İSTANBUL & MARMARA, AEGEAN, MEDITERRANEAN, BLACK SEA REGIONS

CHAMBER OF SHIPPING

MARITIME SECTOR REPORT

İstanbul 2021

TURKISH CHAMBER OF SHIPPING

ISTANBUL & MARMARA, AEGEAN, MEDITERRANEAN, BLACKSEA REGIONS

MARITIME SECTOR REPORT

İSTANBUL - 2021

TURKISH CHAMBER OF SHIPPING

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FOREWORD

Turkish Chamber of Shipping, acting as an umbrella organization for maritime industry in Turkey, continues its activities with great endeavour in order to ensure development in Turkish maritime industry, increase its contribution to national economy as well as ensuring its competitiveness in global maritime industry.

In order to serve these purposes, Maritime Sector Report aims to present the developments in the maritime industry both in Turkey and the world as well as its current state as of 2020 by looking from different perspectives.

Our world is going through an unprecedented times. The pandemic, which has taken our lives under its influence, has left deep impacts in every aspects of our everyday life from our families to companies and all countries in the world. Global maritime trade dropped by 3.4% on tonnage basis in 2020 and this slump has been the worst since 2009 due to the main effects incurred as a result of COVID-19 pandemic.

Although many countries closed its borders, the share of shipping sector in global trade reached around 90% in these challenging times caused by COVID-19. While performing a crucial mission on survival of our economies, procurement of public needs and continuity of supply chain, the maritime industry proved its indispensability as well.

Our Chamber is extremely pleased to provide up to date information and data about maritime industry available for stakeholders through this report.

By introducing our report we believe that the contribution of maritime industry to national economy will gradually increase in coming years.

I hope that the Maritime Sector Report will be useful for our sector and community and contribute in terms of forming industry-related policies and strategies and providing an insight on future targets.

Tamer KIRAN

Turkish Chamber of Shipping

Chairman of the Board of Directors

CONTENTS

ABBREVIATIONS

AIS	: Automatic Identification System
ASP	: Application Service Provider
BOT	: Build-Operate-Transfer
BSEC	: Black Sea Economic Cooperation
DWT	: Deadweight Tonnage
EEEF	: Europe Environmental Education Foundation
EU	: European Union
GT	: Gross Tonnage
IMO	: International Maritime Organization
ISL	: Institute of Shipping Economics and Logistics
LHD	: Multi-Purpose Amphibious Assault Ship
LRIT	: Long Range Identification and Tracking
LST	: Landing Ship Tank
MOSHIP	: Submarine Rescue Mother Ship
NATO	: North Atlantic Treaty Organization
SME's	: Small and Medium-Sized Enterprises
STOVL	: Short Take Off and Vertical Landing
TEU	: Twenty-Foot Equivalent Unit
TRNDC	: Turkey's National LRIT Data Center
TURCEV	: The Environmental Education Foundation of Turkey
UNESCO	: United Nations Educational, Scientific and Cultural Organization
US	: United States
VTMIS	: Vessel Traffic Management and Information System
VTS	: Vessel Traffic Services
YTKB	: New Type Patrol Boat

LIST OF TABLES

LIST OF GRAPHS

LIST OF FIGURES

CHAPTER I

THE DEVELOPMENT OF THE TURKISH SHIPPING

1. THE DEVELOPMENT OF TURKISH SHIPPING

1.1. The Turkish 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 1000 GT 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 2020.

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 505 ships of which 270 (5.0 million DWT) have been imported and 235 (1.4 million DWT) have been built in Turkey.

505 ships are distributed by type as follows; 26.3% dry cargo ships, 11.7% chemical tankers, 9.3% container ships, 9.3% service ships, 9.1% bulk carrier ships and 34.3% other types.

By DWT the fleet consists of; 30.0% bulk carriers, 22.5% oil tankers, 16.0% container ships, 11.1% dry cargo ships, 9.9% chemical tankers and 10.5% other types.

By DWT, 6.1% of our fleet is registered in the National Ship Registry, 93.9% of the fleet is registered in the International Ship Registry. By GT, 8.4% of our fleet is registered in the National Ship Registry, 91.6% of the fleet is registered in the International Ship Registry. (Table 2)

The fleet registered in the International Ship Registry (6.0 Million DWT) is composed of; bulk carriers (30.0%), oil tankers (23.7%), container ships (14.4%), dry cargo vessels (11.1%), chemical tankers (10.4%) and other types (10.4%). (Table 2)

Table 2 shows Turkish merchant fleet which consists of 505 ships. 13.5% of the total fleet (68 ships) is registered in the National Ship Registry and 86.5% of the total fleet (437 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 (40.2%), bulk carrier ships (30.0%), dry cargo ships (10.8%), service ships (5.1%), Dry Cargo-Ro-Ro (3.1%) and other types (10.8%)

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	40	93	133	26.3	242,493	464,037	706,530	11.1	163,417	295,968	459,385	8.7
Bulk Carrier	41	5	46	9.1	1,758,198	150,971	1,909,169	30.0	1,008,803	94,380	1,103,183	20.8
Container	35	12	47	9.3	816,274	198,312	1,014,586	16.0	657,244	152,274	809,518	15.3
Dry Cargo/Container	4	5	9	1.8	12,369	45,618	57,987	0.9	8,066	30,767	38,833	0.7
Chemical Tankers	33	26	59	11.7	436,317	193,764	630,081	9.9	281,412	129,232	410,644	7.8
LPG Tankers	5	0	5	1.0	27,804	0	27,804	0.5	25,574	0	25,574	0.5
Asphalt Tankers	1	3	4	0.8	2,770	54,850	57,620	0.9	1,900	43,630	45,530	0.9
Ro-Ro Ships	12	0	12	2.4	135,903	0	135,903	2.1	308,947	0	308,947	5.8
Ro-Ro Ferry/Passenger	11	7	18	3.6	32,183	1,582	33,765	0.5	73,582	21,512	95,094	1.8
Ferry Boats	7	22	29	5.7	2,538	19,648	22,186	0.4	28,710	27,861	56,571	1.1
Train Ferries	0	6	6	1.2	0	2,960	2,960	0.1	0	9,835	9,835	0.2
Passenger and Cargo Ships	1	10	11	2.2	1,540	5,687	7,227	0.1	4,701	24,635	29,336	0.6
Fishing Boats	1	0	1	0.2	569	0	569	0.0	1,407	0	1,407	0.0
Scientific Research Vessel	4	2	6	1.2	3,580	4,200	7,780	0.1	28,474	7,358	35,832	0.7
Harbour Ferries	1	0	1	0.2	0	0	0	0.0	1,043	0	1,043	0.0
Harbour Car Ferries	0	6	6	1.2	0	1,974	1,974	0.0	0	7,547	7,547	0.1
Tug	1	0	1	0.2	0	0	0	0.0	1,565	0	1,565	0.0
Service Ships	34	13	47	9.3	115,903	37,494	153,397	2.4	322,138	84,073	406,211	7.7
Oil Tankers	12	11	23	4.6	1,241,480	186,024	1,427,504	22.5	665,320	98,792	764,112	14.3
Train Ferries/Ro-Ro	1	0	1	0.2	6,266	0	6,266	0.1	15,195	0	15,195	0.3
Dry Cargo/Ro-Ro	9	1	10	2.0	121,871	17,183	139,054	2.2	314,607	60,465	375,072	7.1
Marine Vehicles	17	13	30	5.8	8,000	5,686	13,686	0.2	215,606	79,443	295,049	5.6
Grand Total	**270**	**235**	**505**	**100**	**4,966,058**	**1,389,990**	**6,356,048**	**100**	**4,127,711**	**1,167,772**	**5,295,483**	**100**

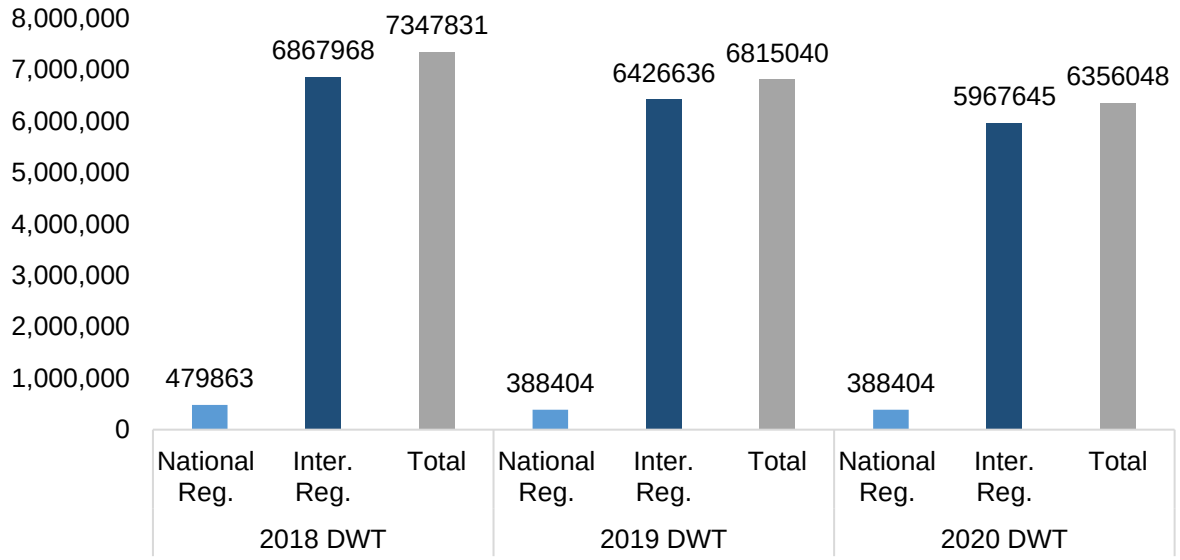
Source: Turkish Chamber of Shipping Statistics

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	126	133	26.3	42,007	664,523	706,530	11.1	28,845	430,540	459,385	8.7
Bulk Carrier	5	41	46	9.1	116,655	1,792,514	1,909,169	30.0	71,927	1,031,256	1,103,183	20.8
Container	5	42	47	9.3	156,278	858,308	1,014,586	16.0	123,464	686,054	809,518	15.3
Dry Cargo/Container	1	8	9	1.8	2,356	55,631	57,987	0.9	1,720	37,113	38,833	0.7
Chemical Tankers	2	57	59	11.7	9,497	620,584	630,081	9.9	6,441	404,203	410,644	7.8
LPG Tankers	0	5	5	1.0	0	27,804	27,804	0.5	0	25,574	25,574	0.5
Asphalt Tankers	1	3	4	0.8	2,770	54,850	57,620	0.9	1,900	43,630	45,530	0.9
Ro-Ro Ships	0	12	12	2.4	0	135,903	135,903	2.1	0	308,947	308,947	5.8
Ro-Ro Ferry/Passenger	3	15	18	3.6	1,500	32,265	33,765	0.5	30,319	64,775	95,094	1.8
Ferry Boats	1	28	29	5.7	2,314	19,873	22,186	0.4	1,596	54,975	56,571	1.1
Train Ferries	6	0	6	1.2	2,960	0	2,960	0.1	9,835	0	9,835	0.2
Passenger and Cargo Ships	3	8	11	2.2	3,761	3,466	7,227	0.1	17,189	12,147	29,336	0.6
Fishing Boats	0	1	1	0.2	0	569	569	0.0	0	1,407	1,407	0.0
Scientific Research Vessel	0	6	6	1.2	0	7,780	7,780	0.1	0	35,832	35,832	0.6
Harbour Ferries	0	1	1	0.2	0	0	0	0.0	0	1,043	1,043	0.0
Harbour Car Ferries	0	6	6	1.2	0	1,974	1,974	0.0	0	7,547	7,547	0.1
Tug	1	0	1	0.2	0	0	0	0.0	1,565	0	1,565	0.0
Service Ships	16	31	47	9.3	19,774	133,623	153,397	2.4	69,949	336,262	406,211	7.7
Oil Tankers	3	20	23	4.6	10,868	1,416,636	1,427,504	22.5	5,940	758,172	764,112	14.4
Train Ferries/Ro-Ro	0	1	1	0.2	0	6,266	6,266	0.1	0	15,195	15,195	0.3
Dry Cargo/Ro-Ro	1	9	10	2.0	11,978	127,076	139,054	2.2	32,770	342,302	375,072	7.1
Marine Vehicles	13	17	30	5.8	5,686	8,000	13,686	0.2	39,258	255,791	295,049	5.6
Grand Total	**68**	**437**	**505**	**100**	**388,404**	**5,967,645**	**6,356,048**	**100**	**442,718**	**4,852,765**	**5,295,483**	**100**

Source: Turkish Chamber of Shipping Statistics

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



Source: Turkish Chamber of Shipping Statistics

Table 3. Examination of Registries (DWT) 2018-2019-2020 (1000 GT and Over)

Ship Types	2018 DWT			2019 DWT			2020 DWT			Years 2019-2020 DWT % Change
	National Reg.	Inter. Reg.	Total	National Reg.	Inter. Reg.	Total	National Reg.	Inter. Reg.	Total	
Dry Cargo	35,162	821,158	856,320	42,007	697,397	739,404	42,007	664,523	706,530	-4.4
Bulk Carrier	169,296	2,639,655	2,808,951	116,655	2,354,822	2,471,477	116,655	1,792,514	1,909,169	-22.8
Container	194,610	1,016,704	1,211,314	156,278	884,751	1,041,029	156,278	858,308	1,014,586	-2.5
Dry Cargo/Container	2,356	97,429	99,785	2,356	60,479	62,835	2,356	55,631	57,987	-7.7
Chemical Tankers	9,497	447,899	457,396	9,497	521,685	531,182	9,497	620,584	630,081	18.6
LPG Tankers	4,444	33,803	38,247	0	27,804	27,804	0	27,804	27,804	0.0
Asphalt Tankers	2,770	39,896	42,666	2,770	54,850	57,620	2,770	54,850	57,620	0.0
Ro-Ro Ships	11,978	230,032	242,010	0	195,680	195,680	0	135,903	135,903	-30.5
Ro-Ro Ferry/Passenger	1,500	23,632	25,132	1,500	26,290	27,790	1,500	32,265	33,765	21.5
Ferry Boats	2,314	22,637	24,951	2,314	19,872	22,186	2,314	19,873	22,186	0.0
Train Ferries	2,960	0	2,960	2,960	0	2,960	2,960	0	2,960	0.0
Passenger and Cargo Ships	3,761	1,226	4,987	3,761	3,466	7,227	3,761	3,466	7,227	0.0
Fishing Boats	2,887	569	3,456	0	569	569	0	569	569	0.0
Scientific Research Vessel	0	7,780	7,780	0	7,780	7,780	0	7,780	7,780	0.0
Harbour Ferries	0	0	0	0	0	0	0	0	0	0.0
Harbour Car Ferries	0	1,974	1,974	0	1,974	1,974	0	1,974	1,974	0.0
Tug	0	0	0	0	0	0	0	0	0	0.0
Service Ships	19,774	51,892	71,666	19,774	66,680	86,454	19,774	133,623	153,397	77.4
Oil Tankers	10,868	1,417,416	1,428,284	10,868	1,412,612	1,423,480	10,868	1,416,636	1,427,504	0.3
Train Ferries/Ro-Ro	0	6,266	6,266	0	6,266	6,266	0	6,266	6,266	0.0
Dry Cargo/Ro-Ro	0	0	0	11,978	75,659	87,637	11,978	127,076	139,054	0.0
Marine Vehicles	5,686	8,000	13,686	5,686	8,000	13,686	5,686	8,000	13,686	0.0
Grand Total	**479,863**	**6,867,968**	**7,347,831**	**388,404**	**6,426,636**	**6,815,040**	**388,404**	**5,967,645**	**6,356,048**	**-6.7**

Source: Turkish Chamber of Shipping Statistics

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 505 ships. The average age of these ships is 23.6 as of 31.12.2020.

The average age of dry cargo ships is 27, which makes 26.3% of the fleet. The average age of bulk carriers is 21 and makes up 9.1% of the total fleet. The average age of containers is 16, which is 9.3% of the fleet. The average age of chemical tankers is 19, which is 11.7% of the fleet. The average age of oil tankers is 17, which is 4.6% 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	133	706,530	459,385	27
Bulk Carrier	46	1,909,169	1,103,183	21
Container	47	1,014,586	809,518	16
Dry Cargo/Container	9	57,987	38,833	23
Chemical Tankers	59	630,081	410,644	19
LPG Tankers	5	27,804	25,574	23
Asphalt Tankers	4	57,620	45,530	13
Ro-Ro Ships	12	135,903	308,947	18
Ro-Ro Ferry/Passenger	18	33,765	95,094	25
Ferry Boats	29	22,186	56,571	24
Train Ferries	6	2,960	9,835	47
Passenger and Cargo Ships	11	7,227	29,336	23
Fishing Boats	1	569	1,407	46
Scientific Research Vessel	6	7,780	35,832	23
Harbour Ferries	1	0	1,043	68
Harbour Car Ferries	6	1,974	7,547	27
Tug	1	0	1,565	36
Service Ships	47	153,397	406,211	32
Oil Tankers	23	1,427,504	764,112	17
Train Ferries/Ro-Ro	1	6,266	15,195	34
Dry Cargo/Ro-Ro	10	139,054	375,072	9
Marine Vehicles	30	13,686	295,049	26
Grand Total	**505**	**6,356,048**	**5,295,483**	**23.6**

Source: Turkish Chamber of Shipping Statistics

Table 5 shows the Turkish Merchant Fleet grouped by different age and tonnage ranges. Turkish Merchant Fleet consists of 505 ships with a total of 6,356,048 DWT.

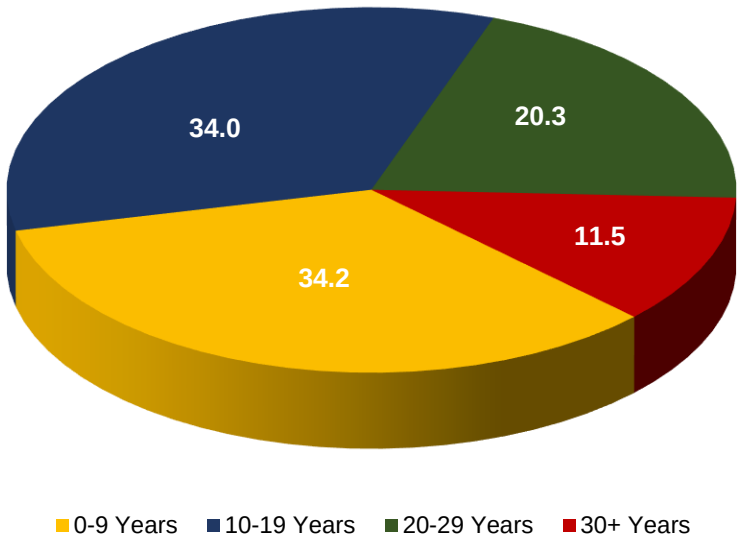
- 87 ships with total size 2,172,591 DWT are in the 0-9 age range,
- 140 ships with total size 2,163,485 DWT are in the 10-19 age range,
- 99 ships with total size 1,286,924 DWT are in the 20-29 age range,
- 179 ships with total size 733,048 DWT are of age 30 or older.

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
0-149	30	0	0.0	14	0	0.0	3	0	0.0	43	0	0.0	90	0
150-1499	1	1,223	6.0	7	4,409	21.6	5	3,059	15.0	17	11,692	57.4	30	20,383
1500-5999	10	40,860	6.3	38	151,777	23.4	42	153,053	23.6	89	303,142	46.7	179	648,833
6000-9999	4	28,999	6.8	19	139,664	32.8	18	139,566	32.8	16	117,340	27.6	57	425,569
10000-34999	24	469,068	24.9	44	774,060	41.1	20	339,037	18.0	14	300,874	16.0	102	1,883,039
35000-52999	6	249,518	23.6	9	391,941	37.1	9	415,179	39.3	0	0	0.0	24	1,056,638
53000-79999	3	220,457	31.8	7	401,089	57.8	1	72,171	10.4	0	0	0.0	11	693,717
80000-119999	3	247,564	100.0	0	0	0.0	0	0	0.0	0	0	0.0	3	247,564
120000+	6	914,902	66.3	2	300,544	21.8	1	164,859	11.9	0	0	0.0	9	1,380,305
Grand Total	**87**	**2,172,591**	**34.2**	**140**	**2,163,485**	**34.0**	**99**	**1,286,924**	**20.3**	**179**	**733,048**	**11.5**	**505**	**6,356,048**

Source: Turkish Chamber of Shipping Statistics

Graph 2. Turkish Merchant Fleet Distribution by Age Groups (DWT/%)



Source: Turkish Chamber of Shipping Statistics

The graph shows the age groups of the Turkish merchant fleet. 34.2% of the fleet is in the 0-9 age range, 34.0% of the fleet is in the 10-19 age range, 20.3% of the fleet is in the 20-29 age range and 11.5% 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 (133 ships) which has a total size of 706,530 DWT.

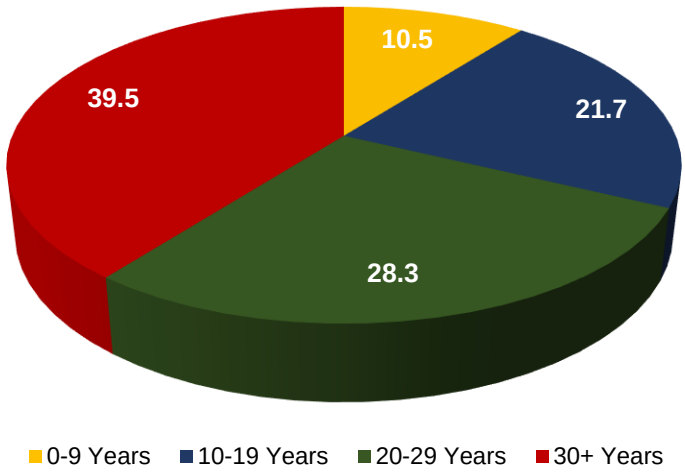
- 10 ships of size 74,188 DWT are in the 0-9 age range,
- 25 ships of size 153,017 DWT are in the 10-19 age range,
- 32 ships of size 200,145 DWT are in the 20-29 age range,
- 66 ships of size 279,180 DWT are 30 years or older.

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	0.0	0	0
1500-5999	6	29,584	39.9	15	61,345	40.1	25	94,001	47.0	57	203,148	72.8	103	388,078
6000-9999	1	6,240	8.4	7	47,904	31.3	3	23,382	11.7	7	48,651	17.4	18	126,177
10000-34999	3	38,364	51.7	3	43,768	28.6	3	32,897	16.4	2	27,381	9.8	11	142,410
35000-52999	0	0	0.0	0	0	0.0	1	49,865	24.9	0	0	0.0	1	49,865
53000-79999	0	0	0.0	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	0.0	0	0
120000+	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Grand Total	**10**	**74,188**	**100**	**25**	**153,017**	**100**	**32**	**200,145**	**100**	**66**	**279,180**	**100**	**133**	**706,530**

Source: Turkish Chamber of Shipping Statistics

Graph 3. Age Distribution of Dry Cargo Segment (DWT/%)



Source: Turkish Chamber of Shipping Statistics

10.5% of Dry Cargo Ships are in the 0-9 age range; 21.7% are in the 10-19 age range; 28.3% are in the 20-29 age range and 39.5% are 30 years or older.

Table 7 shows the Bulk Carrier Segment (46 ships) with a total size of 1,909,169 DWT.

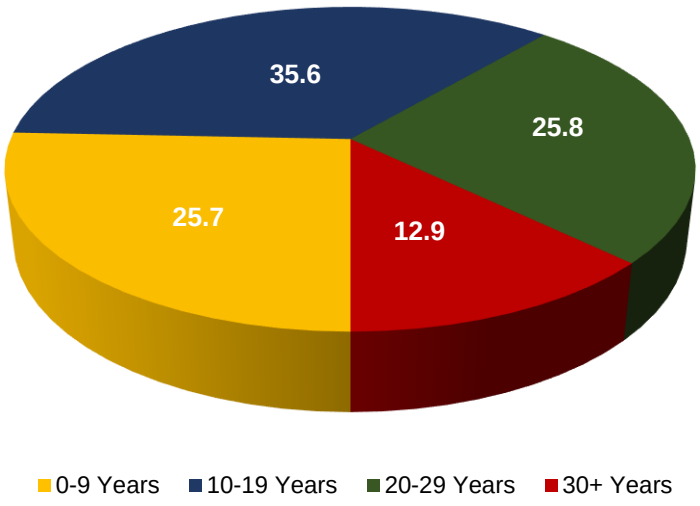
- 8 ships of size 489,961 DWT are in the 0-9 age range,
- 16 ships of size 680,517 DWT are in the 10-19 age range,
- 12 ships of size 493,230 DWT are in the 20-29 age range,
- 10 ships of size 245,461 DWT are 30 years or older.

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
0-9999	0	0	0.0	1	6,635	1.0	1	4,468	0.9	0	0	0.0	2	11,102
10000-39999 (Handysize)	3	83,559	17.1	5	117,219	17.2	4	129,386	26.2	10	245,461	100.0	22	575,625
40000-49999 (Handymax)	0	0	0.0	0	0	0.0	4	182,831	37.1	0	0	0.0	4	182,831
50000-59999 (Supramax)	0	0	0.0	9	491,663	72.2	2	104,374	21.2	0	0	0.0	11	596,038
60000-84999 (Panamax)	5	406,402	82.9	1	65,000	9.6	1	72,171	14.6	0	0	0.0	7	543,573
85000-149999 (Capesize)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
150000+ (Capesize)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Grand Total	**8**	**489,961**	**100**	**16**	**680,517**	**100**	**12**	**493,230**	**100**	**10**	**245,461**	**100**	**46**	**1,909,169**

Source: Turkish Chamber of Shipping Statistics

Graph 4. Age Distribution of Bulk Carriers (DWT)



Source: Turkish Chamber of Shipping Statistics

25.7% of the bulk carriers are in the 0-9 age range; 35.6% are in the 10-19 age range; 25.8% are in the 20-29 age range and 12.9% are 30 years or older.

Table 8 shows Oil Tankers Segment (23 ships) with a total size of 1,427,504 DWT

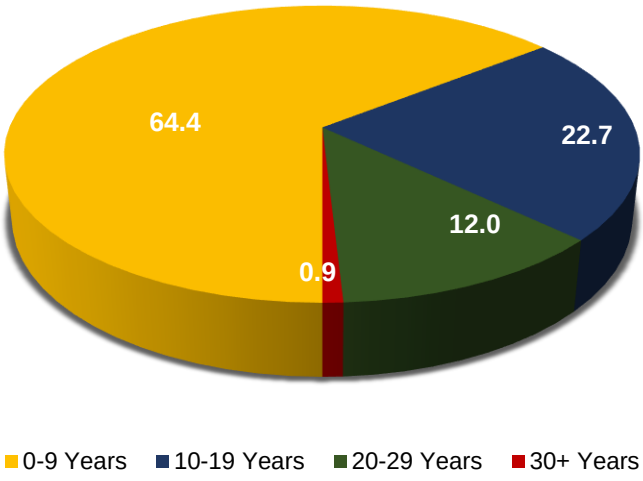
- 8 ships of size 918,498 DWT are in the 0-9 age range,
- 8 ships of size 324,499 DWT are in the 10-19 age range,
- 3 ships of size 171,902 DWT are in the 20-29 age range,
- 4 ships of size 12,605 DWT are 30 years or older.

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
0-4999	2	3,596	0.4	5	16,836	5.2	2	7,043	4.1	4	12,605	100.0	13	40,080
5000-7499	0	0	0.0	1	7,119	2.2	0	0	0.0	0	0	0.0	1	7,119
7500-9999	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
10000-39999 (Handysize)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
40000-59999 (Handymax)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
60000-79999 (Panamax)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
80000-119999 (Aframax)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
120000-199999 (Suezmax)	6	914,902	99.6	2	300,544	92.6	1	164,859	95.9	0	0	0.0	9	1,380,305
200000-324999 (VLCC)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
325000+ (ULCC)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Grand Total	**8**	**918,498**	**100**	**8**	**324,499**	**100**	**3**	**171,902**	**100**	**4**	**12,605**	**100**	**23**	**1,427,504**

Source: Turkish Chamber of Shipping Statistics

Graph 5. Age Distribution of Oil Tankers (DWT/%)



Source: Turkish Chamber of Shipping Statistics

64.4% of the oil tankers are in the 0-9 age range; 22.7% are in the 10-19 age range; 12.0% are in the 20-29 age range and 0.9% are 30 years old or older.

Table 9 shows the average age of the chemical tankers (59 ships) with a total size of 630,081 DWT.

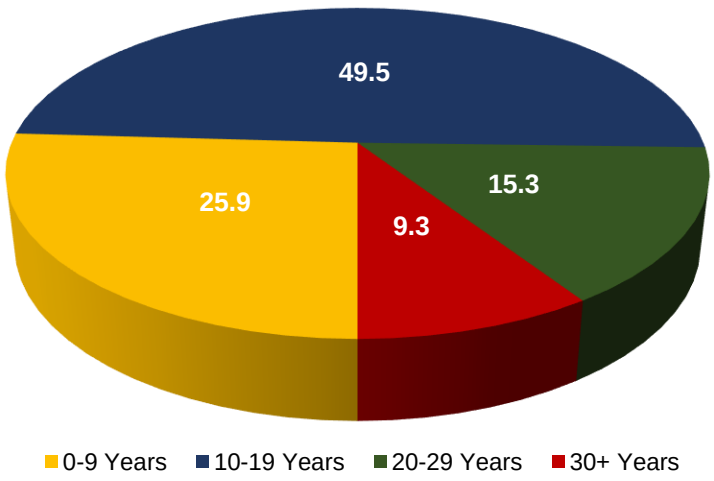
- 7 ships of size 163,357 DWT are in the 0-9 age range,
- 26 ships of size 312,044 DWT are in the 10-19 age range,
- 16 ships of size 96,283 DWT are in the 20-29 age range,
- 10 ships of size 58,397 DWT are 30 years or older.

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
0-4999	0	0	0.0	6	23,636	7.6	5	16,925	17.6	5	18,716	32.0	16	59,277
5000-7499	1	6,271	3.8	8	48,960	15.7	7	43,749	45.4	1	6,400	11.0	17	105,380
7500-9999	1	8,488	5.2	0	0	0.0	3	25,503	26.5	4	33,281	57.0	8	67,272
10000-39999 (Handysize)	3	47,076	28.8	11	193,192	61.9	1	10,106	10.5	0	0	0.0	15	250,374
40000-59999 (Handymax)	2	101,522	62.2	1	46,256	14.8	0	0	0.0	0	0	0.0	3	147,778
60000-79999 (Panamax)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
80000-119999 (Aframax)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
120000-199999 (Suezmax)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
200000-324999 (VLCC)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
325000+ (ULCC)	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Grand Total	**7**	**163,357**	**100**	**26**	**312,044**	**100**	**16**	**96,283**	**100**	**10**	**58,397**	**100**	**59**	**630,081**

Source: Turkish Chamber of Shipping Statistics

Graph 6. Age Distribution of Chemical Tankers (DWT)



Source: Turkish Chamber of Shipping Statistics

25.9% of chemical tankers are in the 0-9 age range; 49.5% are in the 10-19 age range; 15.3% are in the 20-29 age range and 9.3% are 30 years or older.

Table 10 shows the average age of the Container Ships (47 ships) with a total size of 1,014,586 DWT.

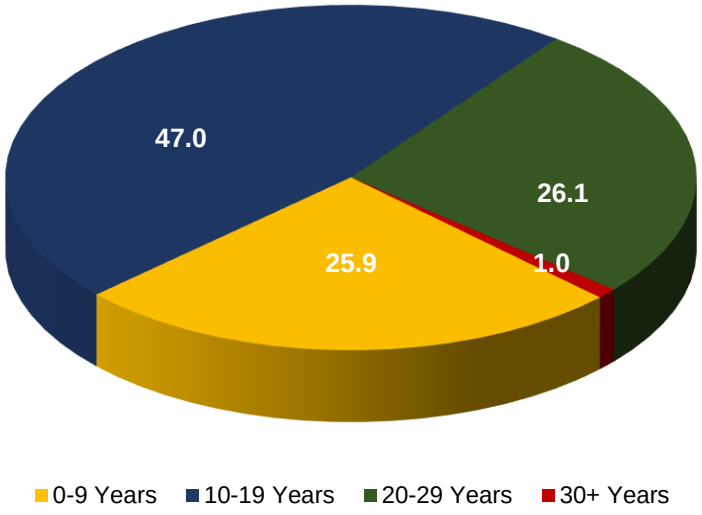
- 8 ships of size 262,902 DWT are in the 0-9 age range,
- 21 ships of size 476,598 DWT are in the 10-19 age range,
- 17 ships of size 265,320 DWT are in the 20-29 age range,
- 1 ship of size 9,766 DWT are 30 years or older.

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	0.0	0	0
1500-5999	0	0	0.0	1	3,301	0.7	0	0	0.0	0	0	0.0	1	3,301
6000-9999	0	0	0.0	0	0	0.0	3	20,563	7.8	1	9,766	100.0	4	30,329
10000-34999	4	114,906	43.7	17	360,375	75.6	13	205,500	77.4	0	0	0.0	34	680,781
35000-52999	4	147,996	56.3	3	112,922	23.7	1	39,257	14.8	0	0	0.0	8	300,175
53000-79999	0	0	0.0	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	0.0	0	0
120000+	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Grand Total	**8**	**262,902**	**100**	**21**	**476,598**	**100**	**17**	**265,320**	**100**	**1**	**9,766**	**100**	**47**	**1,014,586**

Source: Turkish Chamber of Shipping Statistics

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



Source: Turkish Chamber of Shipping Statistics

25.9% of Container ships are in the 0-9 age range; 47.0% are in the 10-19 age range; 26.1% are in the 20-29 age range and 1.0% are 30 years or older.

Table 11 shows the average age of the Ro-Ro Ships, (12 ships) with a total size of 135,903 DWT.

