25	Mersin Yacht Port	Mersin	500	500
26	Güllük Yat Marin	Milas / MUĞLA	270	**-**
27	Gökova Ören Marinas	Milas/ MUĞLA	416	**130**
28	Yalıkavak Marinas	Bodrum/Muğla	710	**40**
		TOTAL	9308	3.157
		GENERAL TOTAL	12.465	

Business Tourism Documantaton of Yacht Slipway

			CAPACITY	
NO	**PORT NAME**	**CITY OF**	**AT SEA**	**ON SHORE**
1	Ayvalık Yacht Slipway	Ayvalık / BALIKESİR	-	140
2	Yat Lift Yacht Slipway	Bodrum / MUĞLA		400
3	Ağanlar Yacht Slipway	Bodrum / MUĞLA	**-**	200
4	Albatros Yacht Slipway	Marmaris /MUĞLA	40	48
5	Neta Marinas Yacht Slipway	Bodrum / MUĞLA		21
6	Ege Yacht Slipway	Milas/MUĞLA		50
		TOTAL	**40**	**859**
		GENERAL TOTAL	899	

Yacht Harbour Investment Tourism Documantation

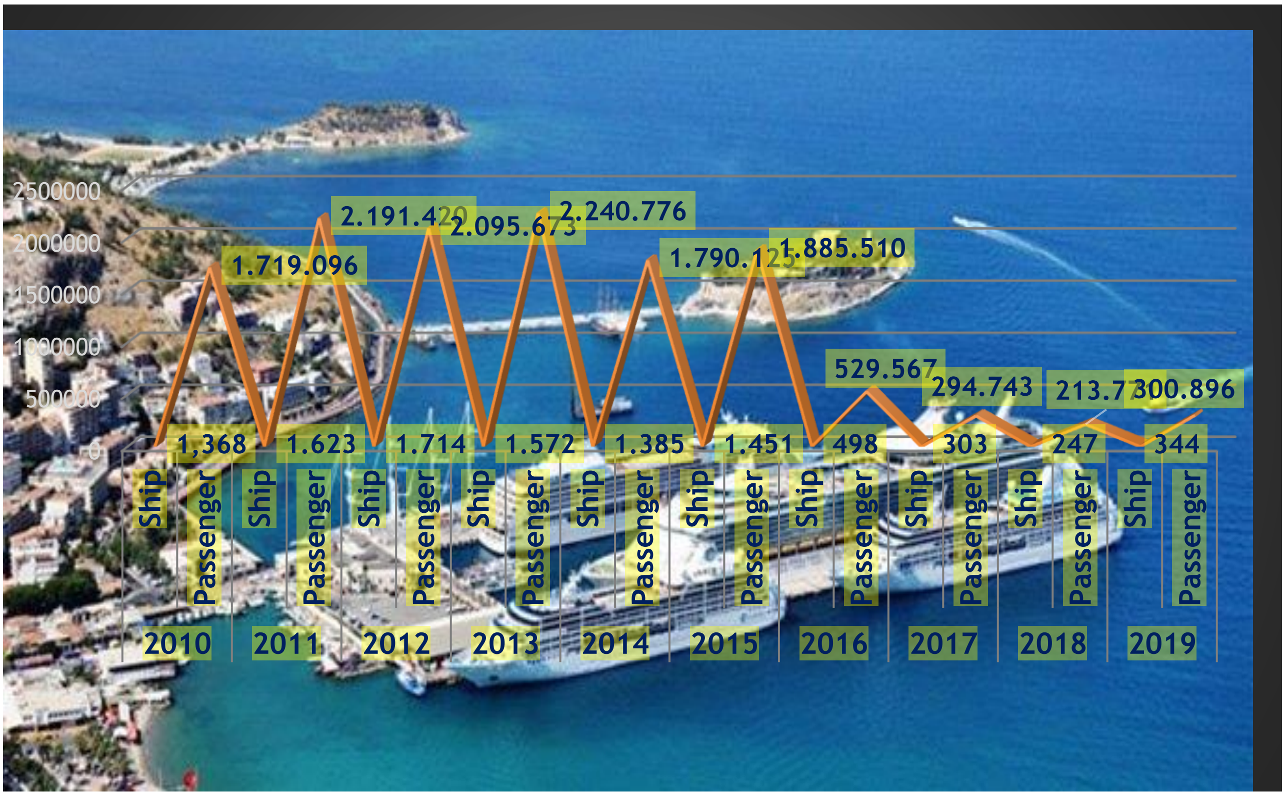
			CAPACITY	
NO	**PORT NAME**	**CITY OF**	**AT SEA**	**ON SHORE**
1	Alacatur Touristic Facility	Turgutreis / MUĞLA	40	12
2	Meersea Körmen Yacht Port	Datça / MUĞLA	246	56
3	Ataport Yacht Port	Zeytinburnu / İSTANBUL	1.000	100
4	Mandalya Dock	Milas / MUĞLA	50	-
5	Tümsağ Kumkuyu Yacht Port	Erdemli/ MERSİN	200	200
		TOTAL	**1.536**	**368**
		GENERAL TOTAL	**1.904**	

Source: Ministery of Culture &Tourism

7.4. Cruise Tourism in Turkey

Cruise Tourism, which is one of the new industries in shipping sector, has emerged as a result of the rising demands of people for cruising with more modern ships. Worldcruise tourism has been developing with a great acceleration with more ships and increasing capacities. Cruise industry today offers a market of 25 Billion USD. Turkey is located in a suitable region for crusing sector, which is the Mediterranean Basin.
World Cruise Companies Arrival-Departure Port of Istanbul, Izmir, Antalya, (Turn-Around Port) as reported by declaring Al Development Program.