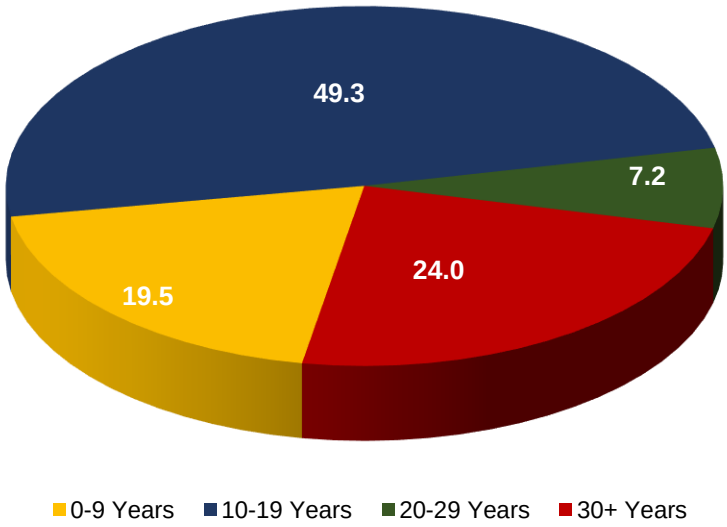
- 2 ships of size 26,462 DWT are in the 0-9 age range,
- 6 ships of size 67,006 DWT are in the 10-19 age range,
- 1 ship of size 9,865 DWT are in the 20-29 age range,
- 3 ships of size 32,570 DWT are 30 years or older.

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
150-1499	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
1500-5999	0	0	0.0	0	0	0.0	0	0	0.0	1	4,538	13.9	1	4,538
6000-9999	0	0	0.0	3	28,819	43.0	1	9,865	100.0	0	0	0.0	4	38,684
10000-34999	2	26,462	100.0	3	38,187	57.0	0	0	0.0	2	28,032	86.1	7	92,681
35000-52999	0	0	0.0	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	0.0	0	0
80000-119999	0	0	0.0	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	0.0	0	0
Grand Total	**2**	**26,462**	**100**	**6**	**67,006**	**100**	**1**	**9,865**	**100**	**3**	**32,570**	**100**	**12**	**135,903**

Source: Turkish Chamber of Shipping Statistics

Graph 8. Age Distribution of the Ro-Ro Ships (DWT/%)



Source: Turkish Chamber of Shipping Statistics

19.5% of Ro-Ro Ships are in the 0-9 age range; 49.3% are in the 10-19 age range; 7.2% are in the 20-29 age range and 24.0% are 30 years old or older.

1.4. Turkish Merchant Fleet by Number and Tonnage (1000 DWT and Over)[1]

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 479 ships. 14.0% of the total fleet (67 ships) is registered in National Ship Registry and 86.0% of the total fleet (412 ships) in the International Ship Registry. The total DWT and GT values of the ships over 1000 DWT are 6,500,109 DWT and 4,716,110 GT respectively. 6 classes make up the majority of this capacity. Bulk carriers lead with 29.4%, oil tankers follow with 22.5%, containers with 15.6%, dry cargo with 11.7%, chemical tankers with 9.7% and service ships with 2.8%. These 6 classes make up 91.7% of the total fleet based on DWT.

6.1% of the bulk carrier ships are registered in the National Ship Registry, and the rest 93.9% are registered in the International Ship Registry with a total weight of 1,909,169 DWT for the bulk carrier segment.

1.5% of the oil tankers are registered in the National Ship Registry, and the rest 98.5% are registered in the International Ship Registry with a total weight of 1,464,237 DWT for the oil tankers segment.

15.4% of the container ships are registered in the National Ship Registry, and the rest 84.6% are registered in the International Ship Registry with a total weight of 1,014,586 DWT for the container ship segment.

7.3% of the dry cargo ships are registered in the National Ship Registry, and the rest 92.7% are registered in the International Ship Registry with a total weight of 763,160 DWT for the dry cargo ship segment.

1.5% of the chemical tankers are registered in the National Ship Registry, and the rest 98.5% are registered in the International Ship Registry with a total weight of 630,081 DWT for the chemical tankers segment.

19.5% of the service ships are registered in the National Ship Registry, and the rest 80.5% are registered in the International Ship Registry with a total weight of 178,582 DWT for the service ships segment.

[1] Accepted International Seaborne Transportation Tonnage

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	45	125	170	35.5	250,037	513,123	763,160	11.7	167,812	323,060	490,872	10.4
Bulk Carrier	41	5	46	9.6	1,758,198	150,971	1,909,169	29.4	1,008,803	94,380	1,103,183	23.4
Container	35	12	47	9.8	816,274	198,312	1,014,586	15.6	657,244	152,274	809,518	17.2
Dry Cargo/Container	4	5	9	1.9	12,369	45,618	57,987	0.9	8,066	30,767	38,833	0.8
Chemical Tankers	33	26	59	12.3	436,317	193,764	630,081	9.7	281,412	129,232	410,644	8.7
Lpg Tankers	5	0	5	1.0	27,804	0	27,804	0.4	25,574	0	25,574	0.5
Asphalt Tankers	1	3	4	0.8	2,770	54,850	57,620	0.9	1,900	43,630	45,530	1.0
Water Barges	0	1	1	0.2	0	1,027	1,027	0.0	0	488	488	0.0
Ro-Ro Ships	12	0	12	2.5	135,903	0	135,903	2.1	308,947	0	308,947	6.6
Ro-Ro Ferry/Passenger	8	3	11	2.3	31,726	4,309	36,035	0.6	65,217	5,457	70,674	1.5
Ferry Boats	0	8	8	1.7	0	15,329	15,329	0.2	0	11,846	11,846	0.3
Train Ferries	0	2	2	0.4	0	2,600	2,600	0.0	0	2,466	2,466	0.1
Passenger and Cargo Ships	1	2	3	0.6	1,540	3,539	5,079	0.1	4,701	12,018	16,719	0.3
Scientific Research Vessel	2	1	3	0.6	3,580	4,200	7,780	0.1	21,740	2,569	24,309	0.5
Sea Buses	1	0	1	0.2	29,642	0	29,642	0.5	431	0	431	0.0
Service Ships	19	14	33	6.9	125,577	53,005	178,582	2.8	107,712	59,492	167,204	3.5
Oil Tankers	19	29	48	10.0	1,251,473	212,765	1,464,237	22.5	671,584	114,595	786,179	16.7
Train Ferries/Ro-Ro	1	0	1	0.2	6,266	0	6,266	0.1	15,195	0	15,195	0.3
Dry Cargo/Ro-Ro	9	1	10	2.1	121,871	17,183	139,054	2.1	314,607	60,465	375,072	8.0
Marine Vehicles	1	5	6	1.4	8,000	10,168	18,168	0.3	6,926	5,500	12,426	0.2
Grand Total	**237**	**242**	**479**	**100**	**5,019,347**	**1,480,763**	**6,500,109**	**100**	**3,667,871**	**1,048,239**	**4,716,110**	**100**

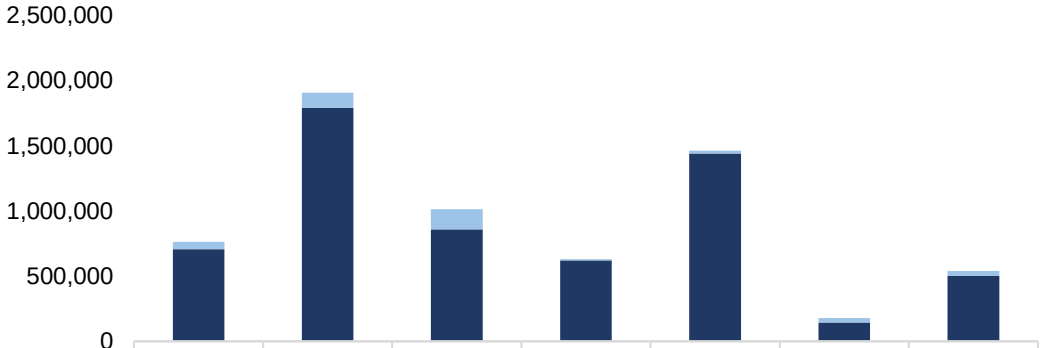
Source: Turkish Chamber of Shipping Statistics

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	17	153	170	35.5	55,385	707,775	763,160	11.7	36,432	454,440	490,872	10.4
Bulk Carrier	5	41	46	9.6	116,655	1,792,514	1,909,169	29.4	71,927	1,031,256	1,103,183	23.4
Container	5	42	47	9.8	156,278	858,308	1,014,586	15.6	123,464	686,054	809,518	17.2
Dry Cargo/Container	1	8	9	1.9	2,356	55,631	57,987	0.9	1,720	37,113	38,833	0.8
Chemical Tankers	2	57	59	12.3	9,497	620,584	630,081	9.7	6,441	404,203	410,644	8.7
LPG Tankers	0	5	5	1.0	0	27,804	27,804	0.4	0	25,574	25,574	0.5
Asphalt Tankers	1	3	4	0.8	2,770	54,850	57,620	0.9	1,900	43,630	45,530	1.0
Water Barges	0	1	1	0.2	0	1,027	1,027	0.0	0	488	488	0.0
Ro-Ro Ships	0	12	12	2.5	0	135,903	135,903	2.1	0	308,947	308,947	6.6
Ro-Ro Ferry/Passenger	1	10	11	2.3	1,500	34,535	36,035	0.6	19,638	51,036	70,674	1.5
Ferry Boats	1	7	8	1.7	2,314	13,015	15,329	0.2	1,596	10,250	11,846	0.3
Train Ferries	2	0	2	0.4	2,600	0	2,600	0.0	2,466	0	2,466	0.1
Passenger and Cargo Ships	2	1	3	0.6	3,240	1,839	5,079	0.1	15,284	1,435	16,719	0.3
Scientific Research Vessel	0	3	3	0.6	0	7,780	7,780	0.1	0	24,309	24,309	0.5
Sea Buses	0	1	1	0.2	0	29,642	29,642	0.5	0	431	431	0.0
Service Ships	13	20	33	6.9	34,847	143,735	178,582	2.8	25,357	141,847	167,204	3.5
Oil Tankers	11	37	48	10.0	22,624	1,441,613	1,464,237	22.5	13,193	772,986	786,179	16.7
Train Ferries/Ro-Ro	0	1	1	0.2	0	6,266	6,266	0.1	0	15,195	15,195	0.3
Dry Cargo/Ro-Ro	1	9	10	2.1	11,978	127,076	139,054	2.1	32,770	342,302	375,072	8.0
Marine Vehicles	5	1	6	1.4	10,168	8,000	18,168	0.3	5,500	6,926	12,426	0.2
Grand Total	**67**	**412**	**479**	**100**	**432,212**	**6,067,897**	**6,500,109**	**100**	**357,688**	**4,358,422**	**4,716,110**	**100**

Source: Turkish Chamber of Shipping Statistics

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



	Dry Cargo Ships	Bulk Carrier Ships	Container Ships	Chemical Tankers	Oil Tankers	Service Ships	Other
National Reg.	55385	116655	156278	9497	22624	34847	36926
International Reg.	707775	1792514	858308	620584	1441613	143735	503368

Source: Turkish Chamber of Shipping Statistics

Table 14 shows the age profile of the Turkish Merchant Fleet with respect to different ship types. The Merchant Fleet of ships with size 1000 DWT and above consists of 479 ships. The average age of these ships is 24.7 as of 31.12.2020.

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

Ship Types	Number	Tonnage (DWT)	Tonnage (GT)	Average Age
Dry Cargo	170	763,160	490,872	31
Bulk Carrier	46	1,909,169	1,103,183	21
Container	47	1,014,586	809,518	16
Dry Cargo/Container	9	57,987	38,833	23
Chemical Tankers	59	630,081	410,644	19
LPG Tankers	5	27,804	25,574	23
Asphalt Tankers	4	57,620	45,530	13
Water Barges	1	1,027	488	51
Ro-Ro Ships	12	135,903	308,947	18
Ro-Ro Ferry/Passenger	11	36,035	70,674	35
Ferry Boats	8	15,329	11,846	31
Train Ferries	2	2,600	2,466	47
Passenger and Cargo Ships	3	5,079	16,719	46
Scientific Research Vessel	3	7,780	24,309	26
Sea Buses	1	29,642	431	32
Service Ships	33	178,582	167,204	31
Oil Tankers	48	1,464,237	786,179	19
Train Ferries/Ro-Ro	1	6,266	15,195	34
Dry Cargo/Ro-Ro	10	139,054	375,072	9
Marine Vehicles	6	18,168	12,426	8
Grand Total	**479**	**6,500,109**	**4,716,110**	**24.7**

Source: Turkish Chamber of Shipping Statistics

Table 15 shows the Turkish Merchant Fleet grouped by different age and tonnage ranges. Turkish Merchant Fleet consists of 479 ships with a total of 6,500,109 DWT.

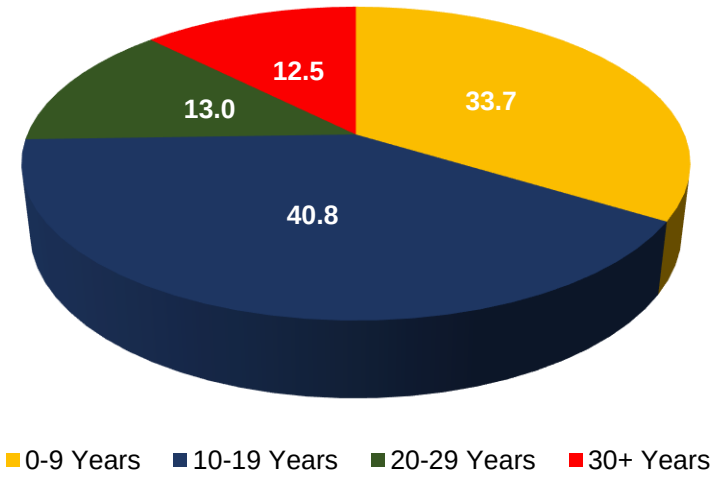
- 68 ships with total size 2,190,957 DWT are in the 0-9 age range,
- 144 ships with total size 2,651,278 DWT are in the 10-19 age range,
- 87 ships with total size 847,031 DWT are in the 20-29 age range,
- 180 ships with total size 810,043 DWT are of age 30 or older.

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	3,482	4.8	6	7,887	11.0	4	4,902	6.8	44	55,578	77.4	57	71,849
1500-5999	19	56,967	8.0	45	170,556	24.0	43	150,484	21.1	108	333,779	46.9	215	711,786
6000-9999	4	28,999	6.8	22	165,330	38.8	18	140,270	33.0	13	90,970	21.4	57	425,569
10000-34999	24	469,068	24.5	48	857,064	44.8	16	256,033	13.4	15	330,516	17.3	103	1,912,681
35000-52999	6	249,518	23.6	13	583,949	55.3	5	223,171	21.1	0	0	0.0	24	1,056,638
53000-79999	3	220,457	31.8	7	401,089	57.8	1	72,171	10.4	0	0	0.0	11	693,717
80000-119999	3	247,564	100.0	0	0	0.0	0	0	0.0	0	0	0.0	3	247,564
120000+	6	914,902	66.3	3	465,403	33.7	0	0	0.0	0	0	0.0	9	1,380,305
Grand Total	**68**	**2,190,957**	**33.7**	**144**	**2,651,278**	**40.8**	**87**	**847,031**	**13.0**	**180**	**810,843**	**12.5**	**479**	**6,500,109**

Source: Turkish Chamber of Shipping Statistics

Graph 10. Turkish Merchant Fleet Distribution by Age Groups (DWT/%)



Source: Turkish Chamber of Shipping Statistics

The graph shows the age groups of the Turkish merchant fleet. 33.7% of the fleet is in the 0-9 age range, 40.8% of the fleet is in the 10-19 age range, 13.0% of the fleet is in the 20-29 age range and 12.5% is 30 years old or over.

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

As of January 1st 2021, accounting only for ships with size 1000 GT and above, Turkish fleet under foreign flag is 23.5 million DWT, whereas the total fleet under both Turkish and foreign flag amounts to 28.9 million DWT.

On the other hand, the ratio distribution of the fleet regarding the flags of registration is as follows: 18.8% percent of these ships are registered under the Turkish flag and 81.2% 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 DWT Change %
	NO	1000 DWT	%	NO	1000 DWT	%	NO	1000 DWT	
2000	456	8,269	90.6	96	855	9.4	552	9,124	
2001	445	7,321	82.0	107	1,607	18.0	552	8,928	-2.1
2002	451	7,815	83.8	117	1,514	16.2	568	9,329	4.5
2003	432	7,045	79.9	147	1,772	20.1	579	8,817	-5.5
2004	408	6,556	75.2	163	2,159	24.8	571	8,715	-1.2
2005	420	6,427	70.2	237	2,725	29.8	657	9,152	5.0
2006	432	6,844	65.5	353	3,609	34.5	785	10,453	14.2
2007	446	6,464	58.2	424	4,650	41.8	870	11,114	6.3
2008	490	6,592	50.0	513	6,591	50.0	1,003	13,183	18.6
2009	520	6,736	43.9	636	8,592	56.1	1,156	15,328	16.3
2010	560	7,246	42.1	665	9,954	57.9	1,225	17,201	12.2
2011	547	7,797	39.7	672	11,863	60.3	1,219	19,660	14.3
2012	523	8,479	37.6	642	14,093	62.4	1,165	22,572	14.8
2013	627	9,488	31.3	842	20,838	68.7	1,469	30,326	34.4
2014	599	8,580	28.2	890	21,846	71.8	1,489	30,427	0.3
2015	564	8,297	30.2	834	19,209	69.8	1,398	27,507	-9.6
2016	551	8,272	28.4	984	20,879	71.6	1,535	29,151	6.0
2017	525	7,800	26.7	1.022	21,465	73.3	1,547	29,265	0.4
2018	483	7,288	25.5	1.028	21,323	74.5	1,511	28,611	-2.2
2019	457	6,831	23.9	1.027	21,758	76.1	1,484	28,589	-0.1
2020	410	6,194	21.1	1.074	23,157	78.9	1,484	29,352	2.7
2021	384	5,432	18.8	1.108	23,497	81.2	1,492	28,929	-1.4

Source: ISL January-February 2021

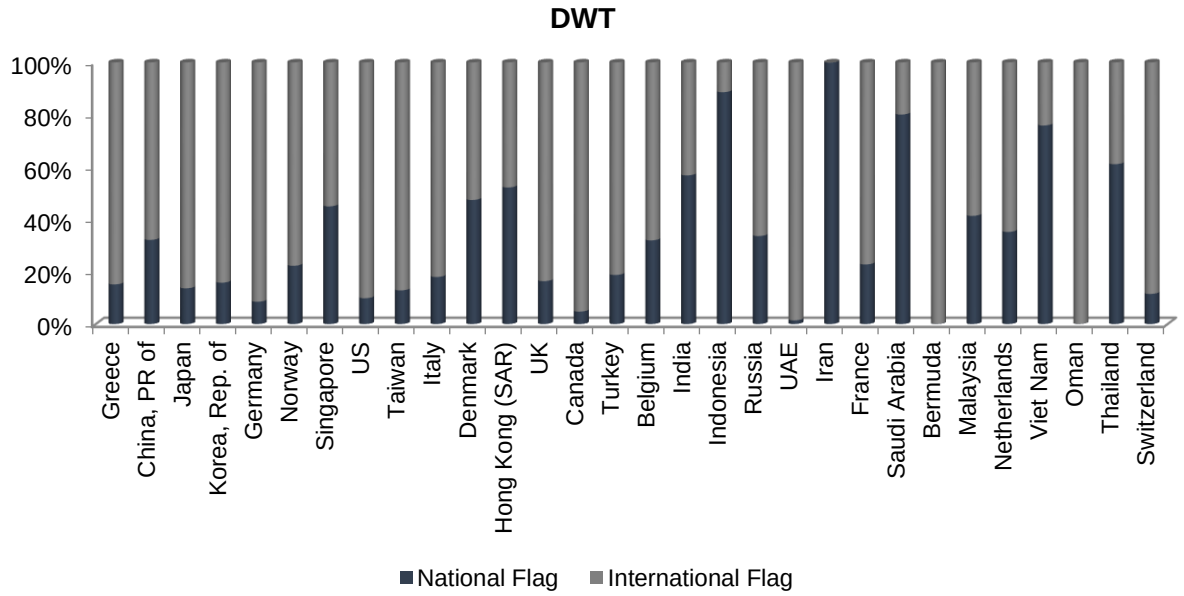
Table 17. Total Fleet of the 30 Countries by National and Foreign Flags (01 January 2020)

(1000 GT and Over)

Country of Control (DWT-Rank 2021)		National Flag				International Flag				Total Fleet				Foreign Flag DWT Share (%)
		No	1000 DWT	1000 TEU	Ave. Age	No	1000 DWT	1000 TEU	Ave. Age	No	1000 DWT	1000 TEU	Ave. Age	
1	Greece	651	61,458	41	15.6	4,354	343,853	2,125	11.9	5,005	405,310	2.166	12.4	84.8
2	China, PR of	4,081	101,018	986	12.7	3,000	212,991	3,108	12.5	7,081	314,009	4.094	12.6	67.8
3	Japan	855	35,397	244	12.2	3,447	223,404	1,852	8.1	4,302	258,801	2.097	8.9	86.3
4	Korea, Rep. of	723	14,018	226	18.0	895	74,536	590	11.2	1,618	88,555	816	14.2	84.2
5	Germany	170	7,311	558	18.1	2,322	78,305	3,450	13.1	2,492	85,616	4.009	13.5	91.5
6	Norway	626	17,733	80	15.4	1,127	61,852	461	14.2	1,753	79,586	541	14.6	77.7
7	Singapore	711	28,026	283	10.2	799	34,271	511	14.6	1,510	62,297	794	12.5	55.0
8	US	202	5,717	86	23.7	927	52,077	213	14.5	1,129	57,794	298	16.1	90.1
9	Taiwan	133	6,909	175	15.4	829	46,771	905	12.8	962	53,680	1.080	13.2	87.1
10	Italy	405	8,827	71	19.7	678	40,227	1,739	12.3	1,083	49,054	1.810	15.0	82.0
11	Denmark	381	21,289	1.421	14.7	499	23,588	1,154	12.6	880	44,878	2.575	13.5	52.6
12	Hong Kong (SAR)	419	22,631	26	10.2	637	20,700	44	19.5	1,056	43,331	70	15.8	47.8
13	UK	182	6,419	139	13.4	622	32,707	906	12.5	804	39,126	1.045	12.7	83.6
14	Canada	124	1,571	5	24.7	407	31,404	1,067	11.7	531	32,975	1.072	14.8	95.2
15	**Turkey**	**384**	**5,432**	**79**	**23.1**	**1,108**	**23,497**	**179**	**19.9**	**1,492**	**28,929**	**257**	**20.7**	**81.2**
16	Belgium	83	8,942	28	10.9	162	19,002	47	10.5	245	27,943	75	10.6	68.0
17	India	638	15,170	19	15.1	176	11,518	4	15.3	814	26,688	24	15.1	43.2
18	Indonesia	2,043	21,474	222	23.6	88	2,754	29	19.0	2,131	24,228	250	23.4	11.4
19	Russia	1,205	7,709	106	29.5	325	15,197	35	20.6	1,530	22,905	142	27.6	66.3
20	UAE	51	307	7	15.4	602	21,137	154	20.4	653	21,445	161	20.0	98.6
21	Iran	215	18,733	157	19.4	3	10	-	34.6	218	18,743	157	19.6	0.1
22	France	122	3,870	287	14.2	215	13,104	954	11.6	337	16,974	1.242	12.6	77.2
23	Saudi Arabia	106	13,329	8	15.4	39	3,315	1	19.1	145	16,645	8	16.4	19.9
24	Bermuda	1	13	-	12.3	98	14,864	40	7.1	99	14,877	40	7.2	99.9
25	Malaysia	199	6,064	26	18.8	151	8,598	1	15.3	350	14,662	27	17.3	58.6
26	Netherlands	558	4,664	199	13.7	365	8,574	70	13.9	923	13,238	269	13.8	64.8
27	Viet Nam	845	8,743	42	14.3	144	2,775	4	19.9	989	11,519	46	15.1	24.1
28	Oman	5	6	-	13.9	58	8,926	1	9.5	63	8,932	1	9.8	99.9
29	Thailand	306	4,972	29	26.3	77	3,163	29	16.7	383	8,135	58	24.4	38.9
30	Switzerland	19	935	1	7.4	147	7,178	4	12.6	166	8,113	5	12.0	88.5
Total 30 Countries		**16.443**	**458,689**	**5,551**	**16.9**	**24,301**	**1,440,298**	**19,678**	**12.9**	**40,744**	**1,898,987**	**25,229**	**14.6**	**75.8**
Others		**2.405**	**34,316**	**228**	**23.6**	**2.662**	**76,826**	**353**	**21.3**	**5,067**	**111,142**	**581**	**22.4**	**69.1**
Subtotal		**18,848**	**493,005**	**5,779**	**17.8**	**26,963**	**1,517,124**	**20,031**	**13.8**	**45,811**	**2,010,129**	**25,810**	**15.4**	**75.5**
Unknown										**539**	**14,304**	**36**	**24.9**	
World Total										**46,350**	**2,024,433**	**25,847**	**15.5**	

Source: ISL January-February 2021

Graph 11. By Country of Domicile as of 1 January 2021 (1000 GT and Over)

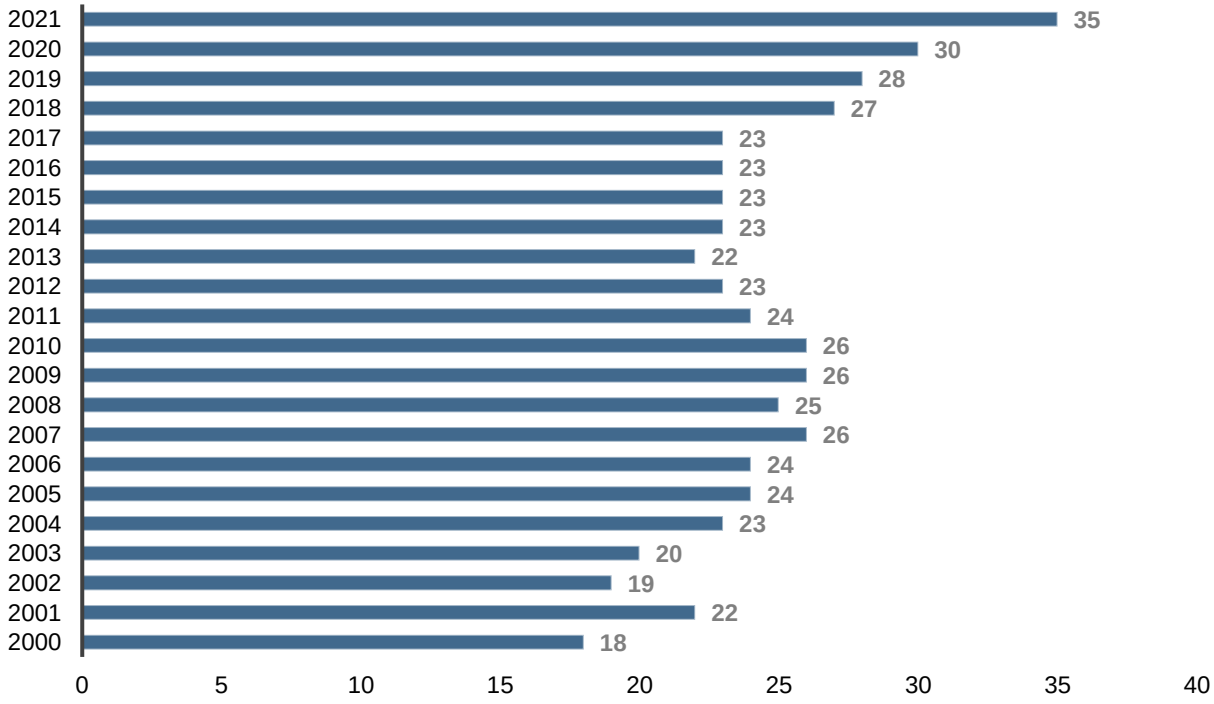


Source: ISL January-February 2021

The World fleet (300 GT and over) consists of 56,899 ships with a total size of 2,033,626.000 DWT based in 155 countries as of 01.01.2021. Turkish merchant fleet is positioned 35th in the world as shown in the Table.

Panama leads with a share of 16.5%, Liberia is second with 14.4% and Marshall Island is third with share of 13.1% of the total registry.

Graph 12. World Merchant Fleet Ranking by Turkish Flag (300 GT and Over)



Source: ISL January-February 2021

Table 18. World Merchant Fleet Ranking by Flag as of 1 January 2021 (300 GT and Over)

DWT Rank 2021	Flag	January 1st, 2020				January 1st, 2021				Total DWT Share %	Years DWT Change %
		NO of Ships	1000 GT	1000 DWT	1000 TEU	NO of Ships	1000 GT	1000 DWT	1000 TEU		
1	Panama	6,486	212,179	320,335	3,489	6,612	220,525	335,293	3,822	16.5	4.7
2	Liberia	3,553	165,854	266,245	4,009	3,777	181,077	293,571	4,115	14.4	10.3
3	Marshall Islands	3,404	155,141	254,460	1,250	3,539	161,532	265,598	1,205	13.1	4.4
4	Hong Kong (SAR)	2,534	126,763	200,544	3,596	2,556	129,348	204,717	3,642	10.1	2.1
5	Singapore	2,362	90,016	135,649	2,467	2,331	87,755	131,596	2,472	6.5	-3.0
6	Malta	2,036	79,320	114,468	2,036	1,976	80,903	115,067	2,116	5.7	0.5
7	China, PR of	4,425	61,277	95,759	954	4,734	64,922	101,691	986	5.0	6.2
8	Greece	913	39,843	68,887	51	876	37,561	64,739	42	3.2	-6.0
9	Bahamas	1,133	55,419	65,224	212	1,091	53,233	61,270	188	3.0	-6.1
10	Japan	2,591	28,738	39,822	244	2,689	27,937	38,229	250	1.9	-4.0
11	S. Cyprus	864	22,402	33,785	497	863	22,138	33,069	471	1.6	-2.1
12	UK	634	24,038	34,465	384	579	22,126	31,844	388	1.6	-7.6
13	Denmark	516	21,035	23,177	1,528	548	22,235	24,916	1,539	1.2	7.5
14	Indonesia	3,391	16,037	22,651	218	3,523	17,225	24,475	229	1.2	8.1
15	Portugal	561	15,284	20,798	902	608	16,491	22,686	939	1.1	9.1
16	Norway	865	16,037	19,969	61	905	17,018	21,423	82	1.1	7.3
17	Iran	449	10,785	19,402	104	461	11,388	20,112	158	1.0	3.7
18	India	888	9,645	16,501	57	899	9,511	16,152	55	0.8	-2.1
19	Korea, Rep. of	1,025	10,558	14,763	145	1,040	11,912	15,206	227	0.7	3.0
20	Saudi Arabia	129	7,536	13,479	8	124	7,516	13,532	8	0.7	0.4
21	Italy	641	13,976	11,372	109	631	13,848	10,751	109	0.5	-5.5
22	Belgium	102	6,230	10,358	22	98	5,817	9,522	28	0.5	-8.1
23	Viet Nam	1,401	5,113	8,359	40	1,419	5,751	9,442	42	0.5	13.0
24	Russia	1,546	6,989	8,957	108	1,583	7,209	9,181	116	0.5	2.5
25	US	363	7,652	8,388	253	364	7,574	8,346	251	0.4	-0.5
26	Bermuda	128	9,713	7,355	44	135	10,296	7,678	44	0.4	4.4
27	France	218	6,011	7,116	242	220	6,672	7,551	287	0.4	6.1
28	Germany	238	7,672	8,338	605	233	7,029	7,456	566	0.4	-10.6
29	Taiwan	200	4,421	6,659	176	204	4,592	7,009	176	0.3	5.3
30	Malaysia	429	5,627	6,907	27	432	5,522	6,620	29	0.3	-4.2
31	Cayman Islands	138	4,392	6,524	1	136	4,407	6,615	5	0.3	1.4
32	Antigua & Barbuda	691	5,000	6,590	343	643	4,832	6,336	329	0.3	-3.9
33	Philippines	1,041	4,166	6,165	51	1,084	4,095	6,004	50	0.3	-2.6
34	Netherlands	763	6,067	6,147	246	752	5,674	5,966	230	0.3	-2.9
35	**Turkey**	**735**	**4,943**	**6,698**	**97**	**702**	**4,456**	**5,955**	**91**	**0.3**	**-11.1**
36	Thailand	567	3,930	6,544	31	562	3,574	5,898	30	0.3	-9.9
37	Kuwait	40	2,317	4,182	1	46	2,555	4,483	1	0.2	7.2
38	Belize	452	1,890	2,936	15	487	2,624	4,266	11	0.2	45.3
39	Brazil	131	2,752	4,427	64	119	2,597	4,209	63	0.2	-4.9
40	New Zealand	212	1,713	2,691	16	210	2,189	3,623	11	0.2	34.6
155	**Total**	**55,655**	**1,320,140**	**1,970,526**	**25,227**	**56,899**	**1,359,675**	**2,033,626**	**25,858**	**100.0**	**3.2**

Source: ISL January-February 2021

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

The capacity of the merchant fleet of Turkey and the neighbouring 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 1000 GT and over operating under foreign flags are added to the home registry, Turkey rises to 28.9 million DWT, Greece to 405.3 million DWT, Russia to 22.9 million DWT and Iran to 18.7 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 DWT %	Years DWT Change %
8	Greece	876	64,739	3.2	-6.0
11	S. Cpyrus	863	33,069	1.6	-2.1
17	Iran	461	20,112	1.0	3.7
24	Russia	1,583	9,181	0.5	2.5
35	**Turkey**	**702**	**5,955**	**0.3**	**-11.1**
53	Egypt	102	1,550	0.1	8.3
91	Ukraine	102	313	0.0	14.1
103	Bulgaria	27	130	0.0	-10.3
111	Georgia	19	74	0.0	-1.9
112	Syria	13	74	0.0	-5.2
124	Romania	15	37	0.0	-9.2

Source: ISL January-February 2021

CHAPTER II

DEVELOPMENTS IN SEABORNE TRADE

2. DEVELOPMENTS IN SEABORNE TRADE

2.1. Developments in the Transportation of Foreign Trade Cargoes

2020 is a projection. Trends calculated using an average of the 11 year period up to and including the current year, or a compound average growth rate over the period.