Graph 57:Statistics of Cruises and Passengers Arrived at Turkish Ports Between 2010-2019

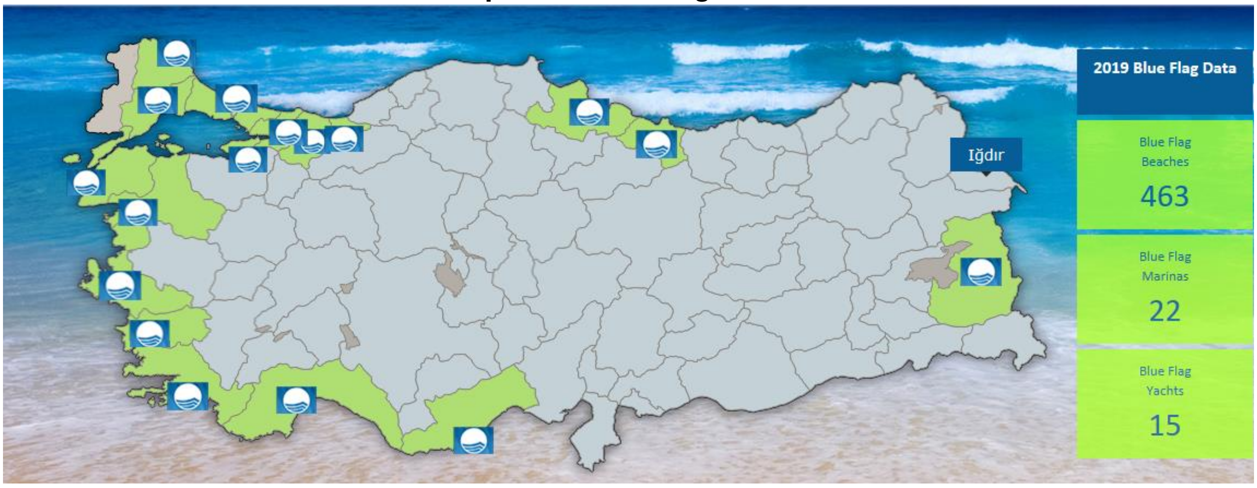


In order to open İstanbul, one of the most important touristic centers of Turkey, to Cruise and Mega Yacht Tourism Services, great effort sare being exerted to develop the ports of Galataport, Yenikapı and Ataköy Marinas.

7.5. Blue Flag Compaign

The Blue Flag Campaign is one of the four projects executed under the co-ordination of the Europe Environmental Education Foundation (EEEF). The Environmental Education Foundation of Turkey (TURCEV) designates which beaches and marinas have the right to display a Blue Flag, which is judged on the basis of cleanliness of water, environmental concerns, security, safety and services.

Graph 58: Blue Flag Data



Source: TURÇEV

Nominees are evaluated by a national, then a European jury, after which the successful ones are awarded the Blue Flag for one year. The sea-water analysis is performed every 15 days during the high season by the local department of the Ministry of Health, and funded by the Ministry of Tourism, and taking into account the physical, pH and microbiological parameters. (Source: Ministry of Culture and Tourism)

7.6. Underwater Diving

In the seas of Turkey, divers can discover a fascinating submerged world, from underwater caverns to sunken ships and even the remains of ancient cities. The only areas prohibited to diving are military zones and areas under protection. Diving for scientific research is also prohibited.

Above the water and diving off the coast of our country engaged in tourism business we have around 800 certified and authorized

7.7. Equipped Diving Rules

Forbidden Zones

All kinds of diving excluding scientific studies in military forbidden zones as well as regions in which there are Cultural and Natural Wealth Required to be protected underwater according to Official Gazette dated 19.08.1989 and numbered 20257 issuing 35th article of Decision of Board of Ministers, according to Cultural and Natural Wealth Protection Law Number 863.

Certificate

Equipped divers for sportive purposes should have the proficiency certificate (diving card) issued by Underwater Sports Federation. But certificates issued by educational organizations under international standards, are also valid. These certificates, can be upgraded to proficiency certificate (diving card) by applying to the Federation. Sportive diving authorizations, technical specifications and certificates are issued in compliance with the principles determined and accepted by Youth and Sports General Directorate, Underwater Sports Life Guarding and Water Ski Federation. As regards to sportive diving for foreign divers, they should be a member of International Underwater Sports Federation or national organizations or have a certificate issued by authorized organizations or institutions of their countries.

Responsibility Diving and life security of the divers belong to divers themselves, but during training all the responsibility is with the lecturer. When diving in Turkey, taking guide skin diver is obligatory. Foreign divers should take guide skin diver during diving. Also, protection of cultural and natural wealth, maintaining of property and life security of divers during diving, are under the responsibility and obligation of guide skin diver. However, existing problems and personal mistakes of divers who violate rules is not within the scope of responsibility of guide skin diver.

Material There is no limit for equipment during sportive diving. Balance vest (life vest, BC), tube pressure monitor, depth monitor and time hour usage is obligatory. Usage of lifting balloon or similar materials is forbidden.

Decompressed dives are completely forbidden. High pressurized tube filling compressor in land or in ships, which requires permission from corresponding authorities, can be present during diving.

Agency, club, establishment, hotel, holiday village, school etc. who organize diving, as well as ships should provide first aid material in stock. Underwater photographing and video cameras and all kinds of related materials can be used during diving.

Material Maintenance Tourism agencies, yacht operators, organizations and institutions as well as underwater clubs organizing sportive diving should perform periodic test and maintenance of diving materials (such as tube regulator, balance vest) used and owned by skin divers. These tests can be performed at civil skin diving firms, agencies or organizations authorized by Ministry of Industry and Commerce.

Ships to be used during dives During underwater diving, using Turkish flag ships is a must. However, if permission is taken for foreign groups who wish to dive from their own boats, they can be used as well.

Diving permission Equipped sportive diving is subject to permission. City Tourism Directorate or authorized body should be informed by clubs, organizations or institutions in order to organize diving to regions excluding forbidden zones. This information is submitted to Regional Coast Guard by correspondent authority.

All kinds of equipped sportive diving are subject to permission for foreign divers. Authorities who issue these permissions are City Tourism Directorate or authorized bodies. One copy of permission forms issued is submitted to Harbor Master and one copy is submitted to Regional Coast Guard by the issuing authority. One copy of the permission should be kept by organizers at all times and should be shown to authorities during controls. Taking permission and submitting information is not obligatory during training and diving with double person system.

VIII CHAPTER

TURKISH FISHING SECTOR

8. TURKISH FISHING SECTOR

Turkey has a rich water products potential. The seas around Anatolia has variant and distinct ecological characteristics. The area of natural lakes is 178,000 km², and the area of dams is 3,442 km².
Our Seas are 500 fish sepecies. Turkey has a share of 0.04 % in the total world water production.
60-80 % of Turkey's water products consist of pelajic fish. Pelajic fishes are mainly anchovy (Engraulis encrasicholus) and pilchard (sardina pilcharolus). Other important pelajic species are horse mackerel (Trachurus trachurus), çaça (sprattus sprattus), tirsi (Alosa alosa), chup mackerel (scomber japonicus), mackerel(scomber scombrus), blue fish (Pamatomus saltatrix), atlantic bonito (Sarda sarda) and blue fine tuna (Thunnus thynnus).Major deep sea fishes are hake (Merluccius merluccius), whitting (merlangius merlangus euxinus), stripped mullet (Mullus barbartus) and red mullet (Mullus surmelatus). Amongst the flat fishes, (Scophthalmidae-Soleidae), sea bass (Dicentrarchus labrax), hani (Serranidae), species shrimp (Penaeidae) and species squid (Loliginidae and Ommastrephidae) can be considered.
Annual fish production of Turkey is 1 million tons. 80 % of fish production comes from sea, 10% from inland water production, and 10 % from farming production.

Graph 59: Quantity of Captured Sea Product (2018)

Production of water products, specially in 1970's, showed a rapid development as a result of low interest credits provided by the State and by customs tax exemptions and increase both in the number of fishing vessels and in the strenght of catch.The production of fish products realized approximately as 180.000 tons has increased above 700.000 tons.

Fishery production decreased by 0.3% in 2018. Fishery production decreased by 0.3% in 2018 with respect to the previous year and occured as 628 thousand 631 tonnes. The total fishery production was composed of sea fish by 35.3%, other sea products by 9.9%, inland water products by 4.8% and aquaculture products by 50%.

In 2018, while capture of fishery products decreased by 11.4%, aquaculture increased by 13.8% while the production made by capture was 314 thousand 094 tonnes, aquaculture production occurred as 314 thousand 537 tonnes. The capture of marine production decreased by 11.9%, capture of inland water production decreased by 6.2% with respect to the previous year. 33.4% of the amount of aquaculture production took place at the inland waters and 66.6% at the seas.Within all the production of marine products by capture, East Black Sea Region was the first with the ratio of 31.5%. The regions West Black Sea with 30.6%, Marmara with 18.4%, Aegean with 15% and Mediterranean with 4.5% followed this region.

In 2018, per capita average consumption of fish increased by 11.8% Per capita average consumption of fish was 5.49 kg in 2017 and occurred as 6.14 kg with increasing by 11.8% in 2018.

Table 70: Fisheries Statistics by The Years

	Sea Products **(Ton** - Tonnes)	Aquaculture Production **(Ton** - Tonnes)	Freshwater Products **(Ton** - Tonnes)
2006	488 966	128 943	44 082
2007	589 129	139 873	43 321
2008	453 113	152 186	41 011
2009	425 046	158 729	39 187
2010	445 680	167 141	40 259
2011	477 658	188 790	37 097
2012	396 322	212 410	36 120
2013	339 047	233 394	35 074
2014	266 078	235 133	36 134
2015	397 731	240 334	34 176
2016	301 464	253 395	33 856
2017	322 173	276 502	32 145
2018	283 955	314 537	30 139

Source: For aquaculture production and freshwater products, Ministry of Agriculture and Forestry.