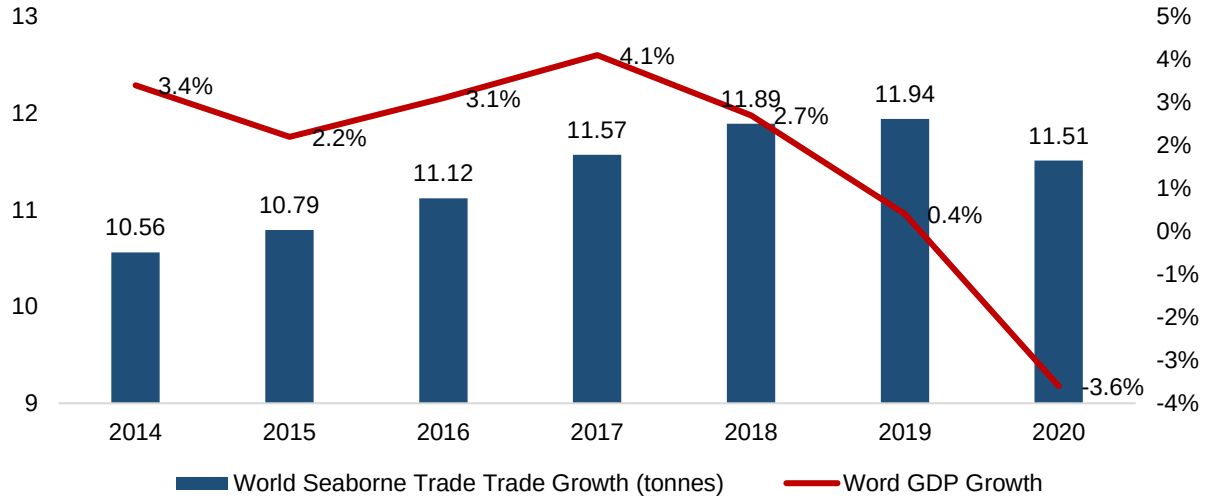
In full year 2020, global seaborne trade is now estimated to have fallen by 3.6% in tonnes, the first decline since 2009, on the back of major impacts from the Covid-19 pandemic. A more moderate contraction of c.1.7% was seen in tonnemiles, as disruption to trade patterns helped to lift the average haul of seaborne trade for a fifth consecutive year.

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
2010	10.8	13.0	9.1	84.0
2011	11.5	7.0	9.5	82.0
2012	11.8	3.0	9.9	84.0
2013	12.2	3.0	10.2	83.0
2014	12.5	2.0	10.5	84.0
2015	12.7	2.0	10.7	84.0
2016	12.9	2.0	11.1	86.0
2017	13.5	5.0	11.5	85.0
2018	13.9	3.0	11.8	85.0
2019	14.1	1.0	11.9	85.0
2020	12.1	-14.0	11.5	90.0

Source: Clarksons Research Feb.2021

Graph 13. Global Seaborn Trade Growth



Source: Clarksons Research Feb.2021

Table 21. Turkish Foreign Trade Transportation by Modes

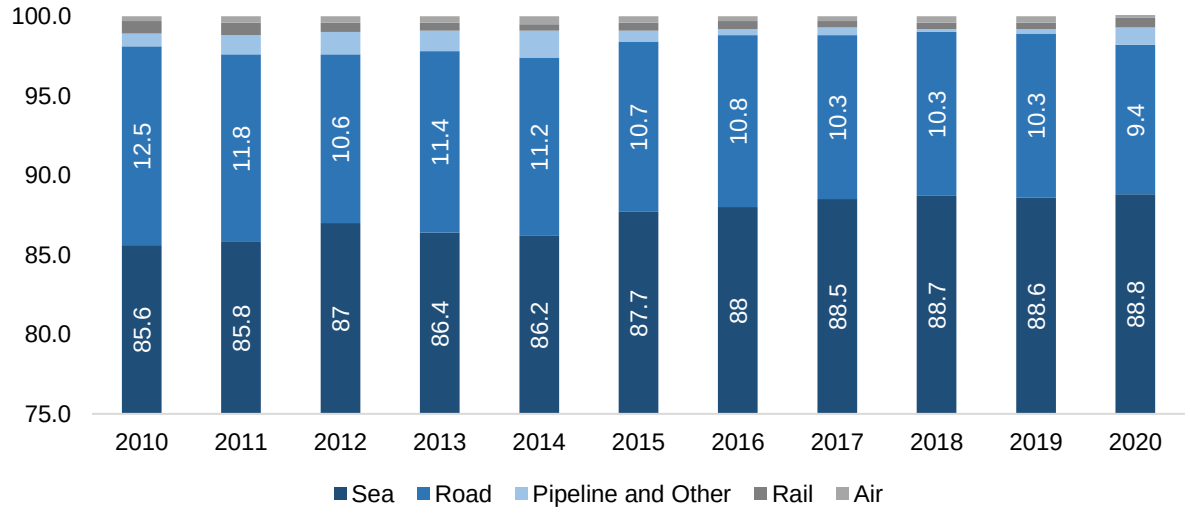
Year	Sea (%)	Rail (%)	Road (%)	Air (%)	Pipeline and Other (%)
2010	85.6	0.8	12.5	0.3	0.8
2011	85.8	0.8	11.8	0.4	1.2
2012	87	0.6	10.6	0.4	1.4
2013	86.4	0.5	11.4	0.4	1.3
2014	86.2	0.4	11.2	0.5	1.7
2015	87.7	0.5	10.7	0.4	0.7
2016	88	0.5	10.8	0.3	0.4
2017	88.5	0.4	10.3	0.3	0.5
2018	88.7	0.4	10.3	0.4	0.2
2019	88.6	0.4	10.3	0.4	0.3
2020	88.8	0.6	9.4	0.2	1.1

Source: Turkstat

88.8% of Turkey's foreign trade is being realised by maritime transportation. The progress between the years of 2010-2020 is shown in the Table below by the modes of transportation.

58.2% of the volume of Turkey's foreign trade transportation has been carried by sea; 25.6% has been carried by road; 0.9% has been carried by rail; 14% has been carried by air and 1.3% has been carried by other transportation modes.

Graph 14. Foreign Trade Transportation by Modes (%)



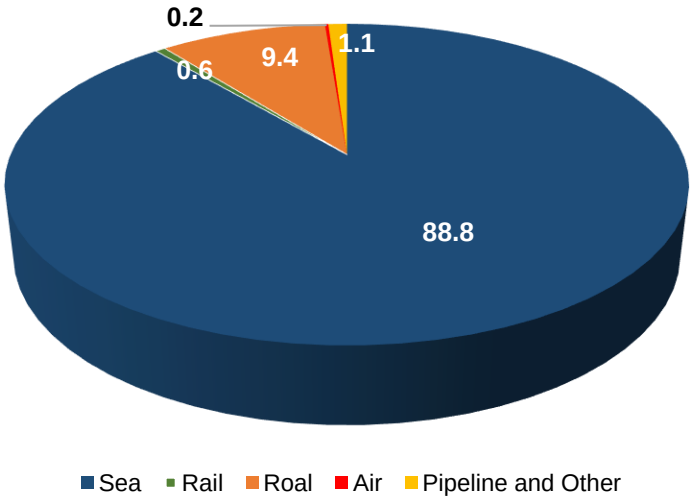
Source: Turkstat

Table 22. Foreign Trade Transportation by Modes (tons) and ($)

Modes	Export Quantity (%)	Import Quantity (%)	Seaborn Trade Quantity (%)	Export Value US $ (%)	Import Value US $(%)	Seaborn Trade Value US $ (%)
Sea	82.0	93.5	88.8	59.5	57.0	58.2
Roal	16.7	4.3	9.4	31.3	20.8	25.6
Air	0.4	0.0	0.2	7.5	19.5	14.0
Rail	0.6	0.5	0.6	0.8	1.1	0.9
Pipeline and Other	0.2	1.7	1.1	0.9	1.7	1.3

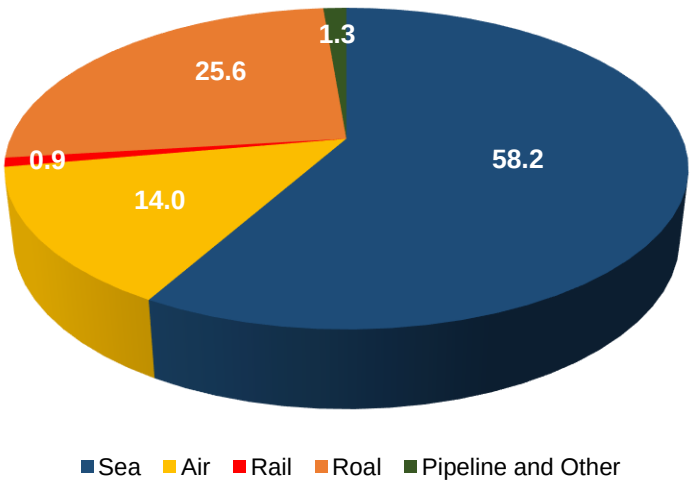
Source: Turkstat

Graph 15. Seaborn Trade Quantity (%)



Source: Turkstat

Graph 16. Seaborn Trade Value (US $/ %)



Source: Turkstat

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.

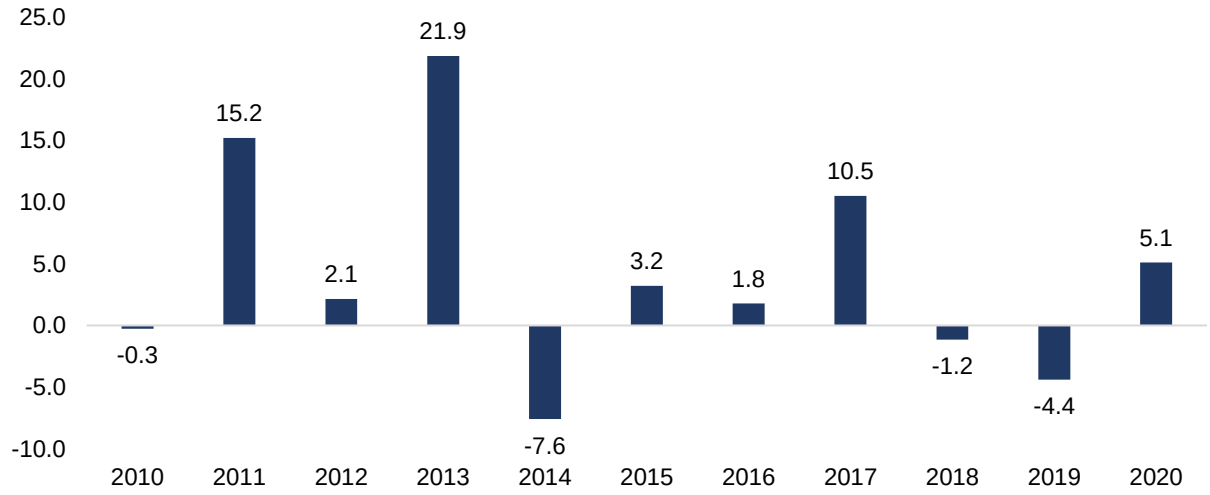
The number of cargoes carried bulk and partially between 2010-2020 in Turkish ports and wharves on ton basis is presented in Table 23.

Table 23. 2010-2020 Cabotage Transportation

Year	Cabotage Loading (tons)	Change (%)
2010	19,434,485	-0.3
2011	22,389,570	15.2
2012	22,869,458	2.1
2013	27,868,157	21.9
2014	25,753,831	-7.6
2015	26,578,284	3.2
2016	27,050,225	1.8
2017	29,898,010	10.5
2018	29,550,554	-1.2
2019	28,251,017	-4.4
2020	29,763,556	5.1

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 17. Rate of Change in Cabotage Transportation Between 2010-2020 (%)



Source: Republic of Turkey Ministry of Transport and Infrastructure

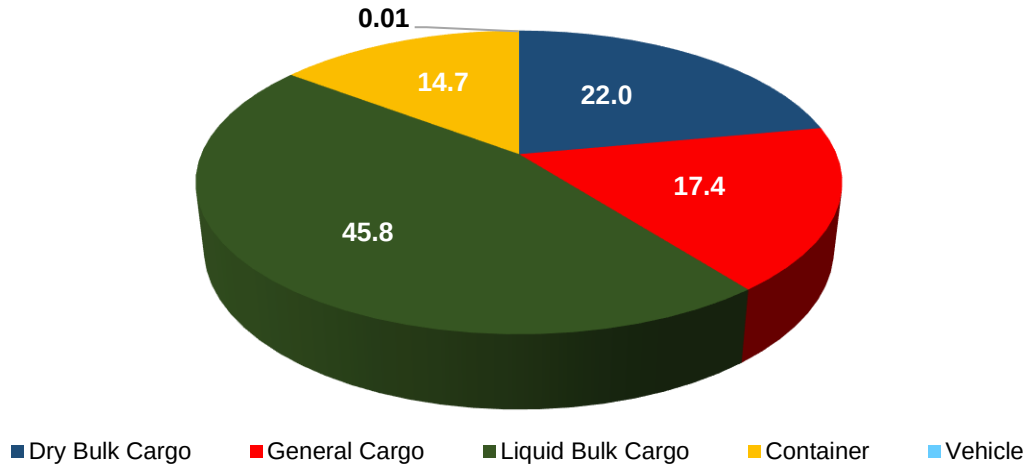
The total cabotage transportation in 2020 is 29.763.556 tons cabotage transportation increased about 53% between the years of 2010-2020.

Table 24. Cabotage Transportation by the Types of Cargoes in 2020 (mtons)

Cargo Types	Catotage Loading	Cabotage Unloading	Total	%
Dry Bulk Cargo	6,462,154	6,502,237	12,964,391	22.0
General Cargo	5,241,887	4,990,637	10,232,524	17.4
Liquid Bulk Cargo	13,620,965	13,322,114	26,943,079	45.8
Container	4,432,731	4,217,330	8,650,061	14.7
Vehicle	5,819	1,510	7,329	0.0
Grand Total	**29,763,556**	**29,033,828**	**58,797,384**	**100.0**

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 18. 2020 Cabotage Transportation (Loading-Unloading) by the Types of Cargoes (%)



Source: Republic of Turkey Ministry of Transport and Infrastructure

Table shows the cabotage transportation by cargo types. The first four cargo types are liquid bulk cargo (45.8%), dry bulk cargo (22.0%), general cargo (17.4%) and container (14.7%).

The ports with the largest shares in cabotage handling in 2020 are Kocaeli Port (19.8%), Aliağa Port (15.7%) and Iskenderun Port (11.2%).

Table 25. 2020 Cabotage Transportation in Ports

Port Authority	Cabotage Loading	Cabotage Unloading	Total	%
Kocaeli	4,733,716	6,905,884	11,639,600	19.8
Aliağa	6,900,197	2,322,055	9,222,252	15.7
İskenderun	4,920,526	1,659,476	6,580,002	11.2
Tekirdağ	1,148,265	3,120,080	4,268,345	7.3
Botaş	2,052,251	1,483,666	3,535,917	6.0
Gemlik	1,270,262	1,174,055	2,444,317	4.2
Ambarlı	969,572	1,395,970	2,365,542	4.0
Mersin	344,830	1,856,485	2,201,315	3.7
Samsun	795,066	1,352,063	2,147,129	3.7
Antalya	707,513	1,292,408	1,999,921	3.4
Karadeniz Ereğli	627,174	1,201,591	1,828,765	3.1
İstanbul	106,383	1,515,702	1,622,085	2.8
Karabiga	704,215	701,851	1,406,066	2.4
İzmir	379,425	611,240	990,665	1.7
Çanakkale	675,380	278,681	954,061	1.6
Marmara Adası	841,167	1,982	843,149	1.4
Ünye	537,810	145,112	682,922	1.2
Bandıma	463,988	199,062	663,050	1.1
Tuzla	351,175	247,034	598,209	1.0
Hopa	407,970	111,026	518,996	0.9
Rize	5,500	435,077	440,577	0.7
Tirebolu	0	423,749	423,749	0.7
Zonguldak	221,437	137,780	359,217	0.6
Trabzon	207,480	127,759	335,239	0.6
İnebolu	208,871	20,365	229,236	0.4
Yalova	108,950	92,144	201,094	0.3
Bartın	48,433	66,568	115,001	0.2
Marmaris	0	48,234	48,234	0.1
Çeşme	0	23,002	23,002	0.0
Taşucu	0	21,609	21,609	0.0
Karasu	0	17,575	17,575	0.0
Alanya	0	16,000	16,000	0.0
İğneada	12,450	0	12,450	0.0
Güllük	10,780	34	10,814	0.0
Silivri	0	10,500	10,500	0.0
Göcek	0	7,950	7,950	0.0
Fatsa	0	6,878	6,878	0.0
Amasra	2,770	0	2,770	0.0
Erdek	0	2,191	2,191	0.0
Sürmene	0	990	990	0.0
Grand Total	**29,763,556**	**29,033,828**	**58,797,384**	**100.0**

Source: Republic of Turkey Ministry of Transport and Infrastructure

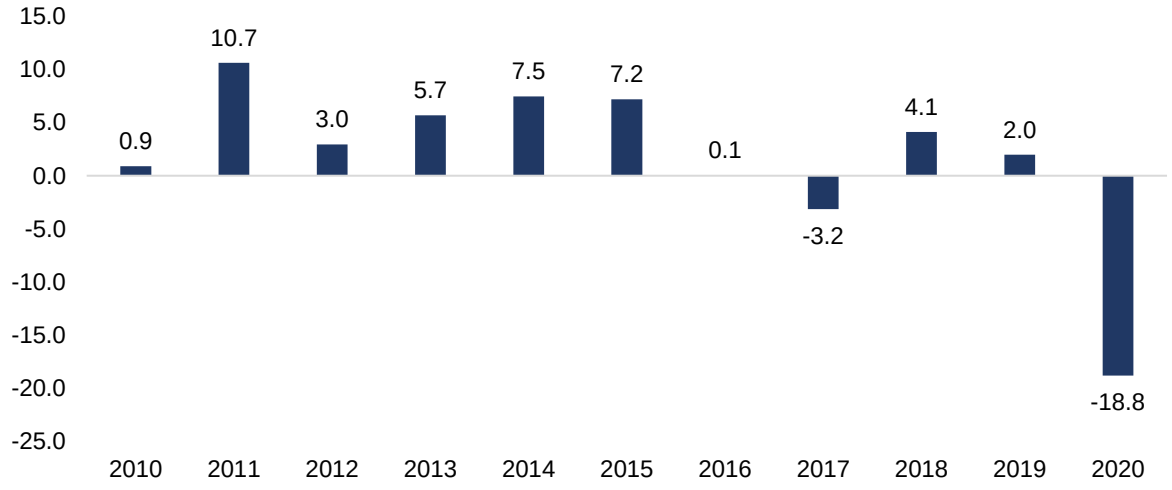
Table 26. 2010-2020 Cabotage Transportation Vehicle Number

Year	Vehicle Number	Vehicle Number Change %	Vehicle (Number x Mile)	Vehicle (Number x Mile) Change %
2010	9,400,735	0.9	83,607,444	1.2
2011	10,402,917	10.7	83,283,519	-0.4
2012	10,710,645	3.0	77,785,568	-7.1
2013	11,318,561	5.7	85,096,902	8.6
2014	12,166,505	7.5	89,322,962	4.7
2015	13,042,399	7.2	95,505,115	6.5
2016	13,050,241	0.1	92,267,227	-3.4
2017	12,638,289	-3.2	95,185,009	3.2
2018	13,159,820	4.1	92,868,442	-2.4
2019	13,420,802	2.0	92,289,144	-0.6
2020	10,892,467	-18.8	70,059,483	-24.1

Source**:** Republic of Turkey Ministry of Transport and Infrastructure

In table 26, the changes in cabotage transportation of vehicles between the years 2010 and 2020 are being shown. The number of carried vehicles increased 16% in total between 2010 and 2020.

Graph 19. 2010-2020 Cabotage Transportation Vehicle Number Change (%)



Source**:** Republic of Turkey Ministry of Transport and Infrastructure

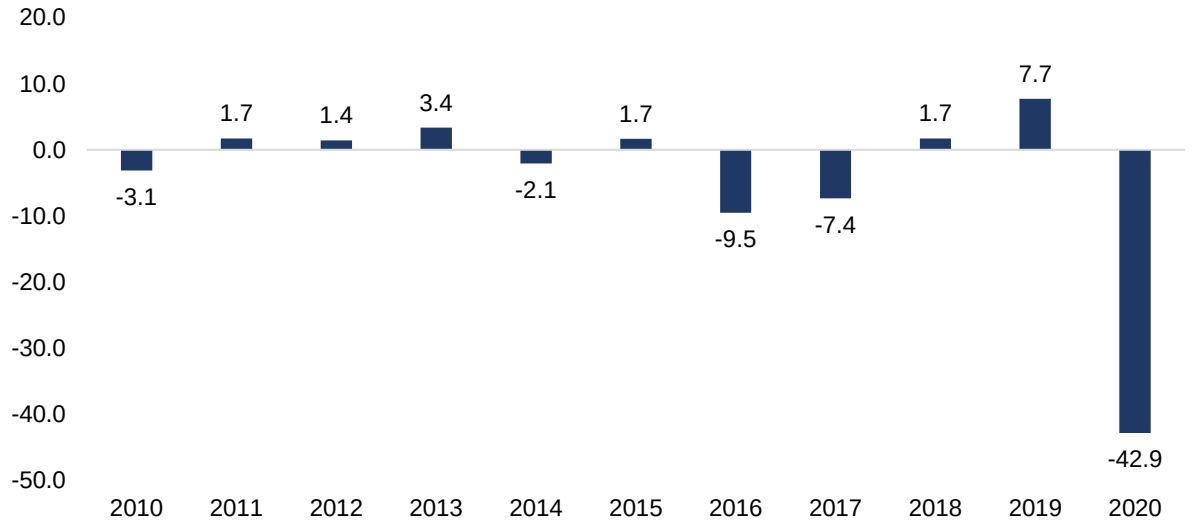
In table 27, the changes in cabotage transportation of passengers between the years 2010 and 2020 are being shown. The number of passenger carried decreased 44% in total between 2010 and 2020.

Table 27. 2010-2020 Cabotage Transportation Passenger Number

Year	Passenger Number	Annual Change (%)	Passenger (Number x Mile)	Annual Change (%)
2010	154,198,088	-3.1	847,715,977	-4.6
2011	156,842,003	1.7	854,909,150	0.8
2012	159,076,921	1.4	787,572,051	-8.6
2013	164,426,997	3.4	900,226,869	12.5
2014	161,048,004	-2.1	974,923,011	7.7
2015	163,723,544	1.7	992,592,392	1.8
2016	148,101,589	-9.5	1,112,255,126	10.8
2017	137,195,691	-7.4	1,138,826,307	2.4
2018	139,556,332	1.7	1,134,349,263	-0.4
2019	150,312,216	7.7	1,218,893,742	7.5
2020	85,866,238	-42.9	650,022,306	-46.7

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 20. 2010-2020 Cabotage Transportation Passenger Number (%)



Source: Republic of Turkey Ministry of Transport and Infrastructure

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 (Tons), 2010-2020

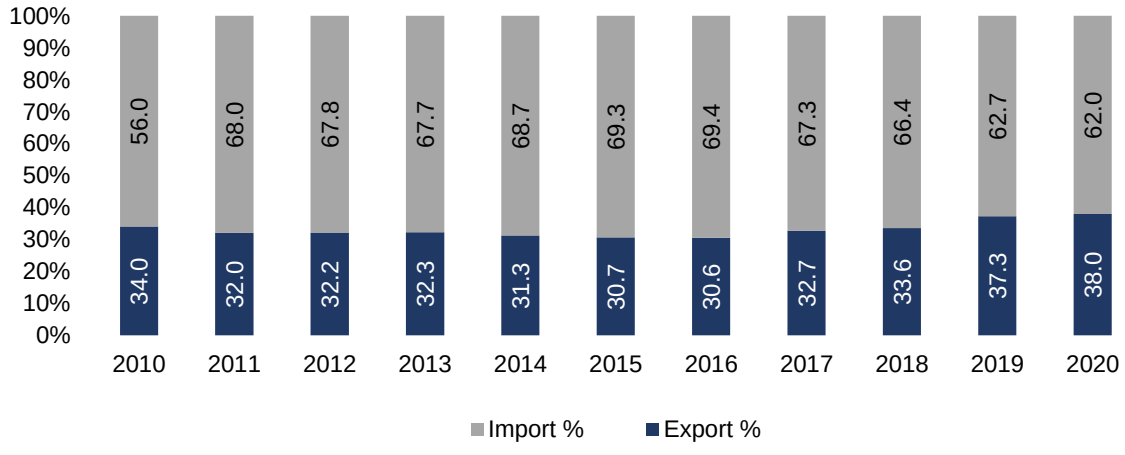
Years	Seaborne Trade Total	Export	Export (%)	Import	Import (%)
2010	246,570,931	83,945,162	34.0	162,625,769	66.0
2011	255,334,712	81,779,528	32.0	173,555,184	68.0
2012	283,782,414	91,307,486	32.2	192,474,928	67.8
2013	277,335,605	89,553,990	32.3	187,781,615	67.7
2014	283,316,220	88,544,792	31.3	194,771,428	68.7
2015	300,478,930	92,152,622	30.7	208,326,308	69.3
2016	309,937,639	94,805,120	30.6	215,132,519	69.4
2017	347,348,092	113,692,068	32.7	233,656,024	67.3
2018	328,969,455	110,424,635	33.6	218,544,820	66.4
2019	353,081,390	131,676,578	37.3	221,404,812	62.7
2020	365,442,296	138,902,823	38.0	226,539,473	62.0

Source: Republic of Turkey Ministry of Transport and Infrastructure

Compared with the previous year, export shipments increased to 138 million tons, import shipments increased to 226 million tons in 2020. 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 2010-2020 has been realized as 11.8% on the average.

Graph 21. Development of the Seaborne Trade (Tons)



Source: Republic of Turkey Ministry of Transport and Infrastructure

The transportation of foreign trade cargoes by Turkish flag vessels includes 7% of the total of 226 million tonnes imports and 10% of the total of 138 million tonnes exports.

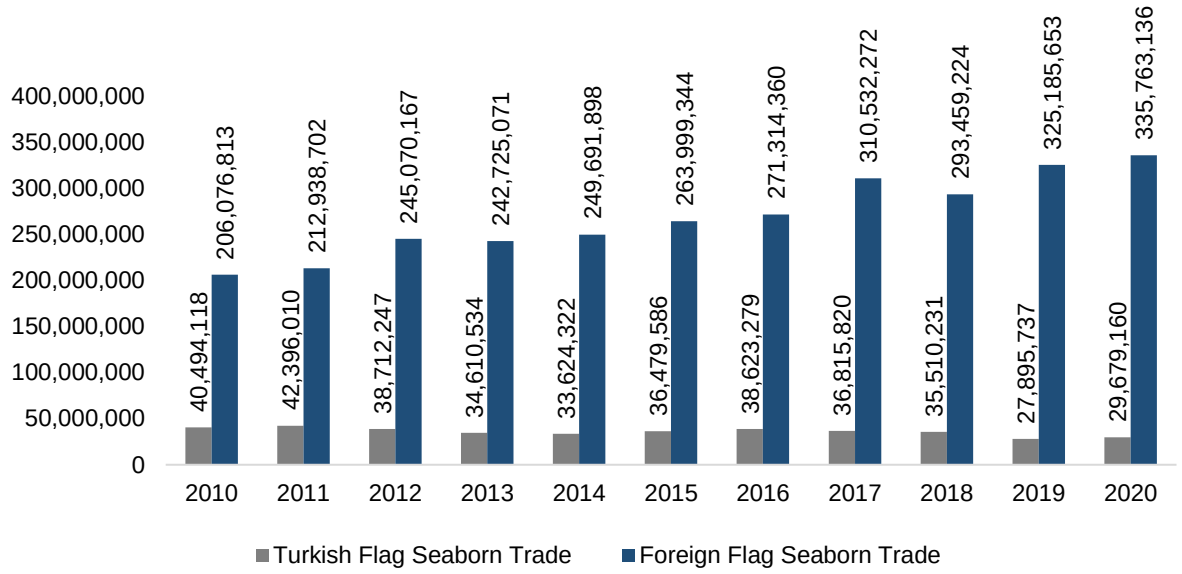
Table 29. Foreign Trade Transportation by Flags (Tons)

Year	Turkish Flag					Foreign Flag				
	Import	%	Export	%	Seaborn Trade	Import	%	Export	%	Seaborn Trade
2010	28,878,432	18.0	11,615,686	14.0	40,494,118	133,747,337	82.0	72,329,476	86.0	206,076,813
2011	30,122,065	17.0	12,273,945	15.0	42,396,010	143,433,119	83.0	69,505,583	85.0	212,938,702
2012	26,476,350	14.0	12,235,897	13.0	38,712,247	165,998,578	86.0	79,071,589	87.0	245,070,167
2013	22,949,887	12.0	11,660,647	13.0	34,610,534	164,831,728	88.0	77,893,343	87.0	242,725,071
2014	20,880,367	11.0	12,743,955	14.0	33,624,322	173,891,061	89.0	75,800,837	86.0	249,691,898
2015	22,724,776	11.0	13,754,810	15.0	36,479,586	185,601,532	89.0	78,397,812	85.0	263,999,344
2016	23,350,424	11.0	15,272,855	16.0	38,623,279	191,782,095	89.0	79,532,265	84.0	271,314,360
2017	21,677,485	9.0	15,138,335	13.0	36,815,820	211,978,539	91.0	98,553,733	87.0	310,532,272
2018	19,850,109	9.0	15,660,122	14.0	35,510,231	198,694,711	91.0	94,764,513	86.0	293,459,224
2019	13,763,576	6.0	14,132,161	11.0	27,895,737	207,641,236	94.0	117,544,417	89.0	325,185,653
2020	16,098,249	7.0	13,580,911	10.0	29,679,160	210,441,224	93.0	125,321,912	90.0	335,763,136

Source: Republic of Turkey Ministry of Transport and Infrastructure

A comparison between 2010 and 2020 of the transportation of foreign trade cargoes reveals that the total amount increased from 246 million tons in 2010 to 365 million tonnes in 2020. Import goods increased from 162 million tons to 226 million tons, whereas export goods increased from 83 million tons to 138 million tons.

Graph 22. Turkish/Foreign Flag Shares (Tons)



Source: Republic of Turkey Ministry of Transport and Infrastructure

The share of Turkish flag vessels in total foreign trade transportation increased to 13 million tons for exports and decreased to 16 million tons for imports in 2020 when compared to 11 and 28 million tons respectively in 2010.

The share of foreign flag vessels in total foreign trade transportation, increased to 125 million tons for exports and also increased to 210 million tons for imports in 2020, 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 138 million tons exports and 60 million tons transit loading goods in 2020, are 38% Container and Dry Bulk Cargo, 13% General Cargo, 8% 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	3,749,631	48,664,886	52,414,517	38.0	126,874	52,541,391
General Cargo	1,253,763	16,380,122	17,633,885	13.0	40,626	17,674,511
Liquid Cargo	577,007	10,221,284	10,798,291	8.0	49,048,421	59,846,712
Container	4,229,831	48,711,526	52,941,357	38.0	11,274,336	64,215,693
Vehicle	3,770,679	1,344,094	5,114,773	4.0	0	5,114,773
Grand Total	13,580,911	125,321,912	138,902,823	100.0	60,490,257	199,393,080

Source: Republic of Turkey Ministry of Transport and Infrastructure

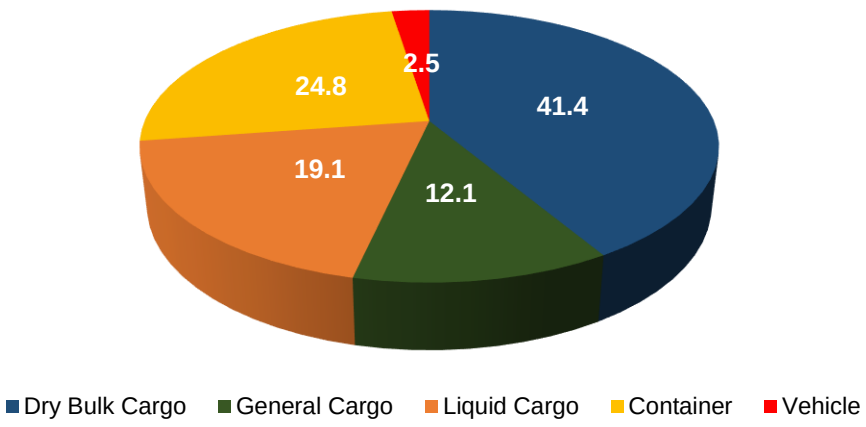
Major shipping segments of the 226 million tons imports and 12 million tons transit unloading goods in 2020 are 44% Dry Bulk Cargo, 26% Liquid Bulk Cargo, 17% Container, 12% General Cargo and 2% vehicles.

Table 31. Import and Transit Unloading by Cargo Types

Cargo Types	Turkish Flag Import	Foreign Flag Import	Total Import	Import (%)	Transit Unloading	Total
Dry Bulk Cargo	4,104,645	94,787,106	98,891,751	44.0	81,590	98,973,341
General Cargo	1,455,726	25,251,162	26,706,888	12.0	13,477	26,720,365
Liquid Cargo	4,464,576	54,648,324	59,112,900	26.0	749,705	59,862,605
Container	2,441,485	35,335,766	37,777,251	17.0	11,067,943	48,845,194
Vehicle	3,631,817	418,866	4,050,683	2.0	0	4,050,683
Grand Total	16,098,249	210,441,224	226,539,473	100.0	11,912,715	238,452,188

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 23. Seaborn Trade the Types of Cargoes (Export Import)



Source: Republic of Turkey Ministry of Transport and Infrastructure

2.6. The Progress in Seaborne Trade by Country Groups

In 2020, 71 million tons of exports and 78 million tons of imports, totally transit (loading-unloading) 47 million tons of transportation have been realized to the OECD countries. Table shows the export and import values to the OECD countries.

Table 32. Seaborne Export and Import, Transit Handling of Turkey and OECD Countries in 2019

OECD Country	Export	Transit Loading	Import	Transit Unloading	Total
Italy	11,914,834	35,427,137	6,769,075	198,565	54,309,611
U.S.	9,255,000	241,834	15,277,847	80,657	24,855,338
Spain	12,362,211	2,267,031	4,192,712	424,255	19,246,209
Greece	6,664,953	1,740,434	9,512,244	751,959	18,669,590
Isreal	9,645,220	352,956	5,993,150	580,107	16,571,433
Belgium	6,067,240	269,800	5,201,009	231,821	11,769,870
Holland	3,573,457	25,246	5,258,341	190,369	9,047,413
U.A.B.	2,758,096	549,395	3,469,187	38,471	6,815,149
Norway	141,213	1,958	5,573,740	720	5,717,631
France	2,093,703	427,643	2,639,962	42,415	5,203,723
S.Korea	986,660	208,455	2,276,138	470,923	3,942,176
Canada	841,657	23,507	2,455,987	29,813	3,350,964
Portugal	1,648,158	944,494	453,181	70,613	3,116,446
Germany	974,727	38,370	1,478,632	102,735	2,594,464
Lithuanian	37,691	0	1,409,778	525	1,447,994
Australia	25,074	560,009	858,239	310	1,443,632
Denmark	118,361	176,304	910,989	836	1,206,490
Slovenia	528,026	32,828	439,948	24,732	1,025,534
Finland	50,260	0	900,196	0	950,456
Sweden	351,360	1,869	565,458	680	919,367
Poland	310,256	30,914	547,238	13,471	901,879
Japan	345,536	8,358	337,214	44,965	736,073
Latvia	80,500	42	640,220	7,018	727,780
Liberia	468,416	0	4,469	3,358	476,243
Estonia	299	0	461,009	0	461,308
Mexico	55,676	0	376,025	90	431,791
Ireland	193,226	9,327	26,632	0	229,185
Chile	40,287	0	42,893	0	83,180
Iceland	55,700	0	0	0	55,700
Grand Total	**71,587,797**	**43,337,911**	**78,071,513**	**3,309,408**	**196,306,629**

Source: Republic of Turkey Ministry of Transport and Infrastructure

In 2020, the seaborne trade volume between Turkey and the OECD countries was 196 million metric tons of which 149 million metric tons were import-exports while 47 million metric tons were transit cargoes.