Table 71:Quantity of Caught Sea Fish

Ton - Tonnes

Type of fish	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total	380 636,0	399 656,0	432 246,0	315 636,5	295 167,9	231 058,3	345 765,0	263 724,5	269 676,4	222 023,6
Akya - Leer fish	1 167,0	883,0	585,9	349,3	333,5	173,5	109,3	186,6	211,9	181,7
Avcı - Greater amberjack	96,0	53,0	31,4	43,2	54,3	9,2	8,8	7,0	8,5	8,4
Albakor (Patlakgöz) - Albacore	631,0	402,0	1 395,7	61,7	70,6	0,3	53,4	25,2	44,0	37,8
Bakalorya-Berlam - Hake-Eurepean hake	1 557,0	1 256,0	921,1	892,5	676,0	642,2	706,0	783,8	1 011,3	1 019,3
Barbunya - Red mullet	2 461,0	2 351,0	1 861,4	2 453,1	2 055,4	1 426,1	1 255,2	1 453,6	1 406,4	1 399,3
Barbunya (Paşa barbunu) - Goldon banded	317,0	446,0	427,8	337,2	88,8	34,8	25,3	78,7	69,4	49,9
Çaça - Sprat	53 385,0	57 023,0	87 140,8	12 091,7	9 764,0	41 647,9	76 995,6	50 224,9	33 949,5	20 056,6
Çipura - Seabream	1 186,0	1 164,0	766,1	917,7	943,5	606,3	480,9	495,1	590,0	544,1
Dil - Common sole	882,0	1 062,0	829,3	792,0	693,6	411,3	328,0	352,2	486,4	432,4
Dülger - John dory	104,0	90,0	67,4	69,1	61,5	44,8	46,0	47,1	48,3	52,1
Fangri - Common seabream	177,0	132,0	69,7	50,8	70,7	36,3	31,3	25,3	28,8	44,7
Fener balığı - Angler fish	317,0	219,0	193,0	199,2	204,6	190,0	166,0	176,0	185,2	219,9
Gelincik - Shore rockling	21,0	9,0	15,3	9,4	14,1	11,6	7,4	10,4	11,7	15,8
Gobene (Tombik) - Frigate mackerel	1 873,0	1 081,0	2 551,8	907,2	863,3	561,7	476,0	406,8	474,1	367,0
Grenyüz - Meagre	23,0	101,0	30,9	56,9	16,5	17,5	20,0	23,6	10,1	55,9
Gümüş - Silverside	1 721,0	1 442,0	1 472,7	935,5	886,3	447,1	326,9	516,5	489,3	591,5
Hamsi - Anchovy	204 699,0	229 023,0	228 491,4	163 981,9	179 615,2	96 440,0	193 492,3	102 595,2	158 093,8	96 451,7
Hani - Painted comber	51,0	23,0	34,2	40,0	36,6	44,6	16,8	17,9	12,1	11,0
İskarmoz - Eurepean barracude	178,0	459,0	228,1	212,7	370,1	124,7	171,3	115,7	96,2	75,3
İskorpit - Black skorpion fish	339,0	254,0	196,4	367,3	192,2	201,9	143,2	138,6	306,0	208,2
İsparoz - Annular bream	427,0	745,0	195,9	129,2	106,6	58,7	75,0	84,2	86,6	45,9
İstavrit(Kraça)-Horse mackerel	20 373,0	14 392,0	18 072,7	24 625,3	21 817,8	12 213,2	14 290,4	8 859,8	8 065,6	14 221,8
İstavrit (Karagöz) - Scad	7 895,0	6 055,0	6 937,3	6 320,7	6 606,3	4 110,4	2 373,1	2 288,6	4 919,3	6 456,1
İşkine - Brown mearge	32,0	20,0	6,6	5,6	2,5	7,6	5,0	4,5	3,0	4,3
İzmarit - Picarel	1 116,0	1 243,0	877,5	903,2	765,7	349,9	332,0	328,9	285,9	255,3
Kalkan - Turbot	383,0	295,0	166,4	202,7	209,4	197,8	239,3	221,1	167,4	139,2
Karagöz - Two banded bream	282,0	202,0	152,6	195,2	123,0	147,9	108,8	125,0	210,9	128,4
Kayabalığı - Gobies	124,0	130,0	95,8	147,7	67,2	42,8	38,5	50,5	2,8	12,8
Kefal - Grey mullet	2 987,0	3 119,0	2 513,8	4 010,4	2 504,9	1 721,0	1 782,9	1 825,7	2 313,6	1 592,4
Keler - Angelshark	20,0	19,0	15,7	13,3	17,0	8,3	1,3	2,8	0,9	0,3
Kılıç - Sword fish**	301,0	334,0	189,6	79,7	96,8	55,7	34,9	76,5	441,0	427,0
Kırlangıç - Red gurnard	320,0	316,0	211,6	272,3	220,4	66,4	54,3	54,3	56,6	43,8
Kırlangıç (Mazak) - Trigla lineata	47,0	92,0	54,7	37,3	26,8	6,5	2,9	4,2	7,5	6,8
Kolyoz - Chup mackerel	2 952,0	2 004,0	3 127,0	2 182,7	2 573,7	1 695,0	1 209,9	1 602,0	2 043,0	1 503,5
Köpek - Topeshark	618,0	285,0	369,5	183,3	110,9	108,9	77,6	22,3	23,2	21,0
Kupez - Bogue	2 919,0	2 761,0	2 113,5	1 421,9	2 226,2	2 208,4	2 207,8	2 795,1	3 175,0	3 559,3
Lahoz - Waker	566,0	672,0	396,6	311,9	260,5	191,5	166,9	230,6	32,6	111,1
Levrek - Seabas	615,0	577,0	316,5	424,0	186,9	110,5	139,0	131,7	135,1	151,4
Lipsöz - Small-Scalled	107,0	80,0	84,2	27,6	51,3	20,4	17,3	28,2	20,4	40,6
Lüfer - Blue fish	5 999,0	4 744,0	3 122,0	7 389,5	5 225,2	8 386,3	4 135,7	9 573,6	1 935,7	5 767,4
Melanurya -Saddled seabream	241,0	243,0	112,8	139,4	113,6	127,9	59,3	90,2	92,3	63,7
Mercan - Striped bream	724,0	742,0	635,6	1 091,0	990,0	788,9	895,5	980,0	1 171,7	1 062,7
Mezgit - Whiting	11 146,0	13 558,0	9 454,8	7 367,1	9 396,9	9 555,1	13 158,3	11 540,8	8 248,0	6 813,9
Mığrı - European coger	3,0	8,0	0,8	3,9	1,5	0,2	1,4	2,6	0,3	-
Mırmır - Conger eel	390,0	281,0	196,2	113,4	122,6	143,8	83,1	123,7	152,3	181,7
Minekop - Croaker	24,0	41,0	23,7	14,0	25,8	91,1	28,9	30,9	26,7	25,3
Orfoz - Dusky grouper	83,0	63,0	34,0	23,0	20,1	13,4	16,6	11,0	3,1	2,6
Orkinos - Bluefin tuna*	981,0	423,0	527,5	535,5	551,4	555,0	1 091,0	1 324,0	1 514,7	1 283,7
Yazılı Orkinos - Little tunny	1 309,0	1 046,0	1 437,4	1 644,7	1 385,8	681,9	325,5	184,1	479,8	616,6
Öksüz - Piper	12,0	14,0	15,2	13,9	9,4	8,3	11,6	3,4	2,5	2,2
Palamut-Torik - Atlantic bonito	7 036,0	9 401,0	10 018,9	35 764,2	13 157,6	19 031,5	4 573,0	39 459,6	7 577,6	30 920,4
Patlakgöz mercan - Large-eye dentex	98,0	91,0	53,6	55,1	33,7	19,3	27,5	32,9	9,4	8,2
Pisi - Flounder	156,0	104,0	47,3	26,8	80,7	6,2	9,8	8,8	7,1	6,3
Sardalya - Pilchard	30 091,0	27 639,0	34 708,6	28 248,0	23 919,0	18 077,2	16 693,4	18 162,1	23 425,7	18 854,0
Sarıgöz - Black sea bream	30,0	38,0	23,8	48,9	25,9	26,9	21,9	51,4	19,8	52,0
Sarpa - Saupe	348,0	305,0	166,9	150,1	203,1	145,1	189,1	127,6	144,6	120,0
Sinagrit - Dentex	165,0	170,0	82,8	81,2	60,3	55,0	58,9	53,9	47,2	69,4
Sivriburun karagöz - Sharpsnout seabream	26,0	21,0	13,8	8,8	6,4	3,7	1,2	2,1	2,1	2,0
Tekir - Striped red	2 818,0	4 455,0	3 876,5	3 766,7	2 332,8	3 616,5	3 476,4	3 047,0	2 074,4	2 914,9
Tirsi - Twaite shad	3 070,0	2 574,0	2 581,5	1 699,3	1 541,0	2 094,4	2 034,7	1 642,0	1 576,2	1 605,3
Trança - Blue spatled bream	86,0	115,0	46,7	19,9	31,4	22,3	8,1	13,5	17,2	26,2
Uskumru - Mackerel	505,0	226,0	147,3	200,9	119,0	46,6	102,9	61,9	728,2	368,8
Vatoz - Thornback ray	707,0	668,0	401,0	275,2	299,0	196,4	168,6	116,1	183,0	82,6
Zargana - Gar fish	346,0	661,0	317,1	232,1	204,7	334,4	314,2	267,8	252,8	263,6
Zurna - Saury	487,0	565,0	319,2	283,3	191,1	218,8	102,8	131,3	152,9	139,3
Diğer - Other	486,0	646,0	673,1	178,2	135,2	419,4	159,0	266,0	307,7	227,2