In the year 2020, 53 million tons of exports and 49 million tons of imports or totally 102 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 (Tons)

EU Countries	Export	Transit Loading	Import	Transit Unloading	Seaborn Trade
Italy	11,914,834	35,427,137	6,769,075	198,565	54,309,611
Spain	12,362,211	2,267,031	4,192,712	424,255	19,246,209
Greece	6,664,953	1,740,434	9,512,244	751,959	18,669,590
Belgium	6,067,240	269,800	5,201,009	231,821	11,769,870
Holland	3,573,457	25,246	5,258,341	190,369	9,047,413
Romania	3,611,431	751,640	3,146,899	756,717	8,266,687
France	2,093,703	427,643	2,639,962	42,415	5,203,723
Bulgaria	1,276,719	566,825	2,587,893	655,739	5,087,176
Malta	1,275,295	92,629	1,803,566	25,308	3,196,798
Portugal	1,648,158	944,494	453,181	70,613	3,116,446
Germany	974,727	38,370	1,478,632	102,735	2,594,464
Crotia	176,625	1,545,637	627,373	3,800	2,353,435
Letonya	37,691	0	1,409,778	525	1,447,994
Denmark	118,361	176,304	910,989	836	1,206,490
Slovenia	528,026	32,828	439,948	24,732	1,025,534
Finland	50,260	0	900,196	0	950,456
Sweden	351,360	1,869	565,458	680	919,367
Polland	310,256	30,914	547,238	13,471	901,879
Latvia	80,500	42	640,220	7,018	727,780
Estonia	299	0	461,009	0	461,308
Ireland	193,226	9,327	26,632	0	229,185
Grand Total	**53,309,332**	**44,348,170**	**49,572,355**	**3,501,558**	**150,731,415**

Source: Republic of Turkey Ministry of Transport and Infrastructure

In 2020, 22 million tons of exports and 78 million tons of imports, totally 99 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	3,121,770	619,791	51,560,330	1,638,988	56,940,879
Greece	6,664,953	1,740,434	9,512,244	751,959	18,669,590
Ukraine	4,312,758	1,930,506	9,143,699	1,522,429	16,909,392
Romania	3,611,431	751,640	3,146,899	756,717	8,266,687
Bulgaria	1,276,719	566,825	2,587,893	655,739	5,087,176
Georgia	1,025,101	1,084,238	1,514,715	427,969	4,052,023
Moldova	1,620,610	0	256,109	0	1,876,719
Albania	324,109	0	16,703	586	341,398
Azerbaijan	10,395	0	39,390	0	49,785
Grand Total	**21,967,846**	**6,693,434**	**77,777,982**	**5,754,387**	**112,193,649**

Source: Republic of Turkey Ministry of Transport and Infrastructure

2.7. World Container Fleet by Country of Domicile

The “country of domicile” examination (including container ships of 1000 GT and over) shows that at the beginning of 2020, 22,944,000 TEU of the container capacity was not registered in the country of domicile of the owner, but flagged out.

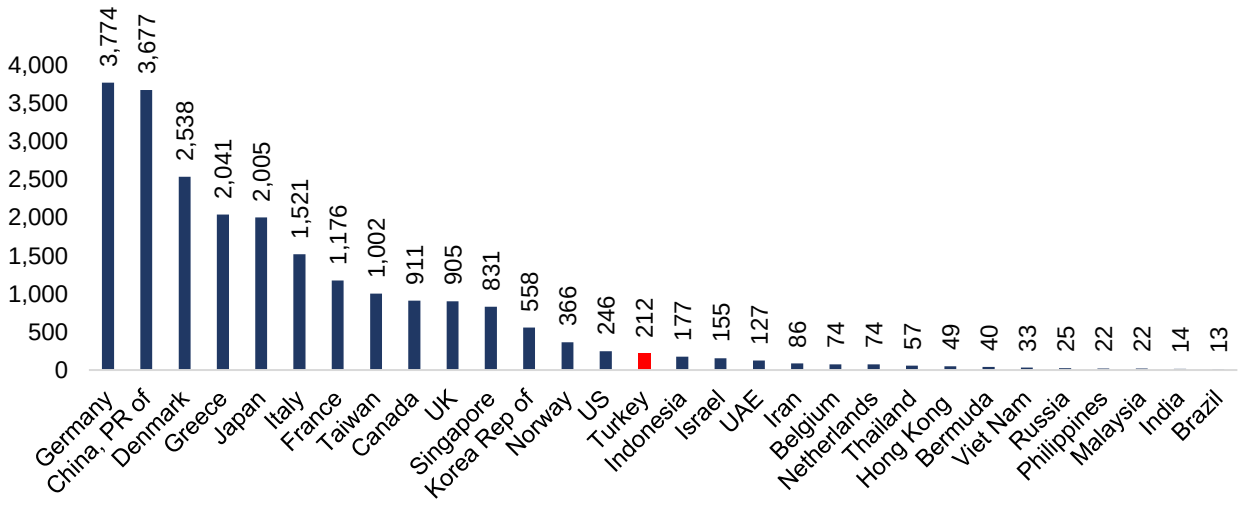
Table 35. World Full Container Fleet by Country of Domicile (1000 GT and over) 2020

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	Foreign Flag %
1	Germany	82	6,970	588	969	39.404	3.186	1,051	46,374	3.774	84.4
2	China, PR of	321	10,285	758	416	32.452	2.919	737	42,737	3.677	79.4
3	Denmark	140	15,343	1.407	208	14.011	1.132	348	29,354	2.538	44.6
4	Greece	6	536	48	472	24.522	1.993	478	25,058	2.041	97.7
5	Japan	24	2,385	231	292	20.023	1.773	316	22,408	2.005	88.5
6	Italy	0	0	0	221	18.340	1.521	221	18,340	1.521	100.0
7	France	30	2,798	239	120 I	10.824	937	150	13,622	1.176	79.7
8	Taiwan	46	2,189	174	210	10.190	828	256	12,379	1.002	82.7
9	Canada	1	15	1	112	10.440	910	113	10,455	911	99.9
10	UK	15	1,210	101	176	10.028	804	191	11,237	905	88.8
11	Singapore	104	3,744	291	136	6.479	541	240	10,223	831	65.0
12	Korea Rep of	84	1,825	140	97	5.130	418	181	6,956	558	74.9
13	Norway	0	0	0	76	4.410	366	76	4,410	366	100.0
14	US	29	930	69	53	2.288	177	82	3,218	246	71.9
15	Turkey	37	846	61	52	1.809	151	89	2,655	212	71.2
16	Indonesia	212	2,355	161	11	224	17	223	2,579	177	9.4
17	Israel	6	310	26	26	1.603	128	32	1,913	155	83.1
18	UAE	3	66	5	65	1.618	122	68	1,684	127	96.1
19	Iran	25	1,123	86	0	0	0	25	1,123	86	0
20	Belgium	4	210	17	19	722	57	23	932	74	76.9
21	Netherlands	32	350	28	35	579	46	67	929	74	62.2
22	Thailand	28	341	26	24	406	31	52	747	57	54.3
23	Hong Kong	15	268	20	24	401	29	39	669	49	59.7
24	Bermuda	-	-		4	372	40	4	372	40	100.0
25	Vietnam	39	422	30	4	43	3	43	465	33	9,3
26	Russia	16	114	10	8	205	15	24	319	25	61.0
27	Philippines	41	262	20	3	32	2	44	294	22	10,3
28	Malaysia	23	301	21	3	12	1	26	314	22	2,9
29	India	8	192	14	0	0	0	8	192	14	0
30	Brazil	5	176	13	0	0	0	0	176	13	0
Total 30 countries		**1,376**	**55,565**	**4,584**	**3,836**	**216,565**	**18,146**	**5,212**	**272,130**	**22,730**	**79.8**
Others		**47**	**493**	**37**	**63**	**606**	**48**	**110**	**1,099**	**85**	**56.4**
Unknown								**16**	**1,394**	**129**	
World Total								**5,338**	**274,623**	**22,944**	

Source: ISL January-February 2020

With respect to the owner countries, German shipowners control by far the largest part of the world container fleet, namely 3.7 million TEU (1,051 container vessels) followed by China 3.6 million TEU (737 container vessels) and Denmark 2.5 million TEU (348 container vessels).

Graph 24. World Full Container Fleet by Country of Domicile (1000 GT and over) 2020 (1000 TEU)



Source: ISL January-February 2020

TEU based container transportations in 2020 realized as follows in their respective subgroups; exports became 4.6 million TEU, imports 4.5 million TEU, cabotage loading-unloading 731,352 TEU and transit 1.7 million TEU.

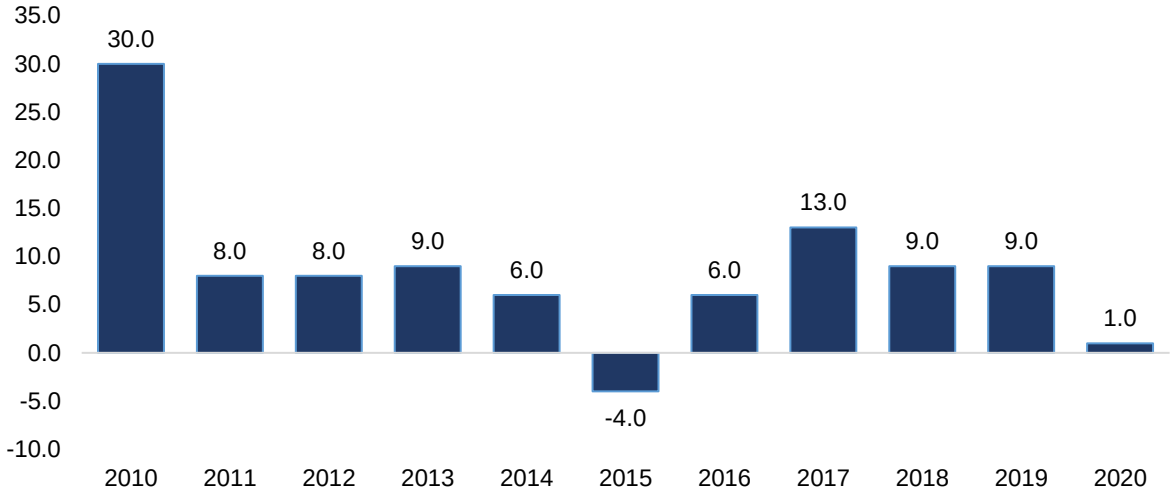
Transportation volume of Turkey's container transports by seaway was 5.7 million TEU in 2010; in 2020 it became 10.9 million TEU, at the same period imports cargoes increased to 4.5 million TEU from 2.3 million TEU and the exports cargoes increased to 4.6 million TEU when compared with 2.3 million TEU in 2010.

Table 36. Container Handling 2010-2020 (TEU)

Years	Loading (TEU)			Unloading (TEU)			Sea Born Trade (TEU)			
	Cabotage	Export	Total	Cabotage	Import	Total	Export + Import	Transit Handling	Total	Change (%)
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	30.0
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	8.0
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	8.0
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	9.0
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	6.0
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	-4.0
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	6.0
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	13.0
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	9.0
2019	359,958	4,594,647	4,954,605	393,309	4,540,201	4,933,510	9,134,848	1,703,722	10,838,570	9.4
2020	370,088	4,618,225	4,988,313	361,264	4,480,472	4,841,736	9,098,697	1,796,601	10,895,298	0.5
2020 Container Handling **11,626,650 TEU**										

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 25. Yearly Change of Foreign Trade Between 2010-2020 (TEU %)



Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 37. Port Authority Handled Container (TEU)

Port Authority	Export	Import	Cabotage Handling	Transit Handling	Total
Ambarlı	960,224	1,008,855	152,806	765,923	2,887,807
Mersin	950,273	916,304	40,283	41,836	1,948,695
Kocaeli	834,113	813,391	66,555	86,584	1,800,642
Tekirdağ	202,622	167,162	182,509	891,742	1,444,035
Aliağa	670,723	579,411	19,707	5,680	1,275,521
Gemlik	368,223	350,619	123,033	1,245	843,119
İskenderun	353,341	346,881	6,775	3,591	710,587
İzmir	213,567	194,235	28,584	0	436,385
Antalya	26,993	37,698	44,717	0	109,408
Samsun	27,752	47,039	31,491	0	106,282
İstanbul	9,967	18,508	13,111	0	41,586
Bandırma	0	222	12,965	0	13,187
Trabzon	381	114	5,206	0	5701
Marmara A.	0	0	2,214	0	2,214
Karabiga	0	0	1,399	0	1,399
Karasu	29	35	0	0	65
KDZ. Ereğli	18	0	0	0	18
Grand Total	**4,618,225**	**4,480,472**	**731,352**	**1,796,601**	**11,626,650**

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 38. Seaborne Export and Import, Transit Handling of Turkey and Country 2020 TEU

Country	Export	Import	Seaborn Trade	Transit Loading	Transit Unloading	Total Handling
Greece	454,459	759,517	1,213,976	39,371	57,651	1,310,997
Egypt	393,372	600,555	993,927	53,058	55,783	1,102,769
Israel	331,207	557,753	888,960	22,422	48,739	960,121
Spain	563,100	205,692	768,792	52,732	31,229	852,753
Belgium	336,580	207,515	544,095	22,282	17,458	583,834
Italy	259,905	216,189	476,094	27,728	13,593	517,415
Chine	192,224	147,965	340,189	51,986	94,494	486,668
Saudi Arabia	245,950	65,729	311,679	70,226	17,281	399,186
Russia	118,143	123,202	241,345	43,245	101,152	385,741
Georgia	73,563	130,370	203,933	90,589	31,929	326,451
Ukrania	85,534	57,364	142,898	84,203	89,647	316,748
Singapore	138,354	95,170	233,524	46,239	21,379	301,142
Libya	102,787	171,601	274,388	8,892	819	284,099
U.K.	176,454	71,136	247,590	6,927	17,777	272,294
Korea Rep.of	96,672	104,114	200,786	17,819	37,126	255,731
Romania	86,954	58,173	145,127	45,221	63,474	253,822
Lebanon	74,937	158,907	233,844	13,964	3,484	251,292
Malta	79,481	139,572	219,053	1,006	1,391	221,450
U.S.	120,010	80,090	200,100	8,729	10,076	218,905
Bulgaria	51,147	50,054	101,201	45,431	49,563	196,195
U.A.E.	92,453	31,045	123,498	54,485	13,878	191,861
Morocco	91,279	65,585	156,864	19,171	7,488	183,523
Algeria	51,881	62,816	114,697	7,978	541	123,216
Germany	69,724	36,736	106,460	3,306	8,767	118,533
Portugal	79,416	19,765	99,181	13,045	6,018	118,244
Other	252,640	263,860	516,500	65,650	80,160	662,310
Grand Total	**4,618,225**	**4,480,472**	**9,098,697**	**915,704**	**880,897**	**10,895,298**

Source: Republic of Turkey Ministry of Transport and Infrastructure

As of 2020, 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 25 countries are shown in the Table 38.

2.8. Vehicle Transportation Through Ro-Ro Lines

Ro-Ro lines of Turkey in 2020 are shown below. Table 20 above shows the amounts of the transported full vehicles (export and import) in the years 2020.

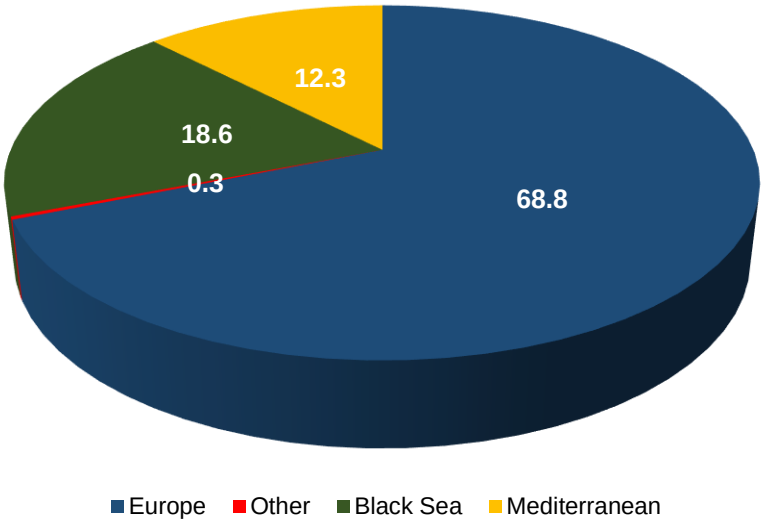
Table 39. Ro-Ro Lines Transported Vehicles 2020

Region	Lines	Incoming Vehicle	Outbond Vehicle	Total Transported Vehicle
Europe	Tuzla (Pendik) - Trieste	86,701	87,792	174.493
	Yalova - Sete	30,396	33,950	64.346
	Çeşme - Trieste	30,095	26,739	56.834
	Mersin - Trieste	17,946	16,937	34.883
	Yalova - Lavrio - Trieste	2,362	2,790	5.152
	Tuzla (Pendik) - Patras	1,997	886	2.883
	Tuzla (Pendik) - Bari	905	1,694	2.599
	Yalova - Bari	828	1,516	2.344
	Ambarlı - Trieste	124	1,134	1.258
	Çeşme - Sete	0	1,079	1.079
	Çeşme - Sakız Adası	142	545	687
	Kocaeli - Zeebrugge	0	646	646
	Kocaeli - Bremerhaven	3	120	123
	Total European Ro-Ro Lines	**171,499**	**175,828**	**347.327**
Black Sea	Samsun - Tuapse	17,737	20,703	38.440
	Karasu - Chornomorsk	10,256	12,279	22.535
	Samsun - Novorossiysk	5,381	6,062	11.443
	Zonguldak - Chornomorsk	6,086	4,552	10.638
	İstanbul (Haydarpaşa) - Chornomorsk	3,455	4,890	8.345
	Samsun - Temrük	1,257	1,300	2.557
	Total Black Sea Ro-Ro Lines	**44,172**	**49,786**	**93.958**
Mediterranean	Mersin - Gazimağusa	12,340	16,674	29.014
	Taşucu - Girne	8,315	9,106	17.421
	Taşucu - Trablus	5,027	5,085	10.112
	Mersin - Hayfa	1,287	1,370	2.657
	İskenderun - Duba	1,478	260	1.738
	Mersin - Darüsselam	0	362	362
	Taşucu - Gazimağusa	212	45	257
	Mersin - Girne	193	10	203
	İskenderun - Port Sudan	0	158	158
	İskenderun - Cidde	0	134	134
	Total Mediterranean Ro-Ro Lines	**28,852**	**33,204**	**62.056**
Other Ro-Ro Lines		274	1,137	1,411
Grand Total		**244.797**	**259,955**	**504,752**

Source: Republic of Turkey Ministry of Transport and Infrastructure

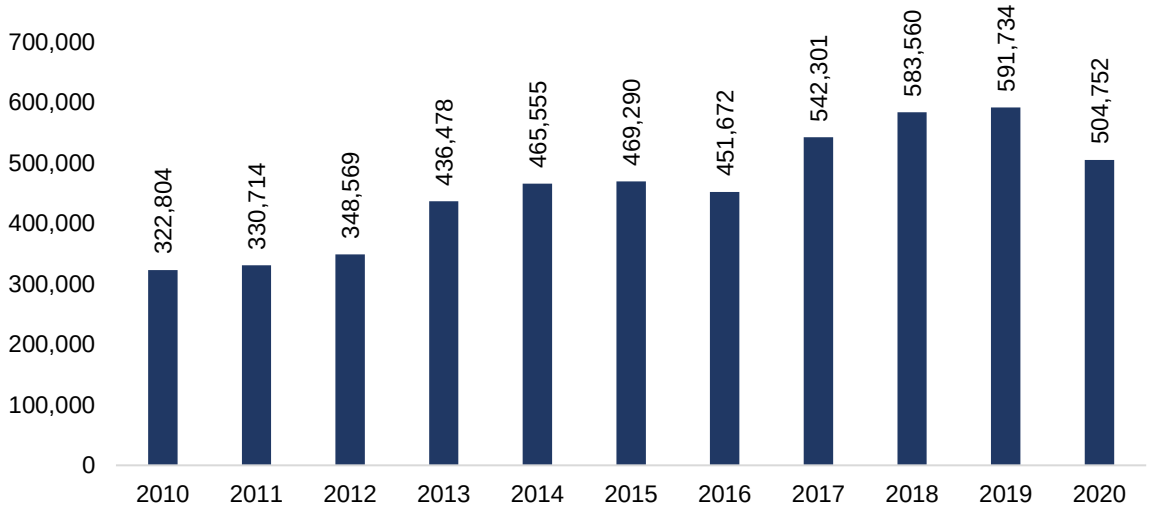
In the 13 European lines 347,327 vehicles have been transported in 2020. (69%)
In the 6 Black Sea lines 93,958 vehicles have been transported in 2020. (19%)
In the 10 Mediterranean lines 62,056 vehicles have been transported in 2020. (12%)

Graph 26. Ro-Ro Lines Transported Vehicles (2020)



Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 27. Ro-Ro Lines Transported Vehicles (2010-2020)



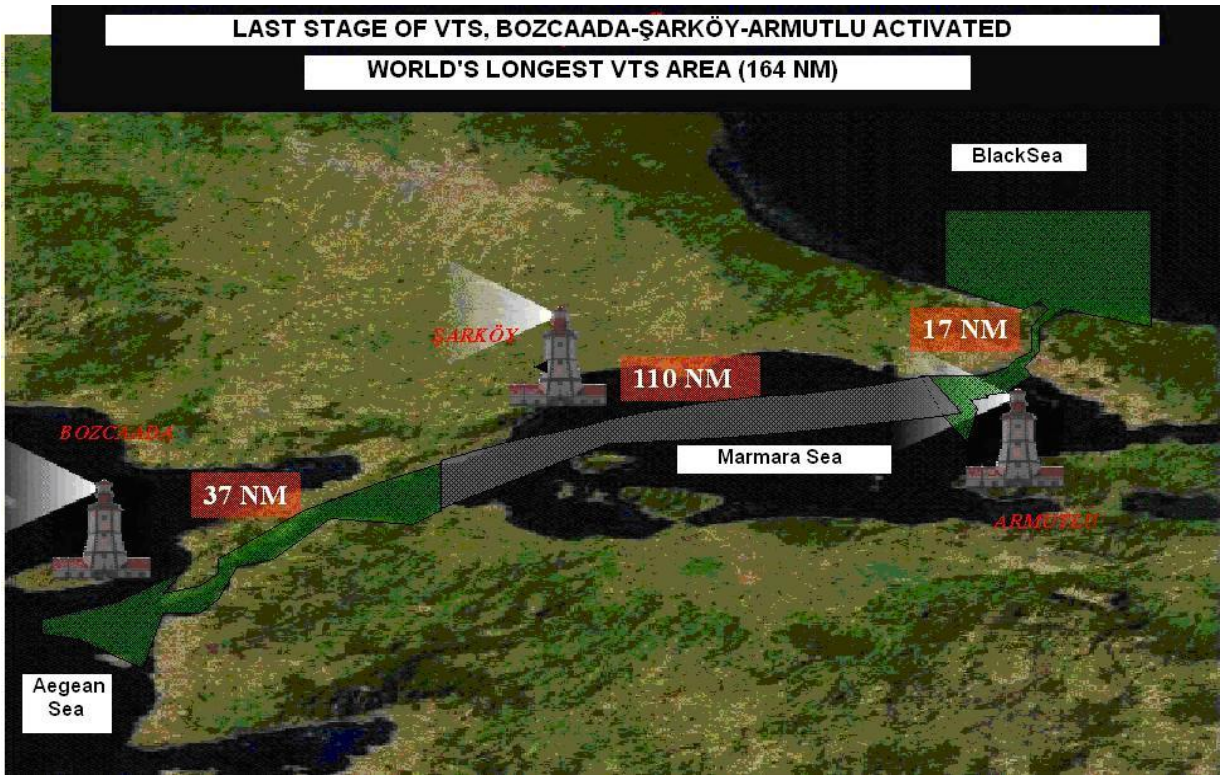
Source: Republic of Turkey Ministry of Transport and Infrastructure

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 İstanbul 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 İstanbul 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 İstanbul 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 İstanbul 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 İstanbul is unique as it runs through the city of İstanbul with more than 15 million inhabitants. The shoreline of İstanbul 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 İstanbul is more than 2500. More than 2.5 million people are daily in a movement at sea crossing from one side to another in İstanbul. İstanbul 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 2006-2020 are shown in Table below.

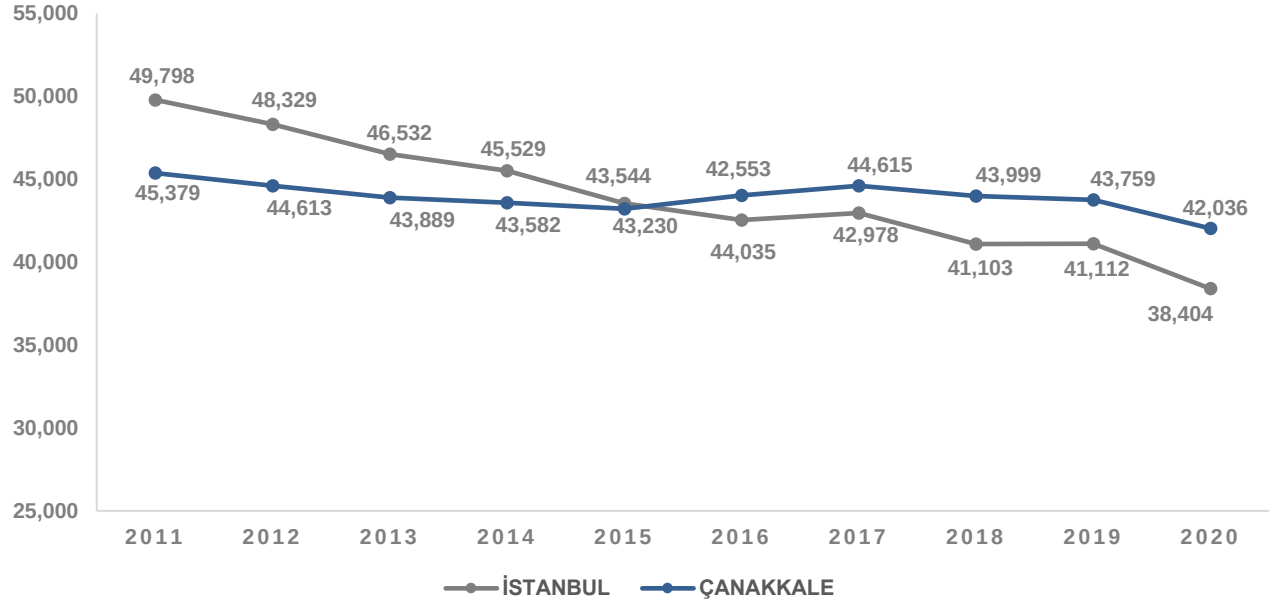
Table 40. Ships Passing Through the Turkish Straits (2006-2020)

Years	İstanbul			Çanakkale		
	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	3.1	49,913	611,885,819	2.0
2008	54,396	515,639,614	-3.9	48,978	657,396,892	-1.9
2009	51,422	514,656,446	-5.5	49,453	667,412,661	1.0
2010	50,871	505,615,881	-1.1	46,686	672,843,533	-5.6
2011	49,798	523,543,509	-2.1	45,379	705,412,518	-2.8
2012	48,329	550,526,579	-2.9	44,613	735,728,537	-1.7
2013	46,532	551,771,780	-3.7	43,889	745,567,671	-1.6
2014	45,529	582,468,334	-2.2	43,582	761,631,756	-0.7
2015	43,544	565,216,784	-4.4	43,230	777,989,382	-0.8
2016	42,553	565,282,287	-2.3	44,035	772,922,682	1.9
2017	42,978	599,324,748	1.0	44,615	823,460,636	1.3
2018	41,103	613,088,166	-4.4	43,999	849,140,218	-1.4
2019	41,112	638,892,062	0.0	43,759	872,312,222	-0.5
2020	38,404	619,758,776	-6.6	42,036	858,844,972	-3.9

Source: Republic of Turkey Ministry of Transport and Infrastructure and İMEAK Chamber of Shipping Calculations

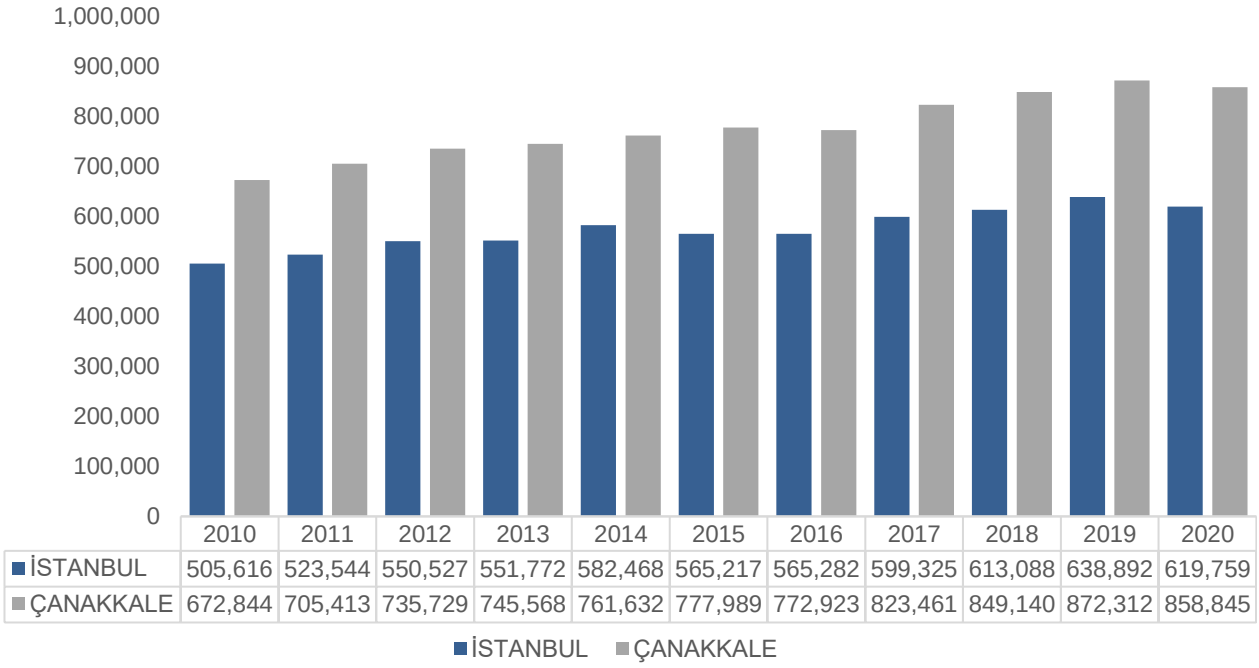
In the year 2020, 38,404 ships in total have passed through the İstanbul Strait with a monthly average of 3,200 ships; 42,036 ships in total have passed through the Çanakkale Strait with a monthly average of 3,503 ships.