Source; Ministry of Agriculture and Forestry.

Changes in fish species; Anchovy production which is one of the important types of sea fish was about 229 thousand tons, showing an increase of 11,88%. The catch of this number used for domestic consumption was about 116 thousand tons and increased by 1,23% and the amount sent to fish meal factories was 113 thousand tons, with an increase of 25,41%. Sprat production with 57 thousand tons has a ratio with 14,27% after anchovy.
The production showed an increase for atlantic bonito by 33,61%, whiting by 21,64%, sprat by 6,81% grey mullet by 4,42% while it decreased for horse mackerel by 29,36%, scad by 23,31% and pilchard by 8,15%.
Other sea products production increased by 3,63% with respect to the previous year. Striped venus, of the other sea products, has the highest ratio of 58,52%.

Table 72: Quantity of Caught Other Sea (Crustaceas, Molluscas)

Quantity of caught other sea fish (crustaceas, molluscs) — Ton - Tonnes

Type of fish	2012	2013	2014	2015	2016	2017	2018
Toplam - Total	**80 685,5**	**43 879,0**	**35 019,3**	**51 965,7**	**37 739,1**	**52 496,1**	**61 931,2**
Ahtapot - Octopus	361,0	283,6	253,7	215,0	245,9	162,7	223,7
Böcek - Spiny lobster	9,4	11,5	1,1	3,4	1,1	5,0	1,9
Deniz kereviti - Norway lobster	5,5	5,7	1,1	0,1	0,1	1,4	2,3
Deniz salyangozu - Sea snail	9 596,0	8 654,8	7 003,6	8795,3	10 353,7	9 194,1	9 672,3
İstakoz - Common lobster	8,0	7,0	1,4	3,9	1,5	1,8	4,7
İstiridye - Oystre	0,0	11,2	0,1	0,2	-	-	-
Kalamerya - Long finned squid	530,9	491,3	409,5	367,2	389,0	421,9	523,6
Erkek karides - Speckled shrimp	255,1	237,9	53,5	39,6	50,1	54,1	46,0
Jumbo karides - Green tiger prawn	640,9	451,8	469,5	489,5	719,8	728,6	758,8
Karabiga karides - Caramote prawn	383,9	354,4	271,9	278,7	252,4	208,0	219,4
Kırmızı karides - Giant gamba prawn	2 157,7	1 363,6	1 119,6	1 423,0	1 669,1	1 382,8	299,0
Pembe karides (Çimçim) - Deep water rose pr	1 600,5	1 619,9	2 501,8	1 764,4	1 809,5	2 356,8	3 212,9
Akıvades (Kum midyesi)-Carpet shell	14,9	83,4	8,8	5,3	4,8	-	0,8
Beyaz kum midyesi - Striped venus	61 225,4	28 029,7	21 827,6	37404,1	20 931,7	34 941,1	44 532,8
Kara midye - Mediterranean mussel	2 093,4	887,4	48,7	192,4	77,5	535,6	603,8
Kıllı midye - Bearded horse mussel	-	-	155,1	47,6	-	-	-
Kidonya - Warty venus	-	-	-	-	-	-	-
Mürekkepbalığı - Cuttle fish	1 396,1	1 244,1	696,8	744,7	925,1	986,0	1 041,9
Pavurya - Common shore crab	21,6	7,3	4,5	4,9	6,0	1,3	14,9
Tarak - Great Scallop	-	3,0	0,1	0,9	-	-	-
Mavi yengeç - Blue crab	2,1	0,6	1,5	0,6	2,0	8,8	10,5
Diğer - Other	383,1	130,8	189,4	184,9	299,8	1 506,1	761,9

Table 73 Agriculture Production

Type of fish	2012	2013	2014	2015	2016	2017	2018
Toplam - Total	212 410,0	233 393,9	235 133,0	240 334,0	253 395,0	276 502,0	314 537,0
İç su - Inland water							
Alabalık (Gökkuşağı) - Trout (Rainbow trout)	111 335,0	122 873,3	107 533,0	100 411,0	99 712,0	101 761,0	103 192,0
Alabalık (Salmo sp.) - Trout (Salmo sp.)*	-	-	450,0	755,0	1 585,0	1 944,0	1 695,0
Aynalı sazan - Carp	222,0	145,5	157,0	206,0	196,0	233,0	212,0
Mersin balığı - Sturgeon*	-	-	17,0	28,0	6,0	13,0	2,0
Tilapya - Tilapia*	-	-	32,0	12,0	58,0	8,0	12,0
Yayın - European catfish**	-	-	-	-	-	8,0	5,0
Kurbağa - Frog*	-	-	50,0	43,0	44,0	43,0	49,0
Deniz - Marine water							
Alabalık (Gökkuşağı) - Trout (Rainbow trout)	3 234,0	5 186,2	4 812,0	6 187,0	4 643,0	4 972,0	9 235,0
Alabalık (Salmo sp.) - Trout (Salmo sp.)*	-	-	798,0	685,0	1 073,0	980,0	375,0
Çipura - Sea bream	30 743,0	35 701,1	41 873,0	51 844,0	58 254,0	61 090,0	76 680,0
Levrek - Sea bass	65 512,0	67 912,5	74 653,0	75 164,0	80 847,0	99 971,0	116 915,0
Fangri - Common seabream*	-	-	106,0	143,0	225,0	20,0	2,0
Antenli mercan - Bluespotted seabream**	-	-	-	-	-	122,0	74,0
Kırmızı bantlı mercan - Redbanded seabream**	-	-	-	-	-	66,0	1,0
Minekop (Kötek) - Corb*	-	-	39,0	61,0	20,0	125,0	30,0
Grenyüz (Sarıağız) - Meagre*	-	-	3 281,0	2 801,0	2 463,0	697,0	1 486,0
Sinagrit - Dentex*	-	-	113,0	132,0	43,0	51,0	24,0
Sivri burun karagöz - Sharpsnout seabream*	-	-	8,0	59,0	2,0	-	-
Trança - Blue spatled bream*	-	-	75,0	90,0	61,0	107,0	70,0
Orkinos - Bluefin tuna*	-	-	1 136,0	1 710,0	3 834,0	3 802,0	3 571,0
Midye - Mussel	-	-	-	3,0	329,0	489,0	907,0
Diğer - Other	1 364,0	1 575,3	-	-	-	-	-

37.6% of the amount of aquaculture production took place at the inland waters and 62.4% at the seas. Within all the production of marine products by capture, East Black Sea Region was the first by the ratio of 49%. The regions West Black Sea by 24.2%, Aegean by 14.8%, Marmara by 7.7% and Mediterranean by 4.3% followed this region

8.1.Fishing Fleet and Catching Water Products

Our fleet is using high-tech equipments and our fishing reserves are more than our yearly fishing capacity.
At present, we have 18.008 (2018 year) registered fishing boats.
The fishing technology in Turkey is considered to be efficient. Seaborn fishing is being done by artisanal fishing (extension meshes,drag side meshes,pareketa,fish trap) and industrial fishing (Purserseine-trawler)
The types of fishing, common in Turkey are short distance fishing and shore fishing (medium distance fishing). The ocean type (off-shore) fishing is in the beginning process. As of end of 2018, there are 128 fisherman shelters, 44 smaller type of fisherman shelters and 58 slips.
Corporate bodies and persons should have fishing certificates according to Water Products Law Number 1380. The Ministry of Agriculture may restrict the certificates in order to protect

of fishing potential. There are 18,024 certificated fishing vessels in Turkey and 1,010 are of big sizes. Dredging and encircle fishing is done by the fishing vessels longer then 12 meters. The Black Sea Region has the major share in fishing sector in Turkey with 1640 km coast line: there are 202 fisherman shelters and slips. In İstanbul, there are 44 shore facilities, consisting of 8 ports, 26 fisherman shelters, and 10 slips.

Fishing vessels in Turkey are generally small vessels, which are suitable for shore fishing. There are 18,008 fishing vessels in total and 83 % of these boats consists of vessels of 5-12 meters which perform shore fishing.
Production distribution of large scale fishermen, collected through survey and having vessels bigger than 10 meters, which have an important share in capture production and small scale fishermen,collected through survey, having vessels equal to or less than 10 meters.

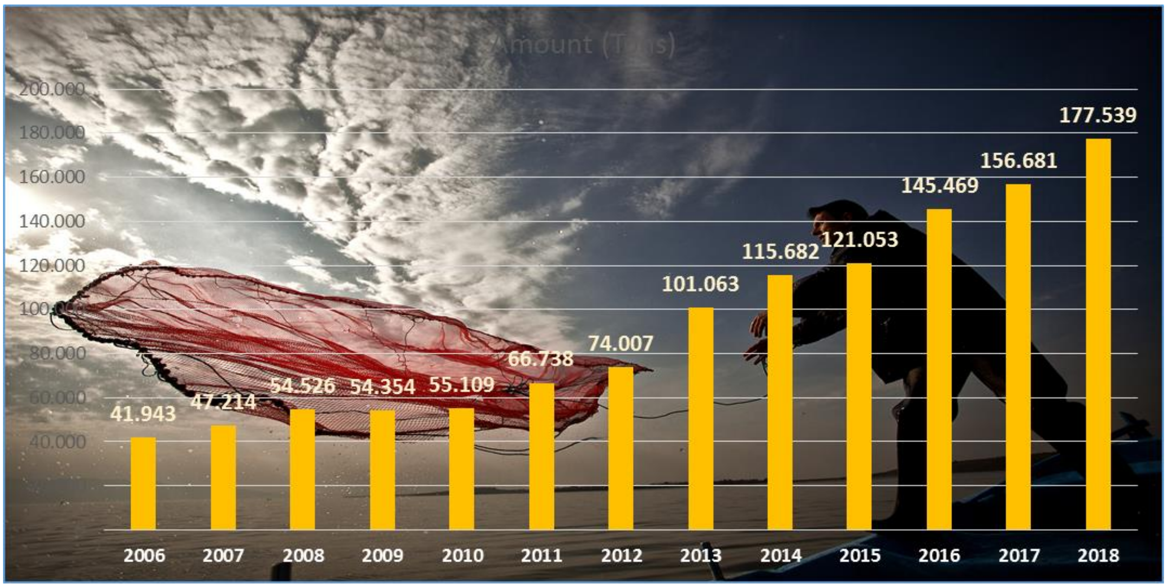
8.2. Foreign Trade in Water Products Exports & Imports

In the previous years, major part of Turkish export water products consisted of frozen fish; but currently it consists of canned fish. Export of canned-fish, is mostly realized to Germany, England, Belgium, Spain, Italy and France. Export to Far East is also developing and some of the main markets are Japan and Hong Kong. Today, most of our exports in water products is realized to Japan by 28 %.