Graph 28. Number of Ships Passing Through the Turkish Straits (2011-2020)



Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 29. 2011-2020 Ships Passing Through the Turkish Straits GT (1.000 GT)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
İSTANBUL	505,616	523,544	550,527	551,772	582,468	565,217	565,282	599,325	613,088	638,892	619,759
ÇANAKKALE	672,844	705,413	735,729	745,568	761,632	777,989	772,923	823,461	849,140	872,312	858,845

Source: Republic of Turkey Ministry of Transport and Infrastructure

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	İstanbul		Çanakkale	
	The Number of Tankers Carrying Hazardous Materials	The Amount of Hazardous Materials (tons)	The Number of Tankers Carrying Hazardous Materials	The Amount of Hazardous Materials (tons)
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
2020	8,435	139,244,513	9,372	157,193,034

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 İstanbul 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	3,438	54,457,208	2,336	3,412	2,146	409	24	530	42	244	1
February	3,125	51,573,297	2,071	3,110	1,995	376	24	439	37	242	4
March	3,171	54,428,594	2,041	3,156	2,107	461	37	498	43	212	7
April	3,480	55,429,405	2,158	3,462	2,306	443	28	482	41	245	6
May	3,224	50,285,634	1,971	3,212	2,127	392	18	459	57	236	8
June	2,786	42,305,884	1,722	2,764	1,759	339	37	378	44	237	5
July	3,049	49,957,064	1,946	3,027	1,918	378	30	424	56	219	2
August	3,141	51,621,940	2,031	3,128	2,032	417	29	391	41	185	9
September	3,150	50,366,442	2,018	3,133	2,005	405	32	402	33	176	9
October	3,340	54,865,494	2,159	3,316	2,167	478	41	428	48	205	9
November	3,255	51,838,707	2,126	3,234	2,079	425	29	397	44	236	2
December	3,245	52,629,107	2,175	3,221	1,982	429	45	424	44	216	5
Total	**38,404**	**619,758,776**	**24,754**	**38,175**	**24,623**	**4,952**	**374**	**5,252**	**530**	**2,653**	**67**

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	3,625	76,345,604	1,926	3,601	2,178	646	43	534	62	285	6
February	3,391	71,203,183	1,769	3,362	1,986	591	46	462	64	266	7
March	3,585	75,496,857	1,794	3,559	2,135	689	53	512	55	275	10
April	3,490	71,832,969	1,583	3,469	2,302	631	41	510	54	231	13
May	3,378	67,580,268	1,582	3,364	2,118	594	35	495	60	261	11
June	3,202	62,219,055	1,570	3,146	1,756	548	95	434	46	264	16
July	3,466	69,855,165	1,802	3,413	1,913	588	75	441	70	257	10
August	3,387	70,076,265	1,697	3,345	2,016	590	75	414	51	238	11
September	3,582	71,544,295	1,820	3,534	2,026	610	95	458	48	215	20
October	3,836	76,339,711	1,959	3,775	2,177	677	90	483	54	257	6
November	3,585	72,130,247	1,791	3,532	2,067	613	81	435	51	242	6
December	3,509	74,221,353	1,882	3,481	1,965	653	50	466	56	266	10
Total	**42,036**	**858,844,972**	**21,175**	**41,581**	**24,639**	**7,430**	**779**	**5,644**	**671**	**3,057**	**126**

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 44. (2016-2020) Statistics of Vessels Passed İstanbul Strait According to Their Ship Type

Ship Types	2016	2017	2018	2019	2020
General Cargo Ship	21,344	21,163	19,269	18,637	16,864
Bulk Carrier	7,664	8,206	8,501	8,811	8,592
Other Tanker, TTA	6,033	6,212	6,014	5,934	5,252
Container Ship	2,734	2,659	2,561	2,642	2,633
Chemical Tanker, TCH	1,681	1,878	1,950	2,462	2,653
Liquefied Petroleum Gas/Natural Gas Tanker, LPG/LNG	989	742	623	561	530
Livestock Carrier	585	544	508	530	555
Tug	237	262	384	270	175
Roll on Roll of Vessel	352	396	245	266	222
Passenger Ship	291	336	367	250	74
Naval	342	237	176	178	205
Vehicle Carrier	16	45	88	113	87
Refrigerated Cargo Carrier	40	46	34	59	52
Barge / Barge Carrier	6	18	3	9	15
Cement Carrier	4	6	12	9	18
Ferry	1	1	1	2	1
Other	234	227	367	379	476

Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 45. 2016-2020 Statistics of Vessels Passed Çanakkale Strait According to Their Ship Type

Ship Types	2016	2017	2018	2019	2020
General Cargo Ship	16,680	16,485	15,764	14,771	14,197
Bulk Carrier	8,060	8,585	8,916	9,204	9,170
Other Tanker, TTA	6,041	6,145	6,181	6,178	5,644
Container Ship	4,728	4,957	5,123	5,238	5,219
Chemical Tanker, TCH	2,559	2,599	2,368	2,996	3,057
Roll on Roll of Vessel	2,473	2,479	2,243	1,957	1,649
Vehicle Carrier	433	576	670	644	498
Livestock Carrier	653	627	601	592	593
Liquefied Petroleum Gas Tanker, LPG	755	652	595	539	542
Tug	365	365	398	365	306
Naval	335	271	217	216	211
Liquefied Natural Gas Tanker, LNG	126	82	103	130	129
Passenger Ship	190	49	55	101	26
Refrigerated Cargo Carrier	125	113	67	83	76
Barge / Barge Carrier	29	89	57	75	109
Ferry	29	24	30	26	26
Cement Carrier	0	6	14	10	17
Other	454	511	597	634	567

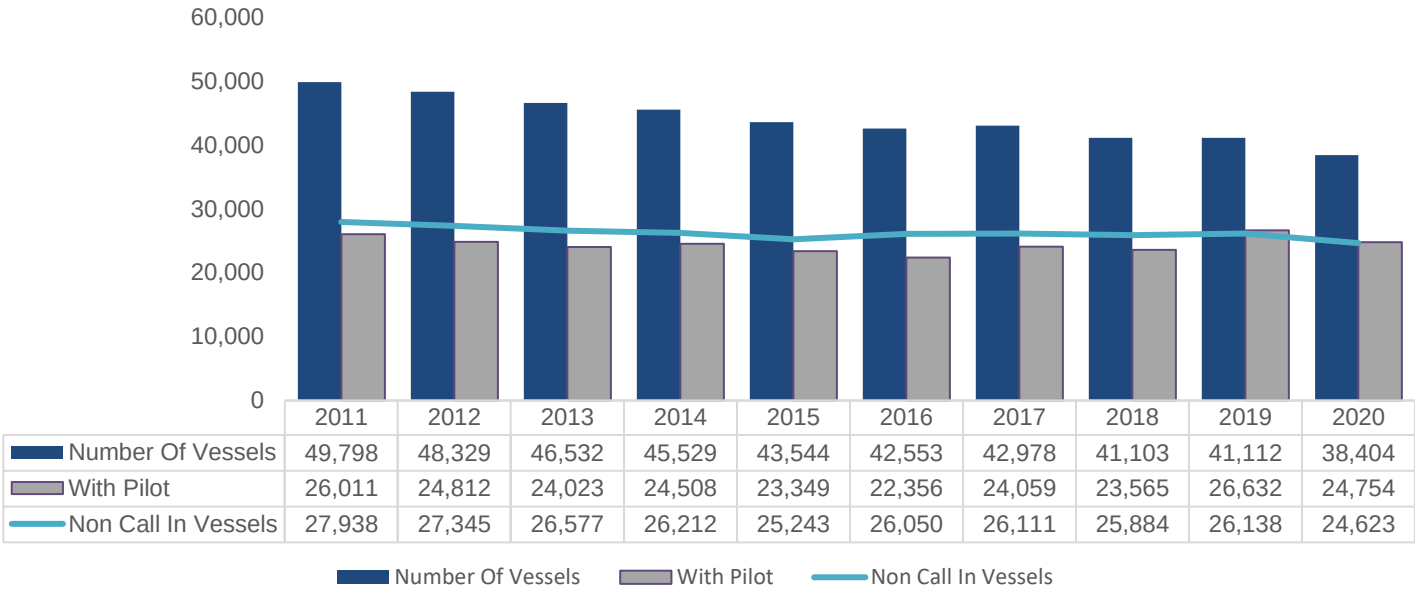
Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 46. 2006-2020 Years of Vessels Passed İstanbul 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
2020	38,404	619,758,776	24,754	38,175	24,623	4,952	374	5,252	530	2,653	67

Source: Republic of Turkey Ministry of Transport and Infrastructure

Graph 30. The Statistics Summary of Vessels Passed İstanbul Strait Number of Vessel, with Pilot and Non Call in Vessel



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Number Of Vessels	49,798	48,329	46,532	45,529	43,544	42,553	42,978	41,103	41,112	38,404
With Pilot	26,011	24,812	24,023	24,508	23,349	22,356	24,059	23,565	26,632	24,754
Non Call In Vessels	27,938	27,345	26,577	26,212	25,243	26,050	26,111	25,884	26,138	24,623

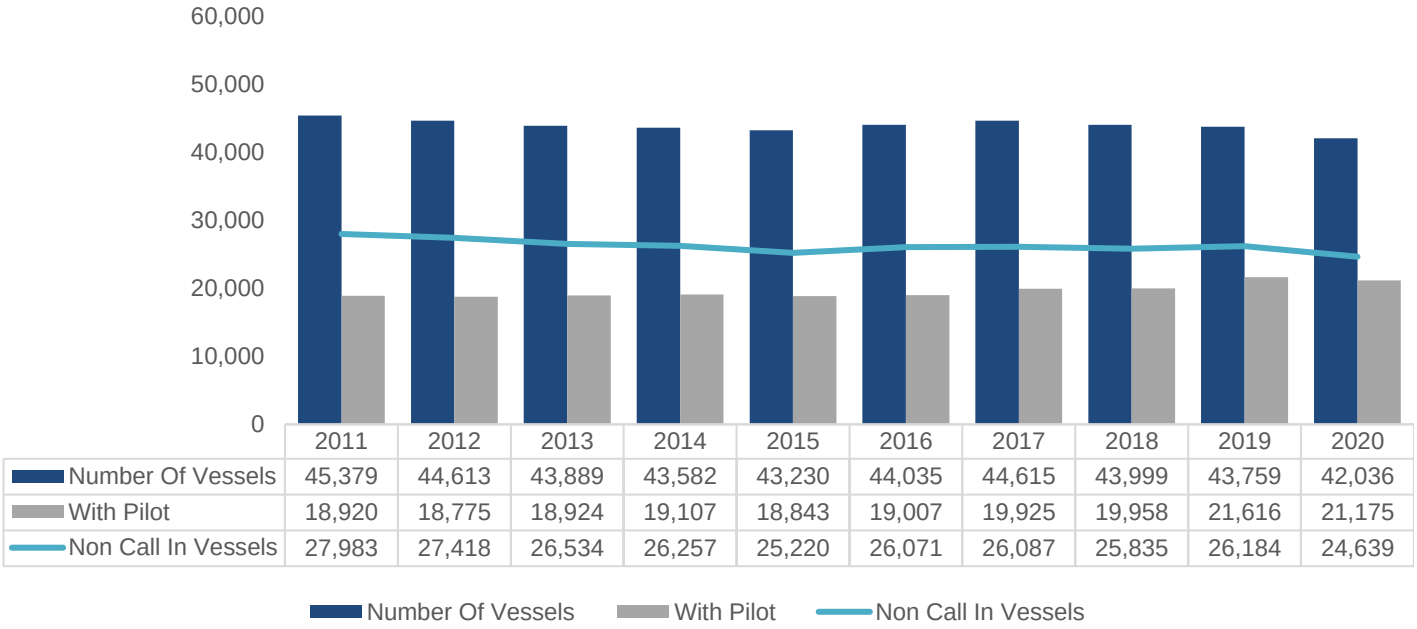
Source: Republic of Turkey Ministry of Transport and Infrastructure

Table 47. 2006-2020 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	872,312,222	21,616	43,321	26,184	7,010	714	6,178	669	2,996	138
2020	42,036	858,844,972	21,175	41,581	24,639	7,430	779	5,644	671	3,057	126

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



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Number Of Vessels	45,379	44,613	43,889	43,582	43,230	44,035	44,615	43,999	43,759	42,036
With Pilot	18,920	18,775	18,924	19,107	18,843	19,007	19,925	19,958	21,616	21,175
Non Call In Vessels	27,983	27,418	26,534	26,257	25,220	26,071	26,087	25,835	26,184	24,639

Source: Republic of Turkey Ministry of Transport and Infrastructure

3.2. Turkish Straits Vessel Traffic Services

Turkish Straits VTS, comprised of the Straits of İstanbul 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.

İstanbul 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 İstanbul, a Local Traffic Control Centre was established at the end of 2018.

CHAPTER IV

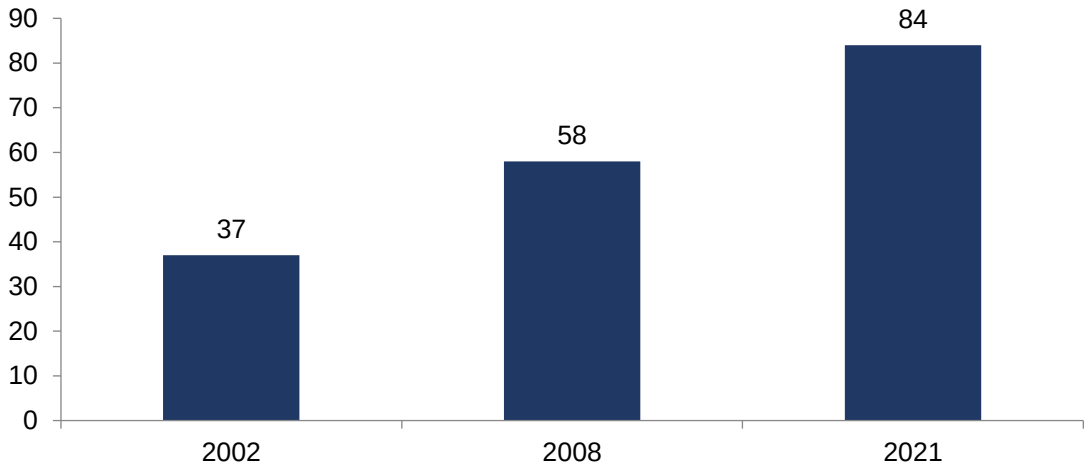
SHIPBUILDING INDUSTRY

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 84 as of March 2021 while it was only 37 in 2002. The quantity of shipyards under construction are 10 and 15 areas that are defined as shipyard investment areas of the same date mentioned above.The Covid-19 pandemic, within the the Global Economic Crisis, affected the Shipbuilding Sector adversely as well as many other sectors. The decrease in the order books caused a downfall both in employment and new investments, so most of the shipyards cancelled or postponed their modernization projects.

Graph 32. 2002 / 2021 Shipyards Under Operation



Source: Ministry of Transport and Infrastrucure 03/2021

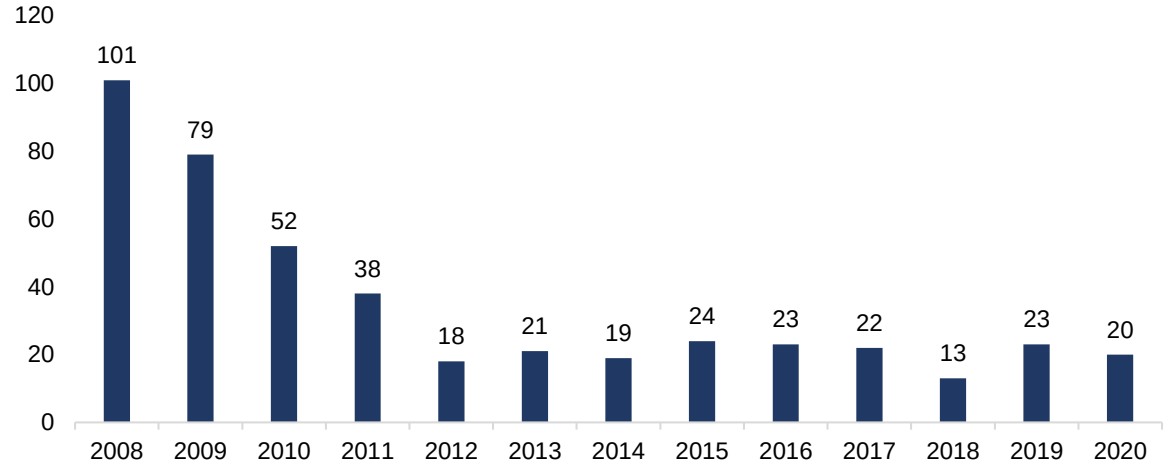
Shipbuilding industry is a branch of heavy industry which provides;

- 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.

In 2020, 20 ships DWT of 99,027 tons have been delivered.

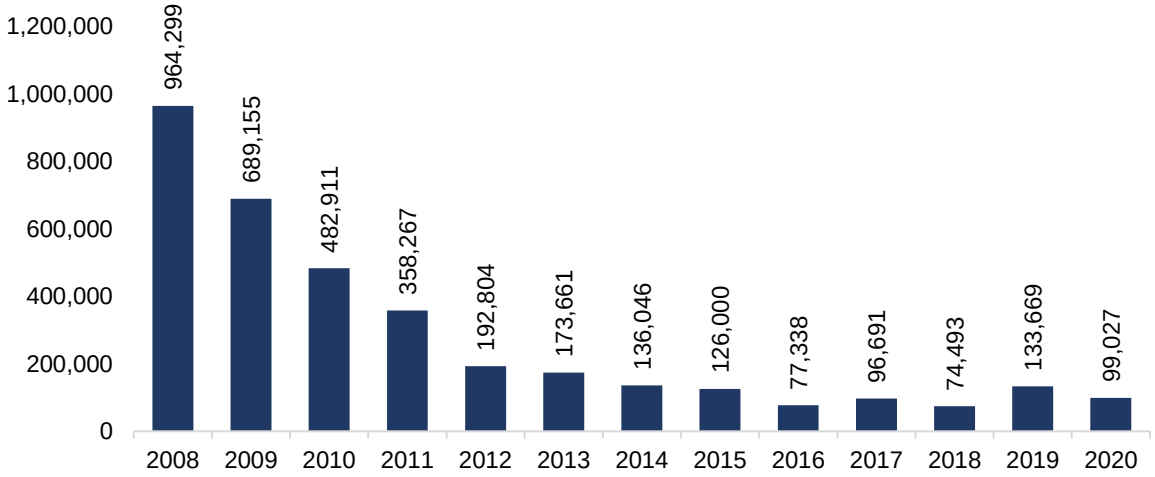
Some of the operative shipyards in Turkey still continue the modernization and extension operations but on the other hand, due to the global economic crisis, some of them suspend or cancel their modernization or extension projects because of the sanctions applied by the banks on the shipyards.

Graph 33. Number of Ships Delivered Between 2008-2020



Source: Clarkson Research Services 01/2021

Graph 34. DWT of Ships Delivered Between 2008-2020



Source: Clarkson Research Services 01/2021

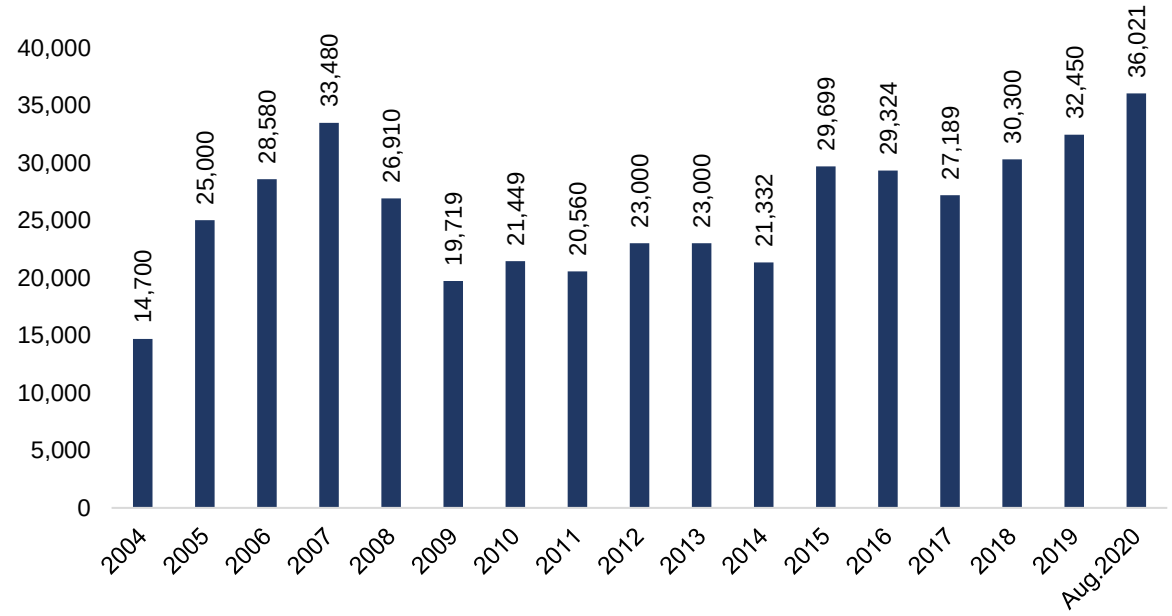
During the Covid-19 pandemic in 2020, it is evaluated that a total of 388 ship orders of 23.0 million DWT (1,000 GT and above) were taken in the first eight months and a 49% decrease was observed in the DWT scale compared to the previous year in the world. Deliveries were also affected, particularly in the first half of the year, due to travel disruptions, equipment supply problems, shipyard closures and financial stress on shipbuilders.

It has been reported that 827 ships of 59.7 million DWT (1,000GT and above) were delivered in the January-August 2020 period, showing a 13% decline compared to the same period of the previous year, but still close to 2018 levels.

According the report which was published by the General Directorate of Shipyards and Coastal Structures, the figures for the first quarter of 2020 in our country;

- An average of 33% loss of workforce is experienced,
- 85% of the design / production re-scheduling obligation has arisen,
- The activity intensity of shipyards has decreased by 54% on average,
- Shipyards' contracts for March have mainly decreased by more than 30%,
- It is determined that our shipyards are experiencing supply and liquidity problems.

Graph 35. Employee Numbers in Turkish Shipyards by 2020

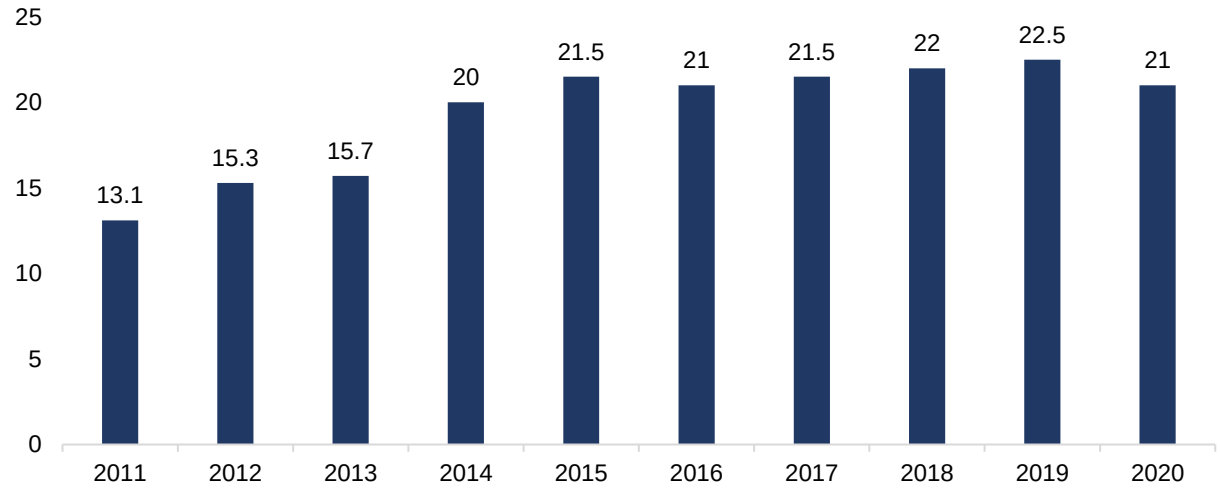


Source: Ministry of Transport and Infrastrucure 08/2020

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.

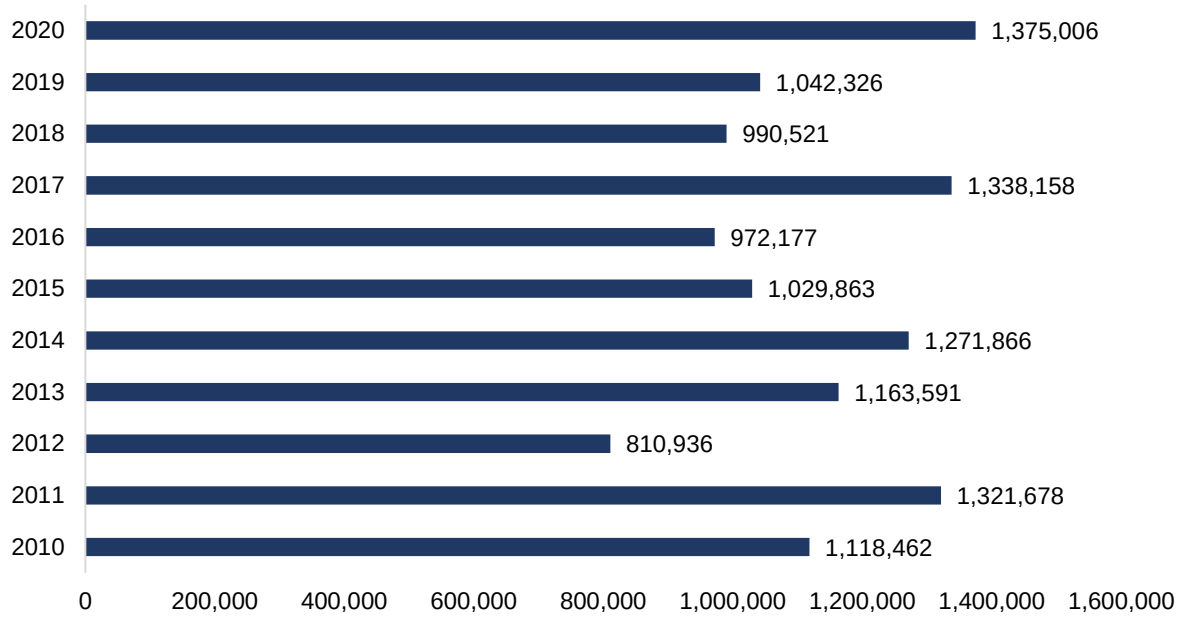
By the end of 2012, orders in our yards was decreased to 0.5 million DWT. Due to the lack of new orders, the shipyards are now mostly concerned, with repair and maintenance facilities. In 2013, in Turkish shipyards 15,755,206 DWT of repair and maintenance had been done. As of 2014, it was approximate 20,000,000 DWT and in 2020 it raised up to 21,000,000 DWT.

Graph 36. Repair and Maintenance Facilities According to Years (Million DWT)



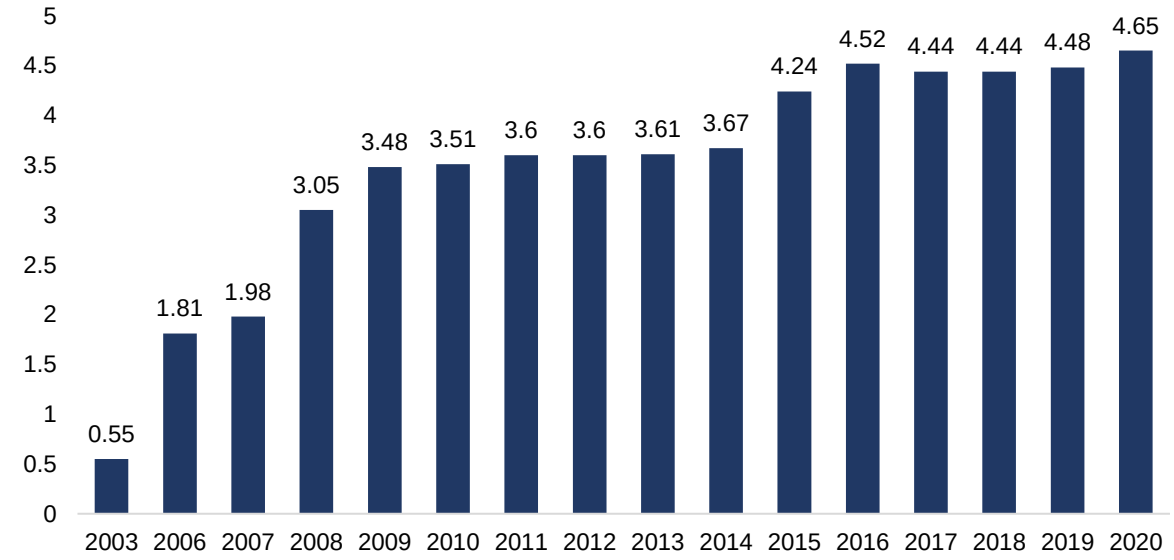
Source: Ministry of Transport and Infrastrucure 01/2021

Graph 37. Export Figures of Turkish Shipbuilding Industry (Thousand $), 2010-2020



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

Graph 38. Shipyards Project Capacities Between 2003-2020 (Million DWT)



Source: Ministry of Transport and Infrastrucure 01/2021

In 2002, our shipyard's capacity was 550,000 DWT. In 2020 it has reached up to 4.65 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 Onarım SAN. ve A.Ş.	Floating Dock	128x30 m	5
2	İstanbul	Gisan Gemi İnşa SAN. ve A.Ş.	Floating Dock	167x34 m	9
3	İstanbul	Çeksan Gemi İnşa Çelik Kons. SAN. ve TİC. A.Ş.	Floating Dock	130x29 m	7
4	İstanbul	Yardımcı Gemi İnşa A.Ş.	Floating Dock	155x36 m	8,5
5	İstanbul	Kuzeystar Shipyard	Floating Dock	217,5x14,81 m	80
6	İstanbul	Kuzeystar Shipyard	Floating Dock	197x39,6 m	45
7	İstanbul	Torlak Denizcilik SAN. ve TİC. A.Ş.	Floating Dock	67x28,4 m	7,5
8	İstanbul	İstanbul Denizcilik Gemi İnşa SAN. ve TİC. A.Ş.	Floating Dock	93x28 m	4,2
9	İstanbul	Snr Gemi İnşa Sanayi A.Ş.	Floating Dock	129x38 m	8,6
10	İstanbul	Desan Deniz İnşaat Sanayi A.Ş.	Floating Dock	172x36 m	19
11	İstanbul	Desan Deniz İnşaat Sanayi A.Ş.	Floating Dock	232x52	49,5
12	İstanbul	Desan 5442 Nolu Parsel	Floating Dock	178x36 m	19
13	İstanbul	Gemak Gemi İnşaat Sanayi ve TİC.A.Ş.	Floating Dock	233x45 m	28
14	İstanbul	Gemak Gemi İnşaat Sanayi ve TİC.A.Ş.	Floating Dock	170x33 m	9
15	İstanbul	Hidrodinamik Gemi SAN. ve TiİC. A.Ş.	Floating Dock	115x22 m	2,75
16	İstanbul	Gemsan Gemi ve Gemi İşletmeciliği SAN. ve TİC. LTD. ŞTİ.	Floating Dock	220x45 m	20
17	İstanbul	Çindemir Makine Gemi Onarım ve Tersanecilik A.Ş.	Floating Dock	123x28 m	5
18	İstanbul	Erkal Uluslararası Nakliyat ve Ticaret A.Ş.	Floating Dock	350x80 m	100
19	İstanbul	Torgem Gemi İnşaat San. ve TİC. A.Ş.	Floating Dock	53x20 m	2,5
20	İstanbul	Turquoıse Yat SAN. Aş	Floating Dock	66x27 m	2,5
21	İstanbul	Tersan Tersanecilik ve Taşımacılık SAN. ve TİC. A.Ş.	Floating Dock	130x30 m	7,1
22	Yalova	Beşiktaş Gemi	Floating Dock	230x37 m	22
23	Yalova	Beşiktaş Gemi	Floating Dock	382x66 m	70
24	Yalova	Tersan Tersanecilik SAN. ve TİC. A.Ş.	Floating Dock	178x35 m	9
25	Yalova	Tersan Tersanecilik SAN. ve TİC. A.Ş.	Floating Dock	253x60,9 m	11,37
26	Yalova	Doğruyol Tersanecilik SAN. ve TİC. A.Ş.	Floating Dock	123x30 m	5,5
27	Yalova	Hat-San Gemi İnşaa Bakım-Onarım Demir Nak. SAN. ve TiİC. A.Ş.	Floating Dock	180x30 m	10
28	Yalova	Sanmar Tersanesi	Floating Dock	84x34 m	3,5
29	Yalova	Sefine Denizcilik Tersanesi SAN ve TİC. A.Ş.	Floating Dock	240x57 m	11,227
30	Yalova	Yaşarsan Gemi İnşaat San. ve TİC. LTD. ŞTİ.	Floating Dock	183x33	10
31	Kocaeli	Uzmar Gemi İnşaat SAN. ve TİC. A.Ş.	Floating Dock	68x38 m	2
32	Kastamonu	İnebolu Denizcilik SAN. ve TİC. A.Ş.	Floating Dock	118x29 m	4,5
Total Capacity: 598,247 Tonnes					

Source: Ministry of Transport and Infrastrucure 01/2021

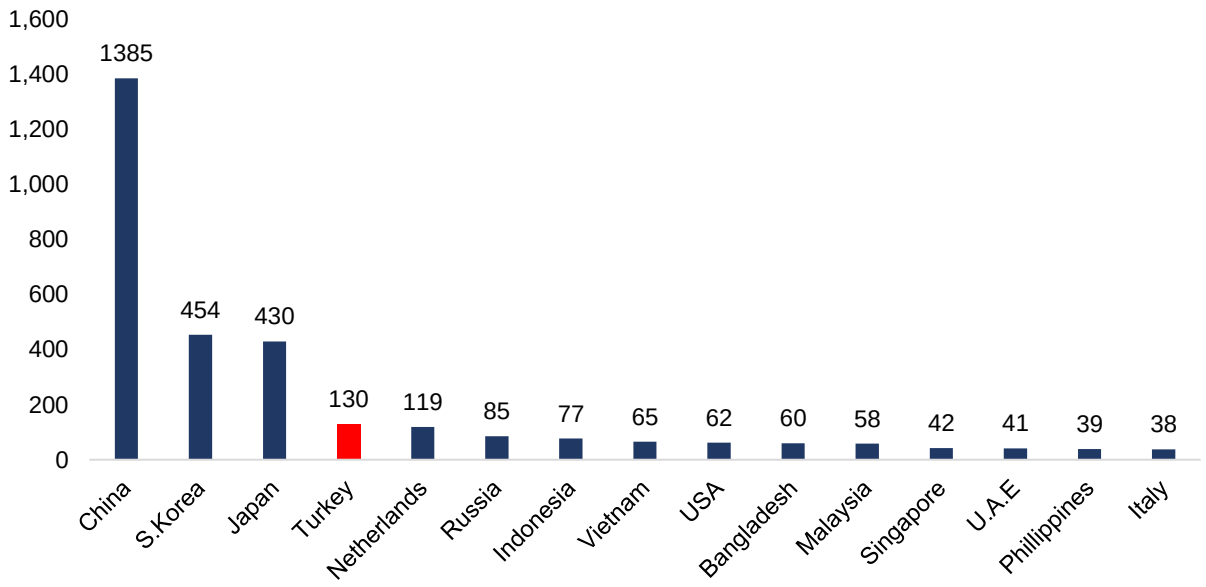
Table 49. Floating and Dry Docks in Turkey

NO	City	Operator	Floating / Dry Dock	Dimensions
1	İstanbul	İstanbul Şehir Hatları (Haliç)	Dry Dock	109x22,5
2	İstanbul	İstanbul Şehir Hatları (Haliç)	Dry Dock	81,5x17
3	İstanbul	İstanbul Şehir Hatları (Haliç)	Dry Dock	151x16
4	İstanbul	Ursa Gemicilik Bakım Onarım Tersanecilik SAN. TİC. A.Ş.	Dry Dock	56x14 m
5	İstanbul	İstanbul Tersane Komutanlığı (Pendik Tersanesi)	Dry Dock	300X69
6	İstanbul	Tuzla Gemi Endüstrisi A.Ş.	Dry Dock	300x53 m
7	İstanbul	Sedef Gemi İnşaatı A.Ş.	Dry Dock	315x50 m
8	İstanbul	Deniz Endüstrisi A.Ş.	Dry Dock	210x37 m
9	Yalova	Sefine Denizcilik Tersanecilik Turizm San. ve TİC. A.Ş.	Dry Dock	240x40 m
10	Yalova	Beşiktaş Gemi (A-10)	Dry Dock	235x40x6,5 m

Source: Ministry of Transport and Infrastrucure 01/2021

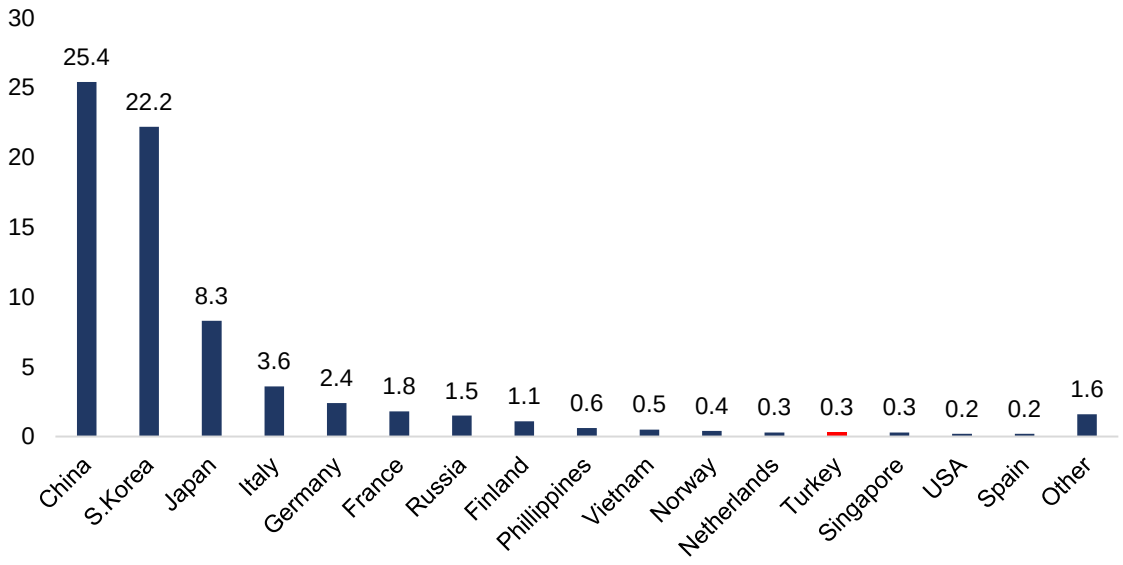
According to quantity, Turkish shipyards are in the 4th place in the world ranking according to quantity.

Graph 39. Orderbook by Builder Country (Quantity)



Source: Clarkson Research Services 01/2021

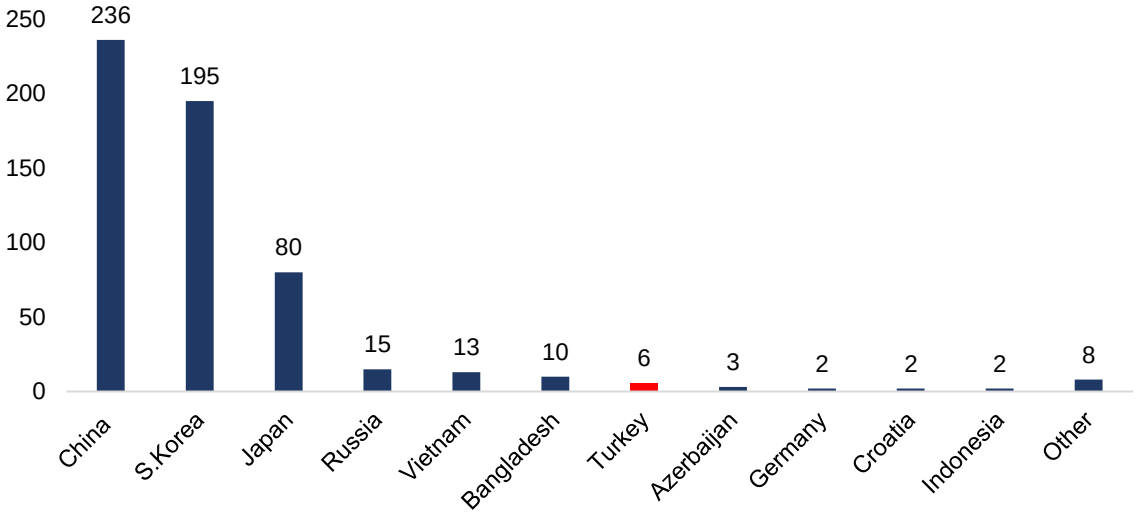
Graph 40. Orderbook by Builder Country (Tonnage - Million CGT)



Kaynak: Clarkson Research Services 01/2021

Our shipyards have a good reputation in building of small and medium tonnage chemical tankers. By January 20201, Turkey was in the 7th place according to quantity among the countries which take tanker orders.

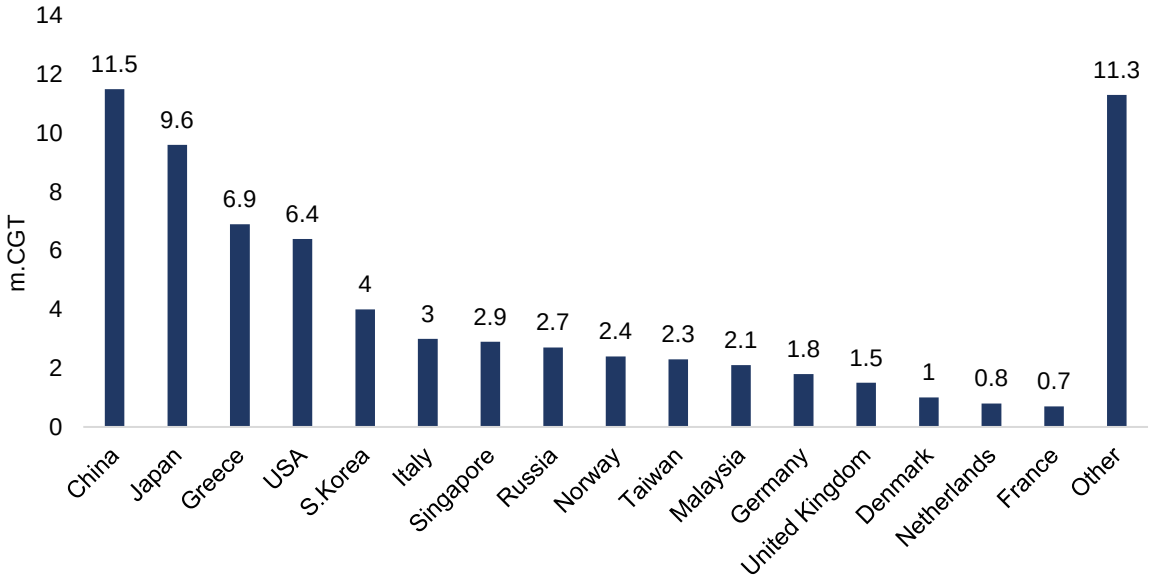
Graph 41. Tanker Orders by Builder Country (Quantity)



Source: Clarkson Research Services 01/2021

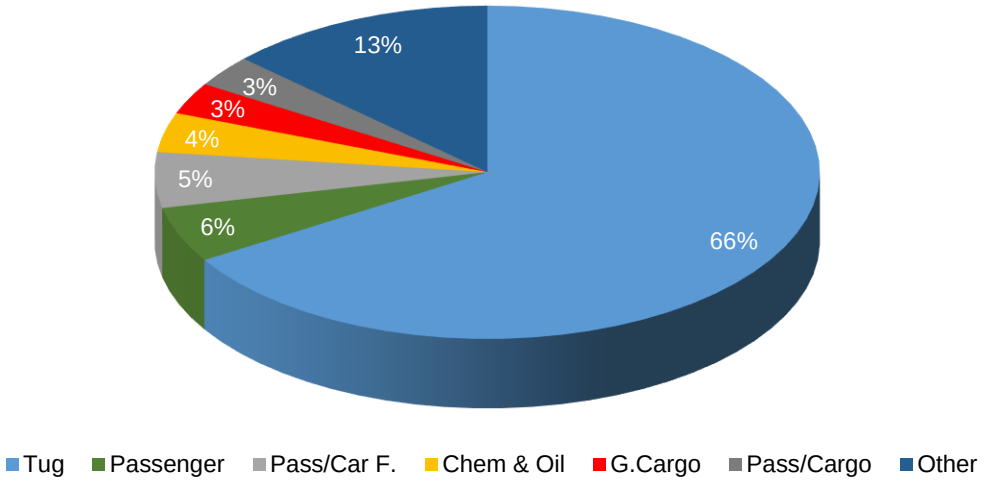
Turkish shipowners worldwide orders consist of 95 ships about 1,16 million DWT as of January 2021.

Graph 42. Orderbook by Owner Country



Source: Clarkson Research Services 01/2021

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



Source: Clarkson Research Services 01/2021

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[2];

1. MİLGEM (National Ship)

Within the scope of the Project, corvette type navy ship has been realized using national resources for the first time, and thereby, external dependence in ship design, shipbuilding and system integration has been reduced and through the integration of military shipbuilding with private sector ship design, shipbuilding means and capabilities, the private industry has been provided with the necessary know-how, experience and infrastructure.

Around 70% of local industry participation was realized in our project and more than 50 domestic companies have been provided with business opportunities within the scope of the entire project.

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 Multipurpose Amphibious Assault Ship (LHD) will be utilized in the Aegean, Black Sea and the Mediterranean operational areas, and if necessary, the Indian Ocean (north of the Arabian Peninsula and west of India) and the Atlantic Ocean (west of Europe and northwest of Africa).

The Multipurpose Amphibious Assault Ship, the TCG ANADOLU, can transport one amphibious battalion as well as carrying the necessary combat and support vehicles to the crisis regions without the support of the main base, taking part in landing operations with the landing vehicles it carries in its well-deck and providing the opportunity for the heaviest NATO helicopters in its inventory together with the tilt-rotor Osprey aircrafts to take part in day and night operations with its flight deck.

Additionally, the TCG ANADOLU on which tactical aircraft capable of Short Take Off and Vertical Landing (STOVL) like F-35B can deploy will be able to transform the regional force projection (transfer) capability of the Republic of Turkey into a medium-scale global force projection capability. The TCG ANADOLU will have an infirmary/hospital including an operating room, x-ray equipment, dental treatment units, intensive care and infection rooms with a capacity of at least 30beds and will be able to serve as a hospital vessel in humanitarian operations.

[2] 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

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)

The main mission of the Landing Ship Tank (LST) is amphibious operations, vehicles, and equipment with unit transport and fire support. In addition to contributing to operations and logistics missions with advanced communications, electronic and command control facilities, the vessels are equipped with facilities and capabilities to carry out natural disaster relief missions when necessary.

The LST amphibious ships, built as a mono hull, displacement type with all-steel construction, have full personnel protection against nuclear, biological and chemical attacks, as well as a helicopter platform to allow the landing and take-off of a 15-ton general purpose helicopter.

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.

MOSHIP will provide life support to the personnel of a damaged submarine with the National and NATO deep water rescue vehicles and will enable the rescue of submarine personnel up to 600-meter depth as well as undertaking surface ship rescue missions, underwater operations and wreckage removal work.

Despite the fact that its main mission is to save the crew from a sinking submarine, our ship is equipped to detect very deep underwater vehicles (submarines, airplanes, ships) and can save all personnel by providing life support up to 72 hours and 600-meter depth.

5. Coast Guard Search & Rescue Boat

Coast Guard Search and Rescue Boats are designed to carry out important missions such as:

1. Search and rescue missions under turbulent weather conditions on our surrounding seas.
2. Prevention of sea smuggling and illegal immigration.
3. Conducting inspections for environmental and marine pollution and preventing illegal aquaculture fishing.

Another goal of the project is to provide private sector shipyards with design competence and building capability in the field of military shipbuilding.

6. New Type Patrol Boat (YTKB)

With regard to the requirements of the Naval Forces Command, 16 boats are to be procured to meet the mission, surveillance, patrol and naval defense mission (DSH) functions on the straits, bases, harbor approach waters and areas close to the shores as well as contributing to base and port defense mission functions.

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

7. New Type Submarıne 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.

Using the products of our local companies for the first time on submarine platform is supported in the scope of the Project, within this framework our industry has been ensured to take part in many fields including submarine design capability.

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.

It is planned to use weapons and sensor systems developed before or for the first time in our country, and within this scope, foreign source dependency in terms of combat systems can be reduced to a minimum in the Project scope.

The modernization of the first ship will be completed and the ship will commence service in first quarter of 2022.

9. Preveze 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.

It is planned to use weapons and sensor systems developed for the first time in our country, and within this scope, foreign source dependency in terms of combat systems can be reduced to a minimum in the Project scope.

The modernization of the first submarine will be completed and the submarine will commence service in 2023.

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;

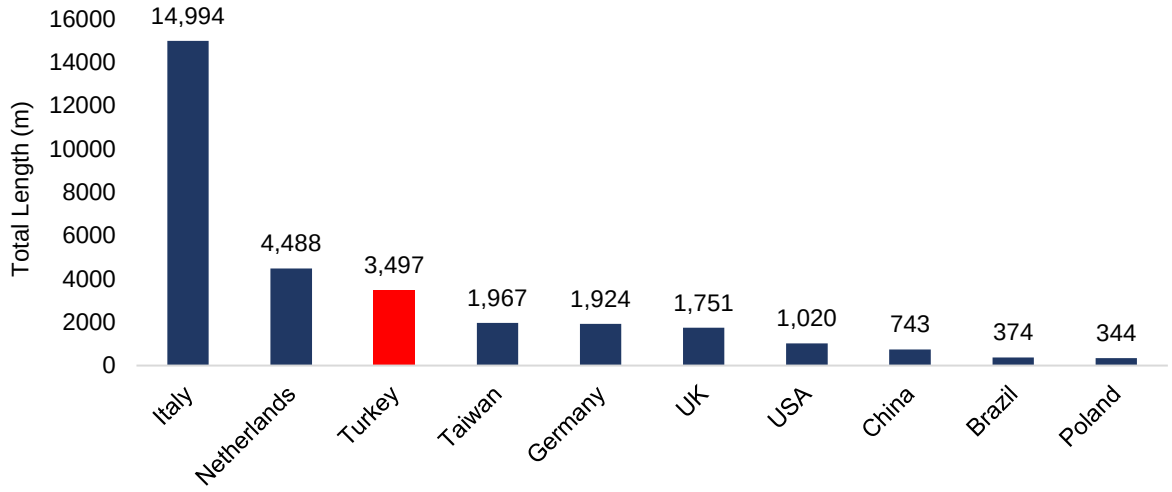
- Educated and competent labour
- Production quality in accordance with international standards
- Reasonable costs
- Adequate sub industry with quality
- Technology basis production
- Closeness to theinternational markets
- Appropriate climate
- Our country’s potential in boat&yacht building

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 3,594 meters at the end of 2017. By 2019, moved to fourth place with the total length of 3,000 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. By 2021, Turkey keeping its position in the 3rd position with the total length of 3,497 meters.

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



Source: Boat International (2021 Global Order Book)

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
- Paint

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 2020, employement in the sub-industry declared to be 97,250 persons.

CHAPTER V

SHIP RECYCLING INDUTSRY

5. SHIP RECYCLING INDUTSRY

Aliağa region, located in the city of İzmir, is in the leading position for ship breaking and recyling activities with 22 operative facilities. Ship Recylcling Industry is a part of maritime sector that find sitself between the withdrawal of ship swhich have completed their economic live sand the replacement of them with the ones based on new technologies, environmentally friendly, high operating efficient, reducing the risks of marine operations.

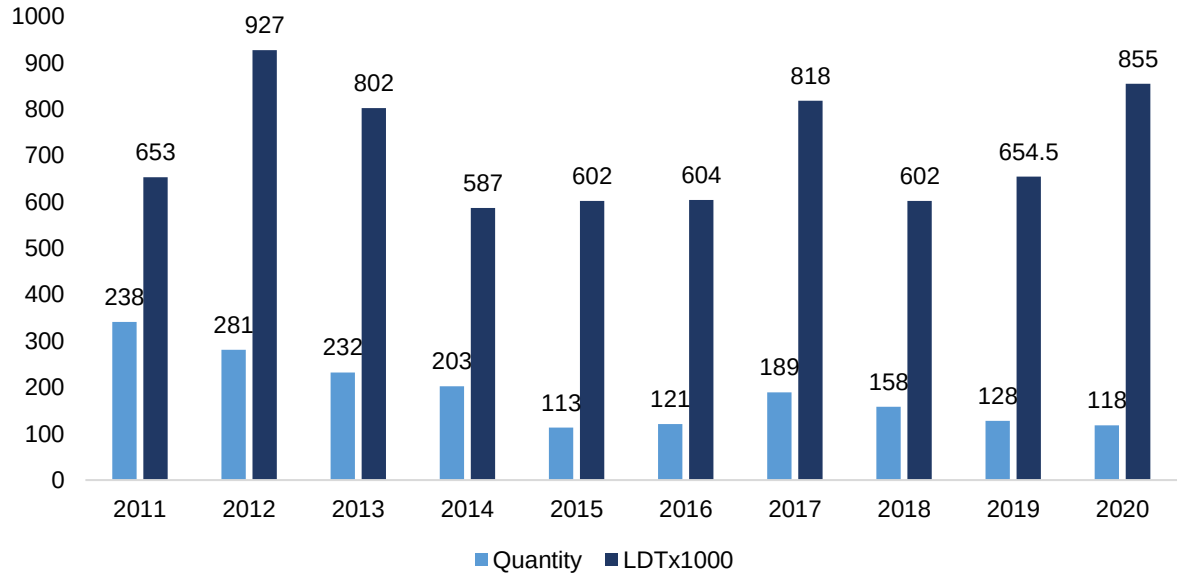
Generally a ship's useful economic life period ranges between 20-35 years and when scrap steel was recovered it's estimated that,

- Energy saving ratio is 74%, raw material resources preserved by 90%
- 40% less water consumption
- 76% less sewage pollution, 86% less air pollution, 97% less mine residue observed.

The main advantages of Turkey's ship recycling industry which has a prestigious place in World ranking can be summarize as follows:

- Qualified labour force and closeness to the Europe Market
- Within the Mediterraneanbas inTurkey is the only country with ship recycling in dustry
- Turkey is the only OECD Member country which has shipre cycling in dustry
- There is a demand in the country for the qoods obtained by recycling
- Entrepreneur being of Turkish bussinessman and skilled workers
- Advantages by the Basel Agreement as an OECD member country
- Position in EU Ship Recyclers' List with the most number of facilities

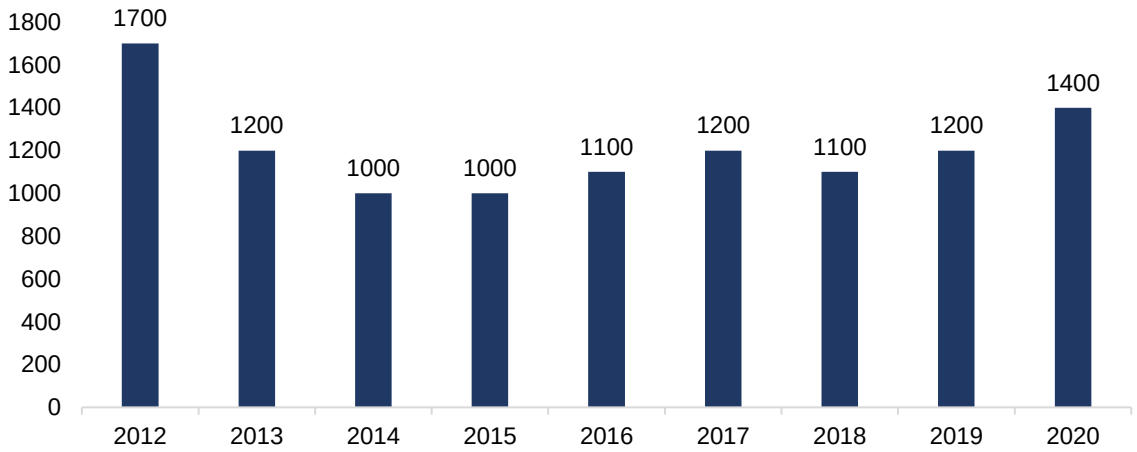
Graph 45. Turkey's Ship Recycling Values by the Year



Source: Ship Recyclers' Association of Turkey (GEMİSANDER)

Ship Recycling Industry makes positive impact to the Dynamics within the maritime sector. Bybalancing the fleet tonnage it also effects the freight index. Provides new orders for ship building industry. As a labor-intensive sector, Turkish ship recycling industry with the technical supports and advertising activities to raise international recognition, provides direct employment opportinity to 1,400 persons and several times more by being a supplier and sub-contractor of iron-steel industry as of 2020.

Graph 46. Employee Figures in Turkey'sShip Recycling Industry (Person)

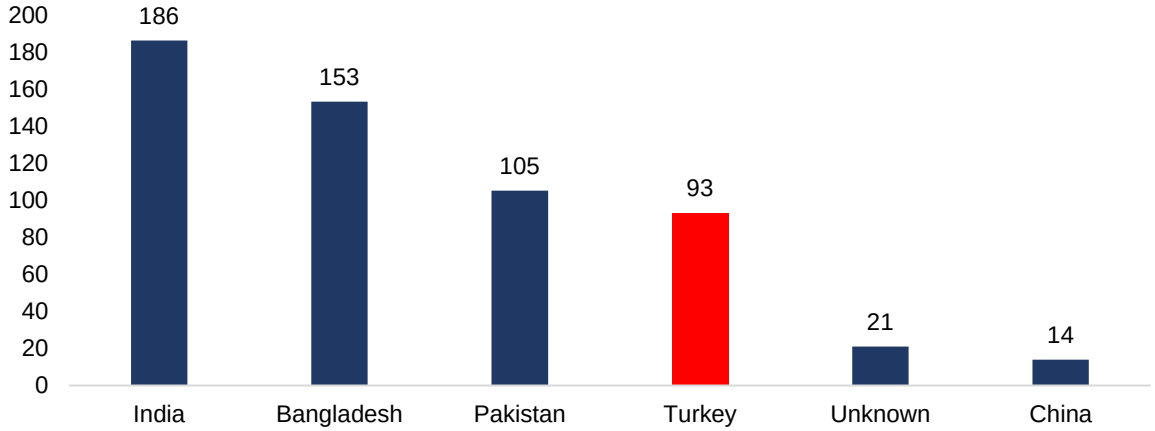


Source: Ship Recyclers' Association of Turkey (GEMİSANDER)

By the EU Ship Recycling Regulation (EU SRR) which has came into force on 31 December 2018, its forbidden that EU flag vessels can not be recycled in the facilities that isn't in the list of "European List of Ship Recycling Facilities." At first Turkey entered the above mentioned list with 3 facility then it raised up to 8 in 2020.

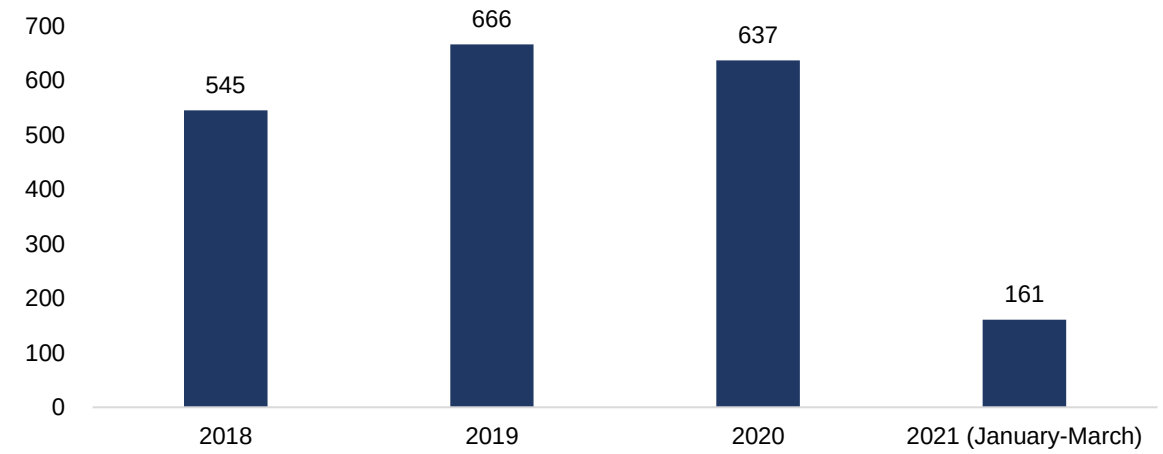
Accoarding to global data, Turkey is in the 4th place in ranking according to quantity by the end of 2020.

Graph 47. Global Ship Recycling According to Quantity (Quantity)



Source: Clarksons Research Services Limited

Graph 48. Recycled Ship Numbers by Years

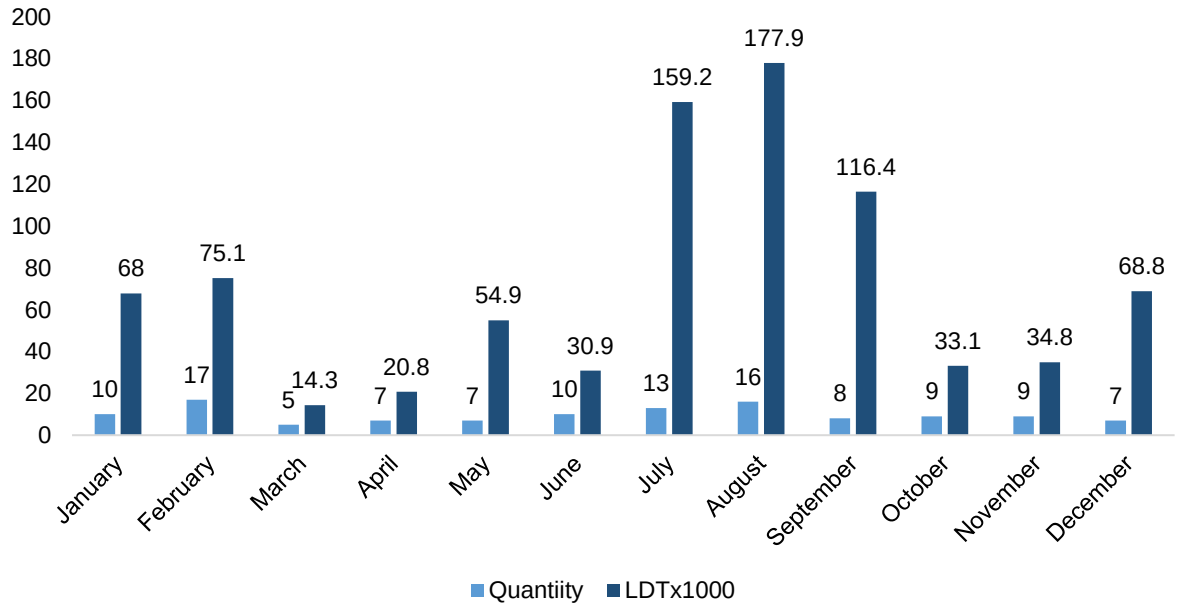


Source: Clarksons Research Services Limited

Like all other participants in the maritime sector, ship recycling has also effected from the Covid-19 global pandemic Inparallel to hygiene and social distance precautions, employee numbers in ship recylcing industry reduced and it's estimated that the related sectors employees declined by half when compared to the pre-pandemic period.

In the first three months of the year, 32 ships had been recycled. During this period scrap material needs of the iron-steel factories among the region have been supplied. When its compared to the same period of the previous year 140,000 tons of decrease was observed.
By the end of 2020, Turkey's ship recycling facilities achieved to recycle 118 ships with the tonnage of 855,000 LDT.

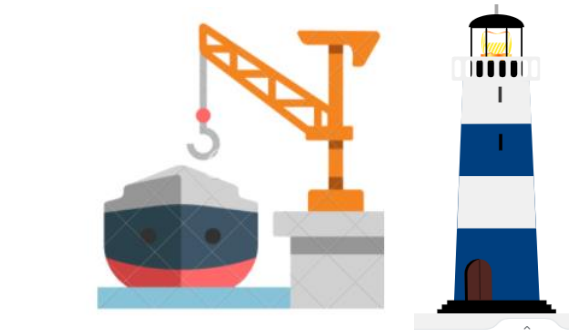
Graph 49. Ship Recycling by Months in Turkey During 2020

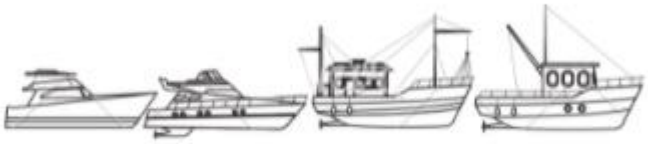


Source: Ship Recyclers' Association of Turkey (GEMİSANDER)

CHAPTER VI

COASTAL STRUCTURES





6. COASTAL STRUCTURES

6.1. General Situation of Coastal Structures in Our Country

Coastal areas have been the first preferred areas for socio-cultural and economic activities for human beings since the existence of the world. Today, by becoming the intersection point of the activity areas of water and land ecosystems, transportation, tourism, industry and so on. It offers usage possibilities in many different areas.

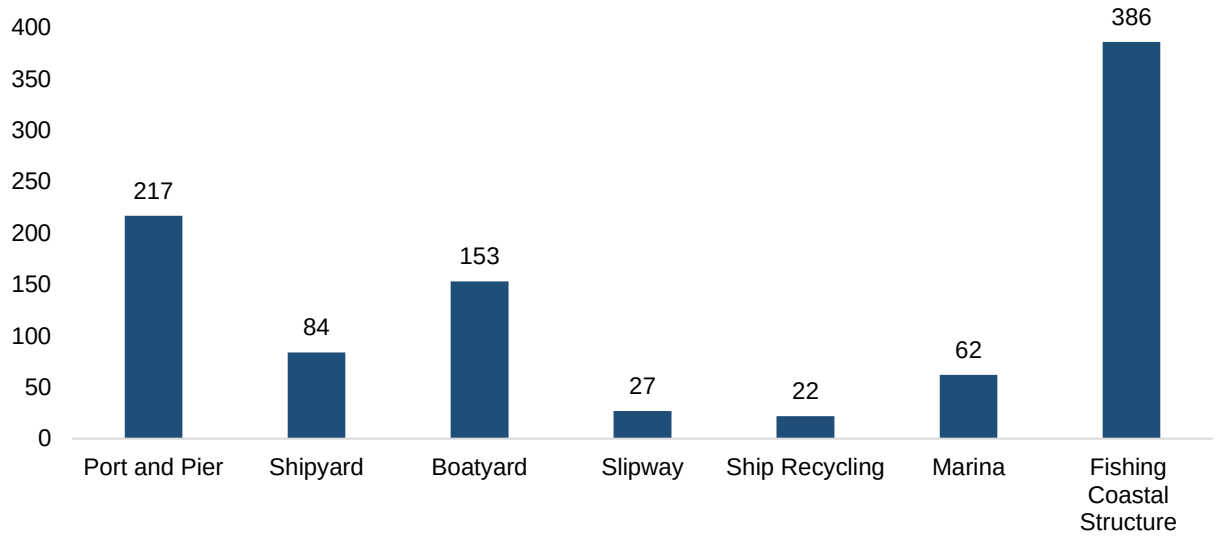
In the emergence of the developments in national and international investment policies on our coasts; Some legal arrangements made with certain economic developments and industrial demands had a significant impact. Especially after 1997, with the opening of the way for private port investments on the coasts, there was an explosion of demand in this area. In the process until today, apart from the privatized public ports, the expansion of the new port areas and the expansion projects of the piers in the industrial zones on the seashore such as Kocaeli, İskenderun and Aliağa, and the expansion of the port areas.

In 2010, the Transport Coastal Structures Master Plan study was carried out and it was revealed that there was a need for 3 main port projects (Filyos, Çandarlı, Mersin) at the point of port management needs analysis and basic suggestions on the coasts of our country. A similar study was carried out by the Ministry of Transport and Infrastructure for the tourism facilities in our country, and with this study, site selection and project studies of many marinas were completed according to the need in the country. On the other hand, in order to determine the situation for the fishermen's shelters in our country and to complete the technical deficiencies required by the fishing ports, an inventory was prepared by conducting the "Fishing Ports Needs Analysis Study".

As of 2020, at the upper scale; Studies on the National Transportation Master Plan have been initiated, and it is known that with the 11th Development Plan, studies have been initiated to establish a "Port Investment Authority" in order to prevent small-scale, scattered, inefficient and low-quality port infrastructure.

Since the coasts of our country are 8,333 km long and a half-island surrounded by the Black Sea, Mediterranean, Marmara and Aegean seas, each with different ecological characteristics, there are a total of 951 coastal structures as of 2020, including port and pier facility, marina/docking place, shipyard, boat manufacturing place, rickshaw location, fishing coastal structure and ship dismantling facility. 217 of the coastal structures in question have operating permits or temporary operating permits.

Graph 50. Existing Coastal Structures in Our Country



Source: Ministry of Transport and Infrastructure, (2020), Reaching Turkey Report

In order to protect our shores and ensure their effective use, first of all; Work has been initiated by the Ministry of Transport and Infrastructure in order to handle the pipeline and buoy systems, which are heavily located in Samsun-Kirazlık, Ambarlı, Antalya, Mersin and Tekirdağ regions and made to handle fuel products, through separate pipelines through a common platform/terminal system.

With the legislative changes made, it is envisaged that the front of the hotel sunbathing and sea piers, which are seen especially in the regions where tourism activities are intense, should be made in accordance with the personal tastes and preferences of the hotel operators with sustainable environmental approaches taking into account the balance of protection and use of coastal areas, in a certain order, in a way that does not prevent the use of the coast in the public interest and minimum coastal construction.

In order to make the people of our country love the sea more and to make our people benefit more from the sea, "Study of Safe Shelters and Binding Systems on our Shores Project" has been carried out especially on the Aegean and Mediterranean coasts where the marina occupancy rates are high and the whole of our country, and as a result, it is aimed to solve the binding problem, which is the biggest problem of private boat owners.

A significant part of the investments made in the maritime field are carried out by the private sector. One of these investments, Kanal Istanbul Study Project and Consultancy Service Job tender was held on 14.07.2017, started on 03.08.2017 and completed technical studies by accepting the work in question. The Final EIA Report was approved by Ministry of Environment and Urbanisation on 17.01.2020. The work on the 1/100,000 scale Environmental Scheme Plan, the 1/5000 scale Nazım Zoning Plan and the 1/1000 scale Application Zoning Plan is being carried out by the Ministry of Environment and Urbanization.

6.1.1. Ports

6.1.1.1. Port Investment Projects in Turkey

North Aegean Çandarlı Port is planned as a transit hub in the combined transport chain caused by potential traffic between Europe and the Middle East. The foundation of Çandarlı Port, which is planned as the largest container port in Turkey and the 10th largest container port in Europe, was laid on 15.05.2011 and started work.

In the first stage;

- 1.st stage 1 Milyon TEU/Year,
- 2.nd stage 2 Milyon TEU/ Year,
- 3.rd stage 1 Milyon TEU/ Year,

to reach a total capacity of 4 million TEU/Year.

Within the scope of the project;

- 480 m stone filling breakwater,
- 1,020 m of steel piled breakwater,
- A total of 1,500 m breakwater has been manufactured,

As of 31.01.2014, it has been provisionally accepted.
The operations for bidding the 1st stage of the dock which is 1,000 m. wide 2,200 m. Length, will be made with the Build-Operate-Transfer Model (BOT)

The Port of Filyos Project is aimed at implementing a port complex in the Western Black Sea that will provide combined transportation services in the north-south axis, and is also the Regional Development Project due to the activities of the Industrial Zone planned to be established in the back area. It will create an important impetus in the development and development of the Western Black Sea provinces. Due to increased ship traffic, the threat faced by the Straits will decrease.

It will serve various types of cargo such as ore, containers and fuel and will have a capacity of 25 million tons/year. Infrastructure Construction of the port is planned to be completed by the end of 2020 and the construction of the dock and back site is underway.

Within the scope of the project;

- 2,450 m long main banister,
- 1,370 m long secondary banister,
- 3,000 m long (-14 m and -19 m deep) dock,

Approximately 20 million m³ of scanning, back site filling and fortification works are involved. The construction time of the construction in question is envisaged as 4 years.

Infrastructure constructions will be carried out with general budget facilities and ensure that the port serves with a capacity of 25 million tons/year with the Build-Operate-Transfer model; Superstructure facilities (hangars, warehouses, operating buildings, loading and unloading

buildings, etc.) are aimed at loading and unloading and equipment supply. In addition, work has been initiated for the railway-road connection of the port.

Study Project Ongoing Port and Coastal Structures:

- Kanal İstanbul Etüt Proje ve Danışmanlık İşi
- Karacaali İskelesi Etüt Proje İşleri
- Karacabey Bayramdere Malkara Sahil Tahkimatı ve Kıyı Erzoyonu Önleme Mahmuzları ÇED ve İmar Planı Çalışması
- Esenköy Kıyı Tahkimatı ve Kum Tutcu Mahmuz Etüt Proje İşleri
- Mersin Erdemli Kızkalesi İskelesi Etüt-Proje İşleri
- Terme Sakarlı Sahil Tahkimatı Etüt Proje İşleri
- Çıldır Gölü Yanaşma Yerleri Etüt Proje İşleri
- Rize Fener Boğaz Mahallesi Dolgu Planı ve Tahkimatı Etüt Proje İşleri
- Rize İslampaşa Mahallesi Dolgu Planı ve Tahkimatı Etüt Proje İşleri
- Karasu Maden Deresi Çıkış Ağzı Mahmuzları Etüt- Proje İşleri
- Doğanyurt Sahil Tahkimatı Etüt-Proje İşleri
- Kozlu Sahili Kıyı Yapıları Etüt-Proje İşleri
- Atatürk Baraj Gölü Feribot Yanaşma Yerleri Etüt Proje İşleri
- Antalya Şamandıra Tesisleri Dönüşümü Etüt Proje İşi
- Marmara Adası Ulaşım Limanı Etüt Proje İşleri
- Karabiga Limanı ve Balıkçı Barınağı Etüt Proje İşleri
- Filyos Sahil Tahkimatı Etüt-Proje İşleri
- Efes Antik Kent Kanalı Denize Çıkış Yapıları Etüt Proje İşi
- Dikili Salhane Mevkii Küçük Tekne Yanaşma Yeri Etüt Proje İşleri
- Kumluca Adrasan Barınma Yeri Etüt Proje İşleri
- Kumluca Mavikent-Karaöz Barınma Yeri Etüt Proje İşleri
- Demre Çayağzı Barınma Yeri Etüt Proje İşleri
- İstanbul Yenikapı Kruvaziyer Limanı Etüt Proje İşleri
- Demre Kruvaziyer Limanı Etüt Proje İşleri
- Mersin Çamlıbel Su Sporları ve Tekne Yanaşma Yeri İnşaatı Etüt Proje İşleri
- Türkler Barınma Yeri Etüd Proje İşleri
- İyidere Sahil Tahkimatı Etüt Proje İşleri
- Gelibolu Piri Reis Sahili Düzenlemesi
- Van Yüzüncü Yıl Üniversitesi Tekne Barınağı Etüt Proje İşleri

Port and Coastal Structures Completed in 2020 Study Project Studies

- Alaplı Deredi Çıkış Ağzı Mahmuzları Etüt Proje İşleri
- Yeşilyurt Fener İskelesi Etüt Proje İşleri
- Çanakkale Güzelyalı Deniz PEM Müdürlüğü Barınma
- Yeri Etüt Proje İşleri
- Erdek Paşa Limanı Balıklı Köyü İskelesi

6.1.1.2. Current Status of Ports

The amount of handling carried out in 2020 at 217 facilities (port / pier / dock) with operating permits in our ports, the installed and planned capacitor information of the facilities are included in Table 50.

Table 50. Current Status of Turkish Ports

Explanation	Dry Bulk Cargo (Million Tons)	Liquid Bulk Cargo (Million Tons)	Container (Million TEU)	Vehicle (Million Pieces)
2020 Cargo Handling	219.1	146.6	11.6	1.9
Capacity	414.1	341.7	25.9	6.8
Capacity Performance	53%	43%	45%	28%
Planned Port Capacities	58	3.7	18.6	0.1
Total Capacity Including Planned	472.1	345.4	44.5	6.9

Source: Republic of Turkey Ministry of Transport and Infrastructure

The number of ships calling at our ports in 2020 decreased by 11.7% compared to 2019 and reached 48,821. The number of foreign flagged ships calling at our ports decreased by 2.1% compared to the previous year, and the number of Turkish flagged ships decreased by 27.5%.

Table 51. Total Number of Calling Vessel, 2018-2020

Months	2018			2019			2020		
	Turkish Flag	Foreign Flag	Total	Turkish Flag	Foreign Flag	Total	Turkish Flag	Foreign Flag	Total
January	3,122	2,789	5,911	1,251	2,574	3,825	1,388	2,913	4,301
February	2,710	2,709	5,419	1,214	2,300	3,514	1,323	2,613	3,936
March	3,080	2,998	6,078	1,550	2,834	4,384	1,319	2,679	3,998
April	2,984	2,918	5,902	1,659	2,854	4,513	1,028	2,571	3,599
May	3,415	2,994	6,409	1,882	2,996	4,878	1,058	2,559	3,617
June	3,230	2,929	6,159	2,003	2,754	4,757	1,216	2,707	3,923
July	3,682	3,117	6,799	2,154	3,090	5,244	1,273	2,802	4,075
August	3,844	2,820	6,664	2,279	2,973	5,252	1,299	2,810	4,109
September	3,326	2,781	6,107	2,120	2,994	5,114	1,329	2,865	4,194
October	3,331	2,837	6,168	1,866	3,261	5,127	1,416	3,092	4,508
November	2,794	2,555	5,349	1,575	2,804	4,379	1,252	2,916	4,168
December	2,701	2,694	5,395	1,438	2,877	4,315	1,321	3,072	4,393
Grand Total	**38,219**	**34,141**	**72,360**	**20,991**	**34,311**	**55,302**	**15,222**	**33,599**	**48,821**

Source: Republic of Turkey Ministry of Transport and Infrastructur

Table 52. Calling Vessel Statistics at Turkish Ports According to the Harbour Masters Area of Jurisdiction

Harbour Master	2016 Total		2017 Total		2018 Total		2019 Total		2020 Total	
	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage
Alanya	39	330,269	76	537,185	112	386,635	69	977,669	20	707,498
Aliağa	4,959	71,492,509	5,202	84,693,738	5,241	89,358,200	5,135	94,156,168	5,356	102,687,486
Amasra	105	38,843	103	54,994	92	30,850	11	11,285	5	4,963
Ambarlı	4,523	87,788,092	4,264	97,438,442	4,083	102,732,900	3,815	96,853,881	3,455	87,045,737
Anamur	27	902	17	736	19	908	0	0	0	0
Antalya	863	8,110,528	750	8,316,791	739	7,449,816	524	6,233,438	703	7,986,149
Ayancık	56	3,570	75	4,900	56	3,818	0	0	0	0
Ayvalık	800	252,278	1,019	303,232	980	320,850	830	271,832	62	20,571
Bandıma	1,570	5,602,944	1,641	6,223,747	1,608	5,603,381	1,279	6,325,516	1,059	5,695,379
Bartın	321	973,803	363	1,061,936	360	1,080,024	348	1,181,935	505	1,756,059
Bodrum	1,617	2,791,869	2,382	1,746,584	2,026	1,739,650	2,021	770,512	125	31,196
Botaş	1,417	55,025,990	1,088	48,597,049	835	40,656,257	914	45,480,079	1,256	46,427,640
Bozcaada	167	456,530	197	242,282	229	209,561	37	88,562	10	101,339
Cide	34	3,678	49	3,009	41	2,014	0	0	0	0
Çanakkale	1,549	3,787,502	1,421	3,127,136	1,153	2,973,579	489	3,113,413	457	3,303,032
Çeşme	1,912	6,246,061	2,109	6,094,557	2,098	6,360,073	1,946	7,661,991	522	5,312,005
Datça	30	3,500	35	5,379	15	217	1	1,809	0	0
Dikili	202	560,323	221	383,517	256	368,070	134	492,392	121	435,420
Edremit	321	15,397	360	21,039	446	70,525	120	58,200	0	0
Enez	218	15,383	233	18,176	165	13,353	0	0	0	0
Erdek	185	82,851	152	58,982	185	57,624	24	15,135	9	5,540
Fatsa	124	190,315	116	214,140	106	154,489	34	87,510	38	109,107
Fethiye	614	313,398	481	234,380	674	422,001	474	424,143	73	439,936
Finike	35	425	30	1,911	35	3,185	2	29,966	0	0
Foça	128	10,139	196	17,256	232	11,895	0	0	0	0
Gemlik	3,992	60,843,803	4,069	63,544,248	3,932	63,531,019	3,490	61,173,351	3,308	59,116,408
Gerze	218	22,922	171	19,798	29	6,501	0	0	0	0
Giresun	105	148,535	86	119,429	72	106,350	100	752,295	150	780,920
Göcek	117	65,501	106	77,213	98	88,219	49	121,649	3	5,994
Gökçeada	157	41,728	174	28,196	250	27,079	0	0	0	0
Görele	14	3,671	12	3,670	14	3,152	0	0	0	0
Güllük	776	4,358,314	838	4,946,072	1,663	5,320,754	910	4,792,159	387	4,114,934
Hopa	606	859,139	395	657,196	407	647,818	208	562,154	193	702,131
İğneada	45	4,206	79	4,048	127	1,024,413	56	92,610	9	13,322
İnebolu	232	336,012	248	473,165	242	394,288	134	333,949	102	324,455

Harbour Master	2016 Total		2017 Total		2018 Total		2019 Total		2020 Total	
	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage	NO. of Ship	Gross Tonnage
İskenderun	3,946	54,639,258	4,570	64,533,484	4,791	67,114,223	4,259	76,837,289	4,052	76,327,130
İstanbul	2,985	20,437,271	2,641	17,473,855	2,389	11,183,874	746	7,555,755	654	5,162,848
İzmir	2,182	32,711,711	2,319	34,855,605	2,047	31,409,989	1,551	23,089,612	1,660	24,797,800
Karabiga	1,269	8,162,942	1,491	9,508,843	1,303	10,569,334	891	8,813,115	902	9,536,036
Karadeniz Ereğli	876	8,246,145	940	8,771,401	911	8,606,656	708	7,485,391	825	8,281,576
Karasu	71	8,081	148	570,831	250	945,879	299	2,444,740	394	5,136,976
Karataş	677	17,567	732	20,097	750	21,520	1	51,821	0	0
Kaş	527	148,328	494	78,872	514	86,866	514	77,604	5	804
Kefken	124	6,964	159	10,693	159	8,939	0	0	0	0
Kemer	115	1,243	133	1,453	169	2,536	0	0	0	0
Kocaeli	10,191	134,544,696	10,548	141,607,179	9,988	143,764,413	8,714	142,553,602	8,976	146,524,596
Kuşadası	949	13,757,621	645	4,006,247	729	3,944,373	671	6,363,275	6	77,451
Manavgat	31	1,949	24	681	21	1,501	0	0	0	0
Marmara Adası	874	1,098,885	838	1,040,467	825	1,116,183	712	1,082,360	656	1,061,429
Marmaris	601	1,060,627	570	1,138,799	589	500,046	536	1,608,012	53	115,809
Mersin	4,161	65,442,460	4,349	75,835,036	4,313	85,526,883	3,874	81,345,719	3,903	78,899,280
Mudanya	132	67,422	117	34,884	86	22,793	0	0	0	0
Ordu	40	5,846	33	5,149	51	9,332	0	0	0	0
Pazar	43	7,849	42	10,980	43	12,381	0	0	0	0
Rize	268	710,550	246	623,361	253	606,843	177	560,667	168	558,418
Samsun	2,349	11,847,243	2,984	15,447,971	3,088	14,519,446	2,437	13,815,080	2,830	16,558,339
Silivri	96	22,663	68	9,839	69	7,653	0		7	10,801
Sinop	99	43,228	132	52,511	168	58,674	1	2,457	1	1,949
Sürmene	129	26,054	111	25,215	128	33,094	6	1,024	5	3,228
Şile	115	11,925	90	12,501	131	9,914	5	4,232		
Taşucu	972	5,308,825	946	5,722,546	992	5,249,387	770	5,512,119	723	5,608,135
Tekirdağ	2,253	35,989,587	2,536	38,703,915	2,481	43,245,773	2,555	49,645,202	2,541	53,368,023
Tirebolu	97	370,531	71	319,628	83	472,888	70	527,291	53	475,437
Trabzon	812	4,128,246	789	4,180,276	679	3,629,277	501	2,627,649	428	2,633,595
Tuzla	3,335	26,499,473	3,362	29,319,000	3,132	28,076,422	698	15,477,393	617	12,871,512
Turgut Reis	330	26,820	0	0	0	0	0	0	0	0
Ünye	523	1,068,293	499	1,041,641	455	1,059,899	309	891,478	335	976,017
Vakfıkebir	52	13,658	57	14,565	57	17,557	0	0	0	0
Yalova	1,383	5,771,140	1,253	10,929,411	1,486	16,027,909	528	7,638,921	472	6,915,714
Zonguldak	535	5,926,990	611	7,254,113	610	7,775,595	615	8,191,154	627	7,851,526
Total	**71,220**	**748,913,021**	**73,306**	**802,435,181**	**72,360**	**816,797,526**	**55,302**	**796,266,565**	**48,821**	**790,881,650**

Source: Republic of Turkey Ministry of Transport and Infrastructure, İMEAK Chamber of Shipping Images

According to the data of the Ministry of Transport and Infrastructure, Maritime Affairs and Communications, 496,642,651 tons of cargo were handled in our country's ports and piers in 2020.

Of the total cargo handled in 2020;

- 28% (38,902,823 tons) of export,
- 45.6% (221,404,812 tons) of import,
- 11.8% (58,797,384 tons) of cabotage,
- 14.6% (72,402,972 tons) of it was realized as transit.

Table 53. Cargo Handling Figures at Turkish Port, 2016-2020

Mode of Transport	Flag	2016	2017	2018	2019	2020
Export	Turkish Flag	15,272,855	15,138,335	15,660,122	14,132,161	13,580,911
	Foreign Flag	79,532,265	98,553,733	94,764,513	117,544,417	125,321,912
	Total	94,805,120	113,692,068	110,424,635	131,676,578	138,902,823
Import	Turkish Flag	23,350,424	21,677,485	19,850,109	13,763,576	16,098,249
	Foreign Flag	191,782,095	211,978,539	198,694,711	207,641,236	210,441,223
	Total	215,132,519	233,656,024	218,544,820	221,404,812	226,539,472
Cabotage	Turkish Flag	26,249,991	29,898,010	29,550,554	28,251,017	29,763,556
	Foreign Flag	27,050,225	30,498,069	30,005,291	27,861,707	29,033,828
	Total	53,300,216	60,396,079	59,555,845	56,112,724	58,797,384
Transit	Turkish Flag	61,436,179	55,544,396	63,081,077	64,960,731	60,490,257
	Foreign Flag	5,527,128	7,885,329	8,547,183	10,013,567	11,912,715
	Total	66,963,307	63,429,725	71,628,260	74,974,298	72,402,972
Total	**Turkish Flag**	**182,491,290**	**199,134,474**	**203,056,266**	**224,888,326**	**229,156,636**
	Foreign Flag	**247,709,872**	**272,039,422**	**257,097,294**	**259,280,086**	**267,486,015**
	Total	**430,201,162**	**471,173,896**	**460,153,560**	**484,168,412**	**496,642,651**

Source: Republic of Turkey Ministry of Transport and Infrastructure, İMEAK Chamber of Shipping Images

Table 54. Cargo Handling Statistics at Turkish Ports According to the Harbour Masters Area of Jurisdiction

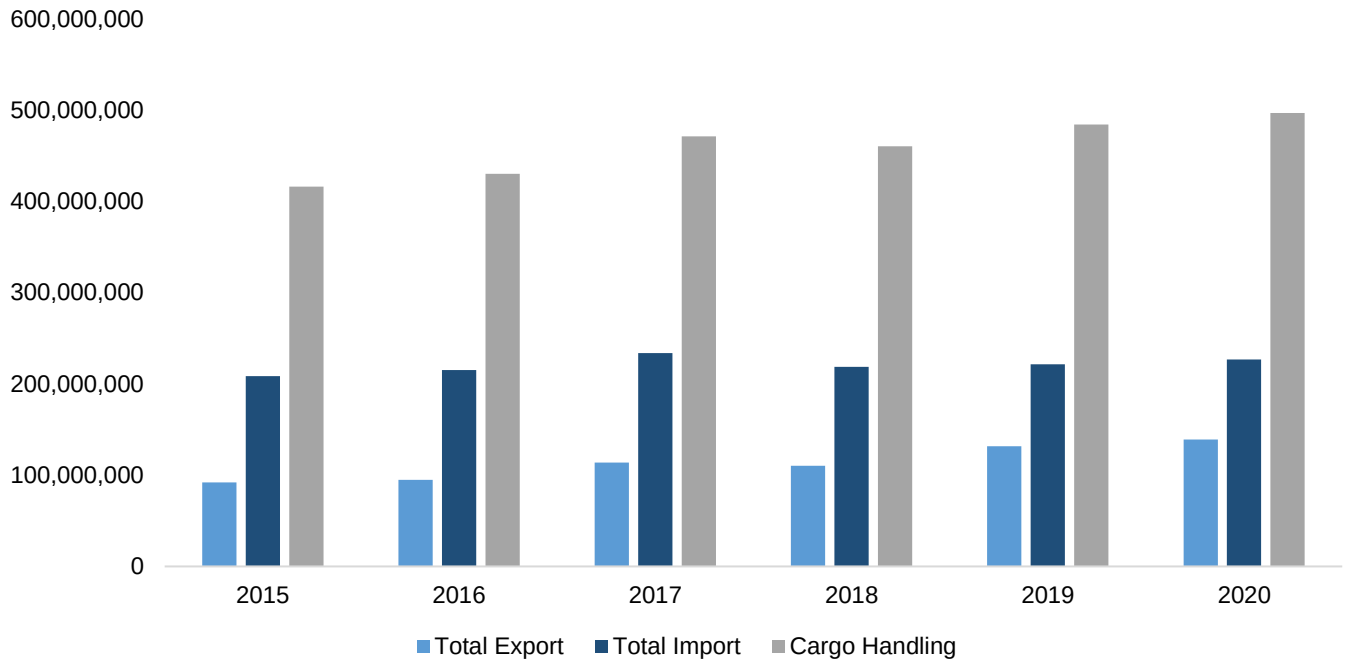
Harbour Master	2018			2019			2020		
	Total Loading	Total Unloading	Cargo Handling	Total Loading	Total Unloading	Cargo Handling	Total Loading	Total Unloading	Cargo Handling
Alanya	0	117,804	117,804	0	168,546	168,546	0	180,278	180,278
Aliağa	18,781,011	35,204,232	53,985,243	26,580,514	39,218,548	65,799,062	27,558,357	41,387,644	68,946,001
Amasra	20,330	0	20,330	11,105	2,199	13,304	2,770	0	2,770
Ambarlı	16,600,667	18,567,579	35,168,246	17,124,537	17,524,947	34,649,484	15,385,143	16,510,191	31,895,334
Antalya	3,109,890	2,841,333	5,951,223	2,703,303	2,670,887	5,374,190	3,571,347	1,952,306	5,523,653
Ayvalık	1,930	0	1,930	2,985	0	2,985	1,295	25	1,320
Bandıma	1,681,209	3,381,649	5,062,858	1,861,585	4,397,234	6,258,819	1,629,584	4,031,579	5,661,163
Bartın	593,526	678,708	1,272,234	828,898	529,930	1,358,828	987,080	996,955	1,984,035
Bodrum	9	94,401	94,410	27	0	27	0	0	0
Botaş	52,848,589	7,881,847	60,730,436	58,737,775	8,207,269	66,945,044	56,079,629	10,763,372	66,843,001
Bozcaada	0	7,858	7,858	0	9,775	9,775	0	0	0
Çanakkale	3,367,181	650,908	4,018,089	3,712,163	452,877	4,165,040	4,114,606	596,442	4,711,048
Çeşme	748,327	651,676	1,400,003	801,868	751,980	1,553,848	654,088	582,316	1,236,404
Dikili	339,081	35,613	374,694	503,359	15,912	519,271	451,759	46,258	498,017
Erdek	0	2,119	2,119	0	6,507	6,507	0	2,191	2,191
Fatsa	55,462	97,617	153,079	55,510	50,625	106,135	68,593	57,875	126,468
Finike	0	3	3	0	0	0	0	0	0
Gemlik	7,061,834	7,235,028	14,296,862	6,942,080	6,966,272	13,908,352	7,530,873	6,760,998	14,291,871
Giresun	0	48,045	48,045	301,589	491,022	792,611	387,647	429,876	817,523
Göcek	0	101,293	101,293	0	106,703	106,703	0	7,950	7,950
Güllük	7,170,458	95,996	7,266,454	6,692,927	4,181	6,697,108	5,761,436	1,048	5,762,484
Hopa	185,499	460,213	645,712	275,787	664,609	940,396	443,121	488,446	931,567
İğneada	3,333	75,169	78,502	71,200	24	71,224	12,450	0	12,450
İnebolu	440,606	128,790	569,396	373,782	84,008	457,790	237,118	98,925	336,043
İskenderun	19,129,357	38,586,642	57,715,999	22,157,001	40,010,712	62,167,713	22,969,022	38,000,214	60,969,236
İstanbul	395,324	2,868,894	3,264,218	247,145	3,165,276	3,412,421	300,185	1,858,138	2,158,323
İzmir	4,387,956	4,652,823	9,040,779	4,597,807	4,628,675	9,226,482	4,743,600	4,646,412	9,390,012
Karabiga	2,944,179	11,926,946	14,871,125	2,514,431	10,455,557	12,969,988	2,657,749	11,271,861	13,929,610
Karadeniz Ereğli	1,811,208	8,868,138	10,679,346	1,380,109	7,891,366	9,271,475	1,884,931	8,793,317	10,678,248
Karasu	359,929	603,177	963,106	378,290	994,978	1,373,268	398,918	983,246	1,382,164
Kocaeli	24,378,090	48,760,931	73,139,021	27,342,422	44,853,993	72,196,415	29,375,494	47,142,131	76,517,625
Kuşadası	0	0	0	0	0	0	0	0	0
Marmara Adası	1,675,308	4,422	1,679,730	1,611,051	3,216	1,614,267	1,519,441	1,982	1,521,423

Harbour Master	2018			2019			2020		
	Total Loading	Total Unloading	Cargo Handling	Total Loading	Total Unloading	Cargo Handling	Total Loading	Total Unloading	Cargo Handling
Marmaris	389	18,507	18,896	74	20,969	21,043	50	48,235	48,285
Mersin	15,192,523	17,848,010	33,040,533	16,416,220	19,957,483	36,373,703	16,810,414	20,942,019	37,752,433
Rize	111,373	668,084	779,457	131,431	546,037	677,468	87,500	561,504	649,004
Samsun	3,207,064	8,640,474	11,847,538	2,705,440	8,445,556	11,150,996	3,674,088	9,321,752	12,995,840
Silivri	0	0	0	0	0	0	0	10,500	10,500
Sürmene	0	0	0	0	0	0	0	990	990
Şile	0	0	0	5,320	0	5,320	0	0	0
Taşucu	2,796,609	299,819	3,096,428	3,320,327	374,307	3,694,634	3,714,877	576,755	4,291,632
Tekirdağ	7,444,520	18,371,783	25,816,303	8,880,791	21,053,186	29,933,977	10,134,526	22,121,784	32,256,310
Tirebolu	0	436,457	436,457	900	481,807	482,707	0	426,240	426,240
Trabzon	552,381	2,458,752	3,011,133	263,539	2,238,940	2,502,479	242,451	2,088,276	2,330,727
Tuzla	2,992,486	2,788,288	5,780,774	2,063,806	432,943	2,496,749	2,233,830	2,242,081	4,475,911
Ünye	1,013,435	508,537	1,521,972	918,651	226,168	1,144,819	1,135,117	208,480	1,343,597
Vakfıkebir	0	1,700	1,700	0	0	0	0	0	0
Yalova	92,872	942,985	1,035,857	890,263	696,885	1,587,148	910,616	1,465,340	2,375,956
Zonguldak	1,562,321	9,484,044	11,046,365	1,482,314	10,477,977	11,960,291	1,486,931	9,880,083	11,367,014
Total	**203,056,266**	**257,097,294**	**460,153,560**	**224,888,326**	**259,280,086**	**484,168,412**	**229,156,636**	**267,486,015**	**496,642,651**

Source: Republic of Turkey Ministry of Transport and Infrastructure, İMEAK Chamber of Shipping Images

In 2020, compared to 2019, the amount of cargo handled at our ports increased by 2.6% (12,474,239 tons).

Graph 51. Cargo Handling by Years, 2015-2020



Source: Republic of Turkey Ministry of Transport and Infrastructure

In 2020, the amount of containers screened at the ports and piers of our country was 11,626,650 TEU.

Container handling;

- 39.7% (4,618,225 TEU) export,
- 38.5% (4,480,472 TEU) import,
- 6.3% (731,352 TEU) of cabotage,
- 15.5% (1,796,601 TEU) was realized as transit.

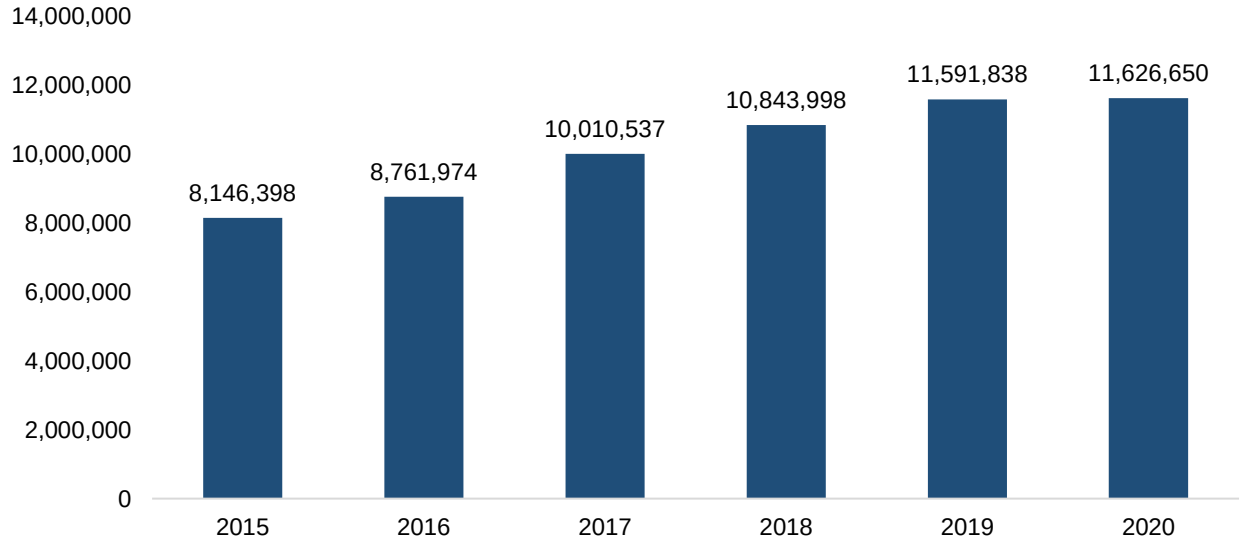
Table 55. Container Handling Figures at Turkish Ports (TEU), 2015-2020

Mode of Transport	2015	2016	2017	2018	2019	2020
Export	3,394,508	3,543,804	3,866,874	4,160,124	4,594,647	5,904,017
Import	3,454,345	3,607,086	3,975,205	4,259,029	4,540,201	5,722,633
Cabotage	606,064	738,312	935,521	935,661	753,267	731,352
Transit	691,481	872,772	1,232,937	1,489,184	1,703,722	1,796,601
Grand Total	**8,146,398**	**8,761,974**	**10,010,537**	**10,843,998**	**11,591,838**	**11,626,650**

Source: Republic of Turkey Ministry of Transport and Infrastructure, İMEAK Chamber of Shipping Images

In 2020, compared to 2019, the amount of containers handled at our ports increased by 0.3% (34,812 TEU).

Graph 52. Container Handling Figures at Turkish Ports (TEU), 2015-2020



Source: Republic of Turkey Ministry of Transport and Infrastructure

6.1.1.3. General Developments in World Ports

In 2020, Shangai port is still the port that handles the most containers with 43 million TEU. It is still the top 3 ports that handled the most containers in 2020 compared to the previous year.

Table 56. Most Container Handling Ports in the World (mteu)

NO	Port	2016	2017	2018	2019	2020
1	Shanghai	37.13	40.23	42.01	43.30	43.50
2	Singapore	30.90	33.67	36.60	37.20	36.86
3	Ningbo	21.57	24.64	26.35	27.54	28.73
4	Shenzhen	24.11	25.35	25.74	25.77	26.55
5	Guangzhou	18.58	20.10	21.62	22.84	23.19
6	Qingdao	18.01	18.30	19.32	21.01	22.00
7	Busan	19.46	20.49	21.59	21.99	21.81
8	Tianjin	14.20	15.04	16.01	17.30	18.36
9	Hong Kong	19.58	20.77	19.64	18.39	17.95
10	Rotterdam	12.39	13.73	14.51	14.81	14.35
11	Dubai	14.77	15.37	14.95	14.11	13.49
12	Port Klang	13.17	11.98	12.32	13.58	13.24
13	Antwerp	10.04	10.45	11.10	11.86	12.03
14	Xiamen	9.60	10.40	17.70	11.08	11.41
15	Tanjung Pelepas	8.28	8.26	8.96	9.10	9.80
16	Kaohsiung	10.46	10.27	10.45	10.43	9.62
17	Los Angeles	8.86	9.34	9.46	9.34	9.21
18	Hamburg	8.91	8.82	8.73	9.27	8.50
19	Long Beach	6.78	7.54	8.09	7.63	8.11
20	NY/NJ	6.25	6.71	7.18	7.47	7.59
21	Laem Chabang	7.23	7.78	8.07	8.11	7.55
22	Ho Chi Minh	5.99	6.16	7.57	7.22	7.20
23	Colombo	5.73	6.21	7.00	7.23	6.85
24	Tangier	2.96	3.31	3.47	4.80	5.77
25	Yingkou	6.01	6.27	6.49	5.46	5.67
26	Piraeus	3.74	4.15	4.91	5.65	5.44
27	Valencia	4.72	4.83	5.18	5.44	5.43
28	Dalian	9.59	9.70	9.77	8.75	5.11
29	Algeciras	4.76	4.39	4.77	5.13	5.11
30	Rizhao	3.01	3.24	4.02	4.52	4.86
31	Lianyungang	4.69	4.72	4.75	4.77	4.81
32	Bremen/Bremerhaven	5.54	5.51	5.48	4.86	4.80

NO	Port	2016	2017	2018	2019	2020
33	Jeddah	3.96	4.15	4.12	4.43	4.74
34	Savannah	3.64	4.05	4.35	4.60	4.68
35	Jawaharlal Nehru	4.52	4.71	5.05	5.10	4.47
36	Colon	3.26	3.89	4.32	4.38	4.45
37	Salalah	3.33	3.95	3.39	4.11	4.34
38	Santos	3.56	3.85	4.12	4.17	4.27
39	Vancouver	2.83	3.25	3.40	3.40	3.47
40	Seattle-Tacoma	3.62	3.67	3.80	3.78	3.32
41	Nanjing	3.08	3.17	3.21	3.31	3.03
42	Durban	2.62	2.70	2.96	2.77	2.60
43	Ambarlı	2.80	3.13	3.19	3.32	-
44	Felixstowe	4.10	4.30	3.93	3.58	-
45	London Gateway	0.71	0.95	1.30	1.40	-
46	Mundra	4.80	4.24	4.42	4.75	-
47	Port Said	3.04	2.97	3.05	3.82	-
48	Haiphong	4.10	4.45	4.76	5.13	-
49	Manila	4.52	4.78	5.05	5.32	-
50	Tanjung Perak	3.35	3.55	3.87	3.92	-
51	Tanjung Priok	5.51	6.92	7.80	7.60	-
52	Tokyo	4.72	5.05	5.11	4.94	-

Kaynak: Clarksons Research, İMEAK Chamber of Shipping Images

6.1.2. Shipyard

In our country, the history of shipyards dates back to the Seljuk era. During the Seljuk period, the Turkish advance to the west began when Emir Çaka Bey established the first shipyard in 1081 and built the first 50-piece Turkish navy.

The most important facility built in the maritime field during the Seljuk era is the Alaiye (Alanya) shipyard. Built in 1227, this shipyard still stands nearly eight centuries after its construction.

The processes that started with the Gallipoli shipyard in 1390 and the Golden Horn shipyard in 1455 continued to these days in accordance with the changing technologies. Shipbuilding industry in world shipping; it is classified as shipbuilding, yacht construction, maintenance and repair, sub-industry and ship recycling. These sectors cover all processes starting from the design phase of a ship and ending with its recycling.

As of 10.08.2008, it has been made mandatory for the facilities to have Operating Permits in order to ensure competitive equality of the shipyards operating in our country, to raise their standards, to make production processes and work areas safer, safer and more environmentally sensitive.

When the comparison of active shipyards and ship dismantling facilities in our country for 2003 and 2020 is made;

- In 2003, there were 37 shipyards and 550,000 DWT project capacity,
- It is known that 84 shipyards and 4.65 million DWT project capacity were reached in 2020.

Figure 1. Distribution of Active Shipyard and Ship Dismantling Facilities by Province

Source: Ministry of Transport and Infrastructure, (2020), Reaching Turkey Report

6.1.3. Ship Recycling Industry

Ship recycling sector; The withdrawal of ships that have reached the end of their economic life and the replacement of new ships are found in a natural technological process that is safer and more environmentally sensitive, has more operating efficiency and minimizes maritime risks.

Ship recycling is one of the types of industry that protects the environment and is also called the "green industry", which plays an active role in maintaining ecological balance.

Since 1976, ship dismantling activities have been carried out only in Izmir Province, Aliaga district and 22 facilities belonging to private enterprise operate on the 1,300 meter coastline. In addition, the MKE Ship Dismantling Plant is located in the same area.

6.1.4. Marina, Boat Manufacturing and Rickshaw Place

The total number of yachts in the Mediterranean basin has reached approximately 1 million today, and there are significant increases every year. France, Spain and Italy make up 75% of the Mediterranean basin marina capacities. However, the restriction of new investment locations in these countries, the pollution of the Western Mediterranean and the increase in operator fees made the Eastern Mediterranean countries attractive.

It is aimed to meet the required capacity in addition to the currently operated marinas, with the targets foreseen for tourism coastal structures whose construction has been completed by the public and private sectors. In line with this purpose, public facilities are of great importance in establishing the necessary infrastructure for yacht tourism and determining the privileged role of our country in the region in terms of tourism, with the BOT model and private sector dynamics. Currently, there are 62 yacht harbors operated by the public and private sector in our country. Our current yacht mooring capacity at sea is 16,667 yachts, and it is aimed to reach 30,000 yacht mooring capacity in 2023 with the ongoing and planned marinas.

As of August 2020, there are a total of 649 boat manufacturing sites, 152 of which are on the coast, and a total of 151 boatyards, 27 of which are on the coast. 38 of these structures have tourism operation or investment certificates. Our yacht mooring capacity in the sea of the coastal structures with tourism operation certificate is 15,150.

Table 57. Tourism Coastal Structures with Operation Permit by the Ministry of Culture and Tourism

Tourism Operation Certificate	Marina	28
	Boatyard	5
Tourism Investment Certificate	Yacht Harbor / Dock / Pier	4
	Cruise Ship Port	1
	Slipway	-
Grand Total		**38**

Source: Ministry of Culture and Tourism (2020), Tourism Statistics

It is aimed to put into operation the production areas determined in 7 different places by the Ministry of Transport and Infrastructure in order to cluster the boat manufacturing sites that have zoning problems and are scattered.

- İzmir Çaltılıdere Boat Production Site (Preliminary permit agreement has been signed. Renewal of the EIA Not Required letter continues. Infrastructure will be carried out by the Ministry of Transport and Infrastructure.)

- Fethiye Karaot Boat Production and Boatyard (Application was made by the relevant cooperative to the General Directorate of Conservation of Natural Assets for zoning plan approval.)

- Bodrum Ruins Boat Production and Boatyard (Preliminary permit agreement was signed and construction licenses were obtained.

- Marmaris Bozburun Boat Production and Shipyard (The proposal plan will be submitted for approval after the geological survey report.)

- Manavgat Boat Production and Boatyard (Preliminary permit agreement was signed, the plan approval process started in February 2016. The Ministry of Culture and Tourism requests the project to be moved to an alternative area that is not suitable.)

- Bartın Tekkeönü Boat Production and Slipway (General Layout Plan has been approved by the Ministry of Transport and Infrastructure. The site allocation process has been initiated through the relevant governorship.)

- Bartın Kurucaşile Boat Production and Shipyard Place (Allocation to the cooperative has been deemed appropriate. However, a cooperative has not been established yet.)

While 1 Haliç Yacht Harbor and Complex project was completed until 2003 with the Build-Operate-Transfer model, the number of Yacht Harbors, whose construction has been completed today, has been increased to 10. The contribution of these projects, built without using public resources, to the economy is approximately 1 Billion TL.

Tourism Facilities Tendered and Opened for Operation with the Build-Operate-Transfer Model:

- Muğla Turgutreis Yat Limanı
- Aydın Didim Yat Limanı
- İzmir Çeşme Yat Limanı
- İzmir Sığacık Yat Limanı
- Yalova Yat Limanı
- Mersin Yat Limanı
- Antalya Alanya Yat Limanı
- Antalya Kaş Yat Limanı
- Mersin Kumkuyu Yat Limanı
- Muğla Ören Yat Limanı
- Bodrum Yolcu İskelesi

Facilities Under Construction by Tendered by Build-Operate-Transfer Model:

- Antalya Gazipaşa Yat Limanı
- Muğla Datça Yat Limanı
- Haliç Yat Limanı ve Kompleksi
- Tekirdağ Yat Limanı

New Yacht Harbors Undergoing Survey Project Studies:

- Demre Yat Limanı
- Özdere Yat Limanı
- Urla Çeşmealtı Yat Limanı
- İstanbul Silivri Yat Limanı
- Samsun Kurupelit Yat Limanı

Projects to be Tendered with Build-Operate-Transfer Model

- Çeşme Şifne Yat Limanı
- Balıkesir Avşa Adası Türkeli Yat Limanı

- İzmir Yeni Foça Yat Limanı

Transportation Seaway Facilities for 2020 Construction Tender Preparations:

- Çanakkale Biga Aksaz Balıkçı Barınağı Onarım ve Tevsii İnşaatı
- Aydıncık Yat Limanı İnşaatı

Coastal Structures Tendered for Construction in 2020

- Rize İyidere Lojistik Limanı İnşaatı
- Erdemli Balıkçı Barınağı Mendirek Uzatma ve Tevsii İnşaatı

6.1.5. Fishermen's Shelters

While there were 178 fishing ports in our country in 2003, this number reached 386. 208 fishermen's shelters have been completed in 17 years.

Fishing Ports Under Construction:

- Espiye Adabük Balıkçı Barınağı

Fishing Ports, whose Survey and Project Studies are Continuing:

As of 2020, the study project works of 34 fishing ports are ongoing.

- Anadolu Feneri Balıkçı Barınağı Etüt Proje İşleri
- Garipçe Köyü Balıkçı Barınağı Etüt Proje İşleri
- Anadolu Kavağı Balıkçı Barınağı Etüt Proje İşleri
- Yalıköy Balıkçı Barınağı Etüt Proje İşleri
- Körfez Atalar Balıkçı Barınağı Etüt Proje İşleri
- Tütünçiftlik Balıkçı Barınağı Etüt Proje İşleri
- Kıyıköy Balıkçı Barınağı Etüt Proje İşleri
- Keşan Yayla Balıkçı Barınağı ve Sahil Tahkimatı Etüt Proje İşleri
- Güzelbahçe Yalı Balıkçı Barınağı Geliştirilmesi
- Narlıdere Balıkçı Barınağı Mendirek Uzatılması
- Ahmetbeyli Balıkçı Barınağı Etüt Proje İşleri
- Doğanbey - Payamlı Balıkçı Barınağı Koruma Amaçlı İmar Planı Hazırlanması
- Gülpınar Balıkçı Barınağı Etüt Proje İşleri
- Erdek İlhanlar Bal. Bar. Sahil Düzenlemesi Kum Tutucu Mahmuz
- Mudanya Kumyaka Balıkçı Barınağı ÇED ve İmar Planı Raporu Hazırlanması
- Koruköy Balıkçı Barınağı Etüd ve Proje İşleri
- Çanakkale Lapseki Şevketiye Balıkçı Barınağı Etüt Proje İşleri
- Karaduvar Balıkçı Barınağı Mendirek Uzatma ve İkmal İnşaatı Etüt Proje İşleri
- Gazipaşa Uğrak-Yeşilöz Balıkçı Barınağı Etüt Proje İşleri
- Akçaabat Söğütlü Çekek Yeri Etüt- Proje İşleri
- Çarşıbaşı Keremköyü Çekek Yeri Etüt- Proje İşleri
- Tirebolu Yalıköy Çekek Yeri Kum Tutucu Mahmuz İmar Planı ve ÇED İşleri
- Pazar Balıkçı Barınma Yeri Büyütme Talebi Etüt Proje İşleri
- Yomra Balıkçı Barınağı Etüt Proje İşleri
- Keşap Tepeköy Çekek Yeri Etüt Proje İşleri

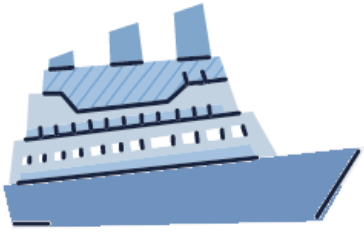
- Akçaabat Darıca Balıkçı Barınağı Etüt Proje İşleri
- Cide İlyasbey Balıkçı Barınağı Etüt-Proje İşleri
- İnebolu Balıkçı Barınağı Etüt-Proje İşleri
- Kilitbahir Bal. Bar. Etüt Proje İşleri
- Adana Karataş Balıkçı Barınağı Geliştirilmesi İnşaatı ve Karataş İskelesi Etüt Proje İşleri
- Tatvan Merkez Balıkçı Barınağı İnşaatı Etüt Proje İşleri
- Taşucu Balıkçı Barınağı Geliştirilmesi İnşaatı Etüt Proje İşleri
- Eğirdir Bal. Bar. İmar Planı Hazırlanması
- Sarıidris Bal. Bar. İmar Planı Hazırlanması

Fishermen's Shelters, Survey Project Work Completed in 2020

- Akçaabat Akçakale Balıkçı Barınağı
- Giresun Balıkçı Barınağı
- Tekkeönü Balıkçı Barınağı
- Seferihisar- Akarca Balıkçı Barınağı
- Gülbahçe Balıkçı Barınağı
- Madenli Balıkçı Barınağı Mendirek Tadilatı ve İskele İlavesi
- Güre Balıkçı Barınağı
- Hatay Arsuz Balıkçı Barınağı
- Altınoluk Balıkçı Barınağı

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.

Table 58. Yachting Companies Licenced by the Ministry of Culture and Tourism

Years	Number of Business			Number of Yacht			Number of Bed		
	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total
2002	96	10	106	725	369	1,094	6,774	2,457	9,231
2003	97	9	106	725	333	1,058	6,905	2,329	9,234
2004	83	8	91	699	294	993	6,377	2,110	8,487
2005	76	10	86	723	345	1,068	6,394	2,486	8,880
2006	60	11	71	666	395	1,061	5,398	2,764	8,162
2007	58	11	69	845	381	1,226	6,764	2,748	9,512
2008	61	15	76	990	431	1,421	8,051	3,116	11,167
2009	53	18	71	943	433	1,376	7,443	3,191	10,634
2010	59	17	76	521	438	959	4,851	3,240	8,091
2011	308	18	326	992	868	1,860	10,292	7,199	17,491
2012	944	10	954	1,246	829	2,075	13,203	6,567	19,770
2013	857	26	883	1,529	871	2,400	15,312	6,911	22,223
2014	857	27	884	1,529	838	2,367	15,312	6,674	21,986
2015	857	27	884	1,529	826	2,355	15,312	6,626	21,938
2016	1,140	24	1,167	1,537	608	2,145	15,994	5,100	21,094
2017	1,150	20	1,170	1,557	312	1,869	16,153	2,532	18,658
2018	1,159	18	1,177	1,572	251	1,823	16,150	2,043	18,193
2019	1,344	11	1,355	1,819	160	1,979	17,917	1,219	19,136
2020	1,451	-	1,451	1,947	-	1,947	18,576	-	18,576

Source: Ministry of Culter & Tourism

Table 59. Marine Tourisim Facility & Vesells With Tourism Administration Certificate (2020)

Marine Tourism Facility				
Mooring Capacity Number Of Facility	Number of Facility	Yacht Capacity		
		Sea	Land	Total
Business Tourism Documantation of Yacht Harbour	28	9,308	3,157	12,465
Business Tourism DocumAntation of Yacht Slipway	6	40	859	899
Investment Tourism Documantation of Yacht Harbour	6	1,842	438	2,280
Grand Total	**40**	**11,190**	**4,454**	**15,644**

Marine Tourism Vessels	Number of Business	Number of Yacht	Number of Beds
Business Tourism Documantation of Turkish Flag Yacht	1,451	1,947	18,576
Investment Tourism Documantation of Turkish Flag Yacht	1	1	26
Grand Total	**1,452**	**1,948**	**18,592**

Marine Tourism Vessels	Number of Business	Number of Vessels	Passenger Capacity
Business Tourism Documantation of One a Day Trip	2,093	2,662	136,744

Marine Tourism Vessels	Number of Business	Number of Vessels	Passenger Capacity
Business Tourism Documantation 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

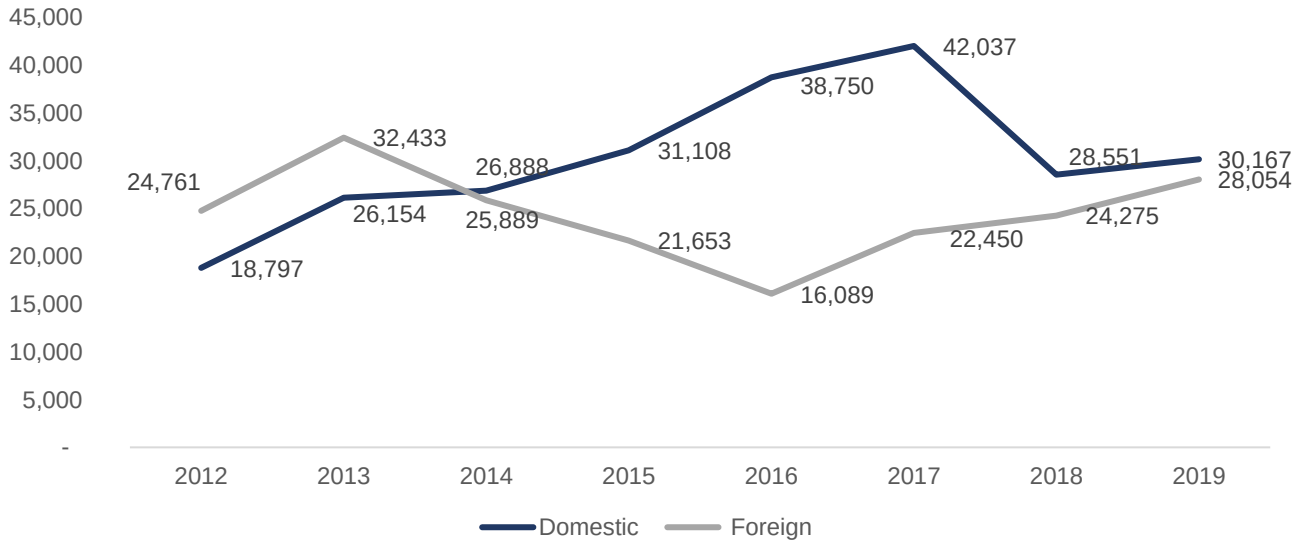
And this is how it became now: Convenience and pleasure on the boat, they come in 3 different shapes: Gulets with her broad rounded stern, favorite of the blue cruise, ideal for relaxation.

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 the sponge divers due to uncluttered space on deck

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

Graph 53. Distribution of the Yachtsmen and the Crew Members of the Flag Q Yacths (for Commercial + Private use) Arrived in Turkish Ports by Years



Source: Ministry of Transport and Infrastructure

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 60. Distribution of the Yachtsmen and the Crew Members of the Flag Q Yachts Arrived in Turkish Ports by their Nationalities and Years 2019

Nationality	Yachtsmen		Crew Member		Total	
	Commercial	Private	Commercial	Private	Commercial	Private
Germany	711	588	45	269	**756**	**857**
Austria	63	112	14	41	**77**	**153**
Belgium	128	87	10	34	**138**	**121**
Denmark	68	43	2	24	**70**	**67**
Finland	42	11	1	11	**43**	**22**
France	797	532	62	262	**859**	**794**
Netherlands	635	186	28	104	**663**	**290**
U.K.	1,649	715	586	873	**2,235**	**1,588**
Ireland	72	50	44	42	**116**	**92**
Spain	647	214	35	82	**682**	**296**
Sweden	80	58	12	47	**92**	**105**
Italy	1,566	687	103	381	**1,669**	**1,068**
Luxembourg	7	7	-	6	**7**	**13**
Portugal	106	23	21	9	**127**	**32**
Greece	1,075	511	608	345	**1,683**	**856**
Czech Rep.	4	16	1	8	**5**	**24**
Switzerland	333	232	5	85	**338**	**317**
Iceland	11	2	-	1	**11**	**3**
Hungary	18	33	4	8	**22**	**41**
Norway	43	32	-	26	**43**	**58**
U.S.A.	1,087	565	41	148	**1,128**	**713**
Australia	1,081	163	151	163	**1,232**	**326**
Japan	22	5	-	7	**22**	**12**
Canada	196	166	14	57	**210**	**223**
Mexico	159	113	2	19	**161**	**132**
New Zealand	58	84	92	152	**150**	**236**
Serbia	12	31	12	17	**24**	**48**
Malta	17	10	2	11	**19**	**21**
Israel	202	387	3	93	**205**	**480**
Others	1,335	2,486	577	1,881	**1,912**	**4,367**
Foreign Total	**12,224**	**8,149**	**2,475**	**5,206**	**14,699**	**13,355**
Turkey	**3,792**	**10,145**	**6,846**	**9,384**	**10,638**	**19,529**
Grand Total	**16,016**	**18,294**	**9,321**	**14,590**	**25,337**	**32,884**

Source: Ministery of Culture &Tourism

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 in 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 in 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 61. Marine Tourisim Facility with Tourism Administration Certificate (2020)

NO	Port Name	City of	Capacity	
			At Sea	On Shore
1	Setur Kuşadası Yacht Port	Kuşadası/AYDIN	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	195	-
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 Marinas	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	MERSİN	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			**9,382**	**3,157**
General Total			**12,539**	

Source: Ministery of Culture &Tourism

Table 62. Business Tourism Documantaton of Yacht Slipway

NO	Port Name	City of	Capacity	
			At Sea	On Shore
1	Yat Lift Yacht Slipwa	Bodrum/MUĞLA		400
2	Ağanlar Yacht Slipway	Bodrum/MUĞLA	-	200
3	Neta Marinas Yacht Slipway	Bodrum/MUĞLA		21
4	Ege Yacht Slipway	Milas/MUĞLA		50
5	Albatros Yacht Slipway	Marmaris/MUĞLA	40	48
Total			**40**	**719**
General Total			**759**	

Source: Ministery of Culture &Tourism

Table 63. Yacht Harbour Investment Tourism Documantation

NO	Port Name	City of	Capacity	
			At Sea	On Shore
1	Meersea Körmen Yacht Port	Datça/MUĞLA	246	56
2	Ataport Yacht Port	Zeytinburnu/İSTANBUL	1,000	100
3	Mandalya Dock	Milas/MUĞLA	50	-
4	Tümsağ Kumkuyu Yacht Port	Erdemli/MERSİN	200	200
Total			**1,496**	**356**
General Total			**1,852**	

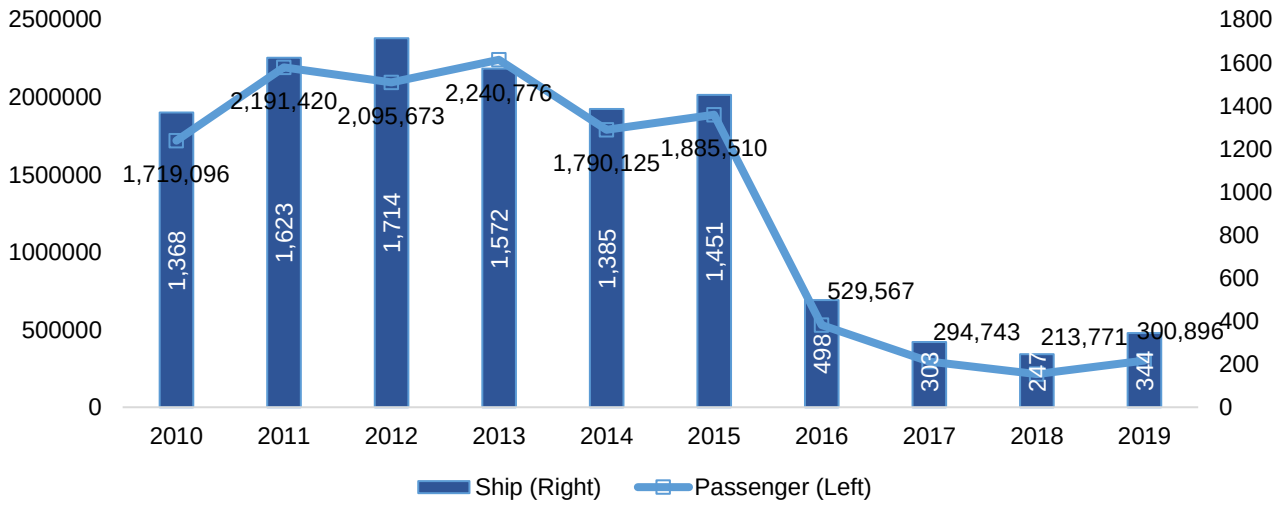
Source: Ministery of Culture &Tourism

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 54. Statistics of Cruises and Passengers Arrived at Turkish Ports Between 2010-2019



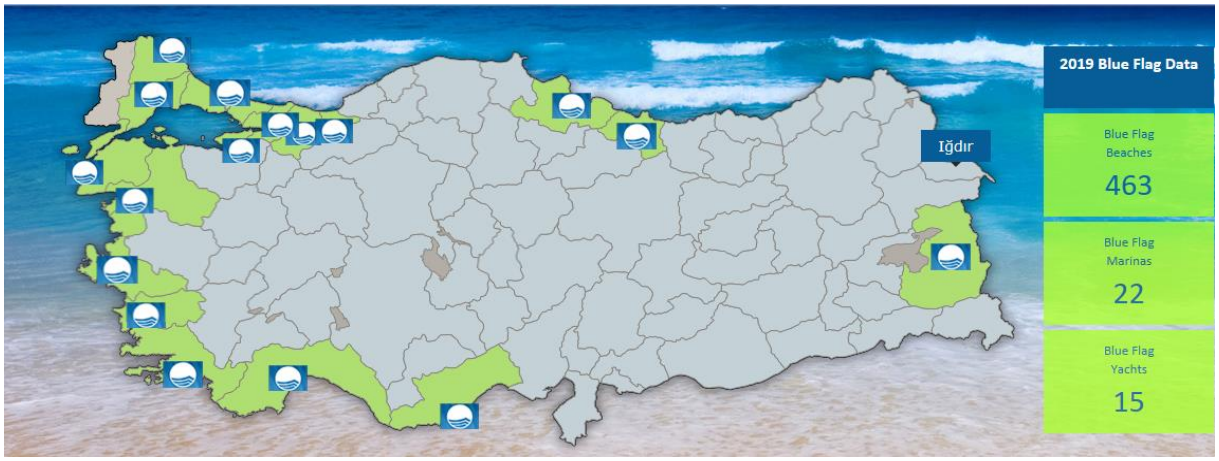
Source: Ministery of Culture &Tourism

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.

Figure 2. Blue Flag Data



Source: Foundation for Environmental Education of Turkey

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[3].

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.

[3] Source: Ministry of Culture and Tourism

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.

CHAPTER VIII

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 have 500 fish species. 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.

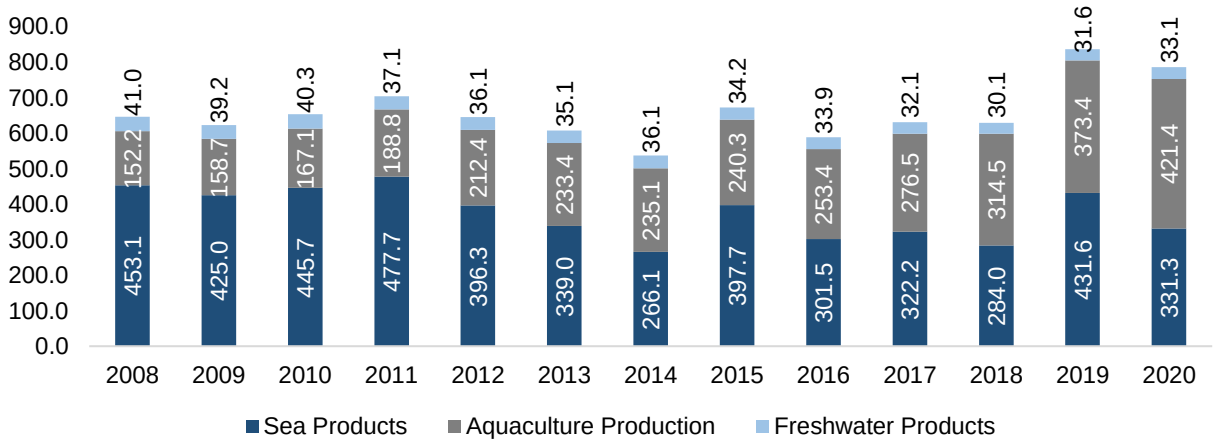
Annual fish production of Turkey is 1 million tons. 80% of fish production comes from sea, 10% from inland water production, and 10% from farming production.

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 6.1% in 2020 with respect to the previous year and occured as 785 thousand 811 tonnes. The total fishery production was composed of catched sea fish by 37.1%, catched other sea products by 5%, catched inland water products by 4.2% and aquaculture products by 53.6%.

While the production made by capture was 364 thousand 400 tonnes, aquaculture production occurred as 421 thousand 411 tonnes. The capture of marine production decreased by 23.2%, capture of inland water production increased by 4.8% with respect to the previous year.

Graph 55. Fishery Production (2011-2020) (Tohussand Tonnes)



Source: Ministry of Agriculture and Forestry

The quantity of the capture of sea fish occured 291 thousand 910 tonnes. When examined the distribution of the capture of sea fish, the highest amount of fish is anchovy with 171 thousand 253 tonnes. Sprat with 26 thousand 804 tonnes and atlantic bonito with 22 thousand 743 tonnes followed the anchovy.

Table 64. Fisheries Statistics by the Years

Years	Sea Products (Tonnes)	Aquaculture Production (Tonnes)	Freshwater Products (Tonnes)
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
2019	431,572	373,356	31,596
2020	331,281	421,411	33,119

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 65. Quantity of Caught Sea Fish

Type of Fish	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Leer Fish	586	349	334	174	109	187	212	182	190	142
Greater Amberjack	31	43	54	9	9	7	9	8	18	10
Albacore	1,396	62	71	0	53	25	44	38	4	16
Hake-Eurepean Hake	921	893	676	642	706	784	1,011	1,019	1,270	1,149
Red Mullet	1,861	2,453	2,055	1,426	1,255	1,454	1,406	1,399	1,719	1,604
Goldon Banded	428	337	89	35	25	79	69	50	42	36
Sprat	87,141	12,092	9,764	41,648	76,996	50,225	33,950	20,057	38,078	26,804
Seabream	766	918	944	606	481	495	590	544	558	584
Common Sole	829	792	694	411	328	352	486	432	421	458
John Dory	67	69	62	45	46	47	48	52	61	50
Common Seabream	70	51	71	36	31	25	29	45	32	35
Angler Fish	193	199	205	190	166	176	185	220	242	208
Shore Rockling	15	9	14	12	7	10	12	16	30	37
Frigate Mackerel	2,552	907	863	562	476	407	474	367	462	1,070
Meagre	31	57	17	18	20	24	10	56	69	67
Silverside	1,473	936	886	447	327	517	489	592	499	452
Anchovy	228,491	163,982	179,615	96,440	193,492	102,595	158,094	96,452	262,544	171,253
Painted Comber	34	40	37	45	17	18	12	11	7	12
Eurepean Barracude	228	213	370	125	171	116	96	75	69	94
Black Skorpion Fish	196	367	192	202	143	139	306	208	154	108
Annular Bream	196	129	107	59	75	84	87	46	54	54
Horse Mackerel	18,073	24,625	21,818	12,213	14,290	8,860	8,066	14,222	13,180	7,495
Scad	6,937	6,321	6,606	4,110	2,373	2,289	4,919	6,456	6,325	4,855
Brown Mearge	7	6	3	8	5	5	3	4	2	1
Picarel	878	903	766	350	332	329	286	255	218	179
Turbot***	166	203	209	198	239	221	167	139	272	412
Two Banded Bream	153	195	123	148	109	125	211	128	118	79
Gobies	96	148	67	43	39	51	3	13	63	32
Grey Mullet	2,514	4,010	2,505	1,721	1,783	1,826	2,314	1,592	2,182	1,416
Angelshark	16	13	17	8	1	3	1	0	0	0
Sword Fish**	190	80	97	56	35	77	441	427	414	402
Red Gurnard	212	272	220	66	54	54	57	44	46	29
Trigla Lineata	55	37	27	7	3	4	8	7	5	3
Chup Mackerel	3,127	2,183	2,574	1,695	1,210	1,602	2,043	1,504	2,334	2,239
Topeshark	370	183	111	109	78	22	23	21	13	5
Bogue	2,114	1,422	2,226	2,208	2,208	2,795	3,175	3,559	2,865	2,599
Waker	397	312	261	192	167	231	33	111	243	248
Seabas	317	424	187	111	139	132	135	151	156	135
Small-Scalled	84	28	51	20	17	28	20	41	23	13
Blue Fish	3,122	7,390	5,225	8,386	4,136	9,574	1,936	5,767	1,214	3,722
Saddled Seabream	113	139	114	128	59	90	92	64	68	65
Striped Bream	636	1,091	990	789	896	980	1,172	1,063	1,011	948
Whiting	9,455	7,367	9,397	9,555	13,158	11,541	8,248	6,814	8,941	9,364
European Coger	1	4	2	0	1	3	0	-	-	0
Conger Eel	196	113	123	144	83	124	152	182	74	75

Type of Fish	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Croaker	24	14	26	91	29	31	27	25	25	20
Dusky Grouper	34	23	20	13	17	11	3	3	0	1
Bluefin Tuna*	528	536	551	555	1,091	1,324	1,515	1,284	1,771	2,252
Little Tunny	1,437	1,645	1,386	682	326	184	480	617	450	341
Piper	15	14	9	8	12	3	3	2	5	5
Atlantic Bonito	10,019	35,764	13,158	19,032	4,573	39,460	7,578	30,920	1,578	22,743
Large-Eye Dentex	54	55	34	19	28	33	9	8	6	28
Flounder	47	27	81	6	10	9	7	6	8	6
Pilchard	34,709	28,248	23,919	18,077	16,693	18,162	23,426	18,854	19,119	21,265
Black Sea Bream	24	49	26	27	22	51	20	52	39	41
Saupe	167	150	203	145	189	128	145	120	155	95
Dentex	83	81	60	55	59	54	47	69	69	70
Sharpsnout Seabream	14	9	6	4	1	2	2	2	5	1
Striped Red	3,877	3,767	2,333	3,617	3,476	3,047	2,074	2,915	2,342	2,775
Twaite Shad	2,582	1,699	1,541	2,094	2,035	1,642	1,576	1,605	1,965	2,612
Blue Spatled Bream	47	20	31	22	8	14	17	26	11	26
Mackerel	147	201	119	47	103	62	728	369	186	173
Thornback Ray	401	275	299	196	169	116	183	83	9	4
Gar Fish	317	232	205	334	314	268	253	264	185	367
Saury	319	283	191	219	103	131	153	139	144	180
Other	673	178	135	419	159	266	308	227	363	352
Total	**432,246**	**315,637**	**295,168**	**231,058**	**345,765**	**263,725**	**269,676**	**222,024**	**374,726**	**291,910**

*As from 2011 figure of bluefin tuna is the administrative register data of Ministry of Agriculture and Foresrty.
**As from 2017 figure of sword fish is the administrative register data of Ministry of Agriculture and Forestry.
***As from 2019 figure of turbot is the administrative register data of Ministry of Agriculture and Forestry.
Source: Data on sea products is compiled by the Monthly Large Scale Fishermen and Sesonal Small Scale Fishermen Catch Survey

Table 66. Quantity of Caught Other Sea (Crustaceas, Molluscas)

Type of Fish	2012	2013	2014	2015	2016	2017	2018	2019	2020
Octopus	361	284	254	215	246	163	224	293	311
Spiny Lobster	9	12	1	3	1	5	2	1	1
Norway Lobster	6	6	1	0	0	1	2	2	7
Sea Snail	9,596	8,655	7,004	8,795	10,354	9,194	9,672	11,646	8,461
Common Lobster	8	7	1	4	2	2	5	2	3
Oystre	-	11	0	0	-	-	-	-	-
Long Finned Squid	531	491	410	367	389	422	524	620	631
Speckled Shrimp	255	238	54	40	50	54	46	64	27
Green Tiger Prawn	641	452	470	490	720	729	759	580	552
Caramote Prawn	384	354	272	279	252	208	219	204	172
Giant Gamba Prawn	2,158	1,364	1,120	1,423	1,669	1,383	299	438	939
Deep Water Rose Prawn	1,601	1,620	2,502	1,764	1,810	2,357	3,213	3,852	3,515
Carpet Shell	15	83	9	5	5	-	1	14	57
Striped Venus	61,225	28,030	21,828	37,404	20,932	34,941	44,533	36,613	21,824
Mediterranean Mussel	2,093	887	49	192	78	536	604	1,170	1,035
Bearded Horse Mussel	-	-	155	48	-	-	-	-	3
Warty Venus	-	-	-	-	-	-	-	-	-
Cuttle Fish	1,396	1,244	697	745	925	986	1,042	940	961
Common Shore Crab	22	7	5	5	6	1	15	5	4
Great Scallop	-	3	0	1	-	-	-	-	0
Blue Crab	2	1	2	1	2	9	11	5	3
Sea Cucumber*	-	-	-	-	-	-	-	-	829
Other	383	131	189	185	300	1,506	762	399	38
Total	**80,686**	**43,879**	**35,019**	**51,966**	**37,739**	**52,496**	**61,931**	**56,846**	**39,371**

Source: Data on administrative register of Ministry of Agriculture and Forestry

Aquaculture production occurred as 293 thousand 175 tonnes at the seas, 128 thousand 236 tonnes at the inland waters in 2020. While the most important type produced at the inland waters is trout as 127 thousand 905 tonnes, the most important types produced at the sea are sea