As regards 2016 in our country's exports of fish products Japan has the biggest share, being followed by Holland, Greece, Italy, Spain, German, France and Lebanon. Although the markets to which our water products exportation is directed are mostly those of the European Union, we also export fish to all the regions of the world.

In 2016, as regards our country's exports of fish products, Japan has the biggest share, being followed by Holland, Greece, Italy, Spain, Germany, France and Lebanon . Although the markets to which our water products exportation is directed are mostly those of the European Union, we also export fish to the whole world.
The amount of exports has been increased 276% in the last eleven years. Exports reached 156,681 tons in 2017; although it was 26860 tons in the year 2002.

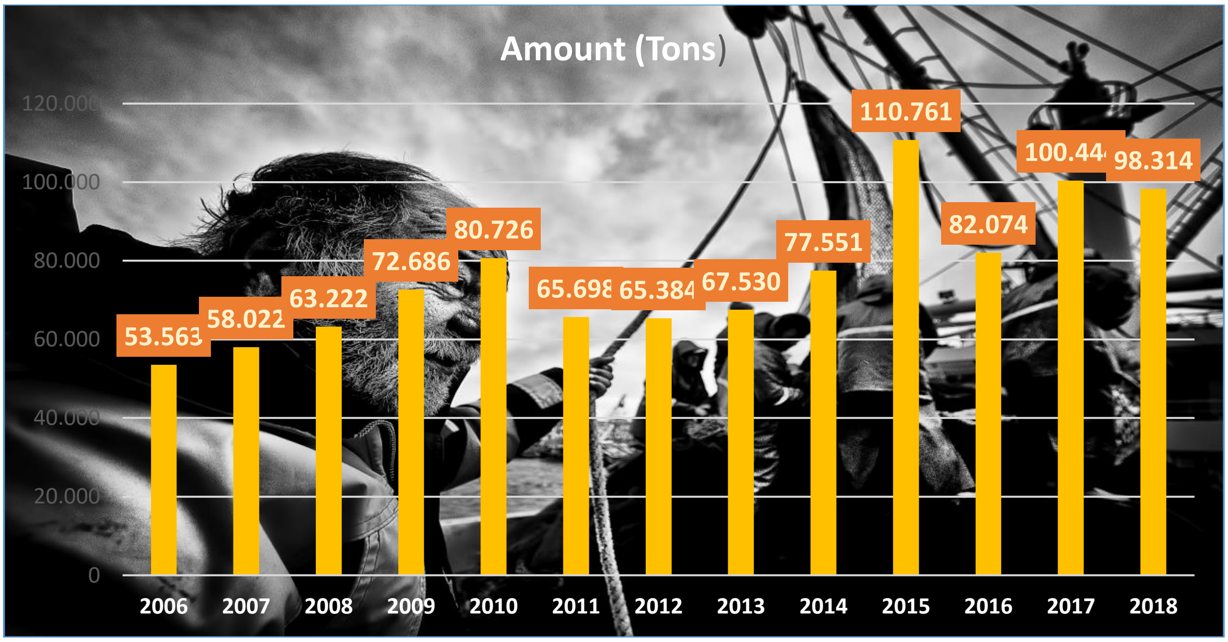
Graph 60: Exports of Water Production (2006-2018) Amount (Tonnes)



Imports

Export of seafood includes crustaceans, molluscs, and cephalopods, which may be frozen, preserved, or chilled. The EU is Turkey's primary market for fish and seafood exports, but exports are increasing to Russia, the Middle East and even the Far East and the US. Turkey also has a tuna ranching industry which catches and fattens tuna for the Japanese market.

Graph 61: Imports of Water Products (2006-2018) Amount (Tonnes)



22,532 in 2002 (tons), 156,681 In 2018 the exports (tons), reaching the last eleven years, according to the amount of exports increased nearly 100% has been achieved.

28,860 in 2002 (tons), 300,444 in 2018 the imports (tons) reaching the last eleven years, according to the amount of exports increased nearly 100% has been achieved

As regards 2018 in our country's imports of fish products Norway has the biggest share, being followed by France, India, USA, Morocco, Georgia and Greece

Turkish imports include frozen mackerel and other small pelagic fish, salmonids, and cephalopods. Imports of fishmeal and fish oil are also significant due to the large requirement for fish feed, of which fishmeal and fish oil are the main components.

8.3. Water Products Processing Industry

Technological improvements and changes are applied in water treatment industry and new water products from our own resources are treated and supplied to the market. A major amount of water products is supplied for fresh consumption, 4% for fish flour and oil, and 10% for water products treatment and utilization facilities.

Various products such as frozen inland and sea products, pre-cooked crayfish, tuna, anchovy, pilchard, canned horse mackerel, salted/corned anchovy, smoked trout, snakefish, salmon fish are produced by treatment industry using different sources. Facilities treating and utilizing water products are increasing , and studies are carried out in order to comply with the provisions of Water Products Law No: 1380, Water Products Regulation and European Union Directives.

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- For aquaculture production and freshwater products,
- Ministry of Agriculture and Forestry

Meclis-i Mebusan Cad. No: 22 Fındıklı - Beyoğlu Istanbul / TURKEY
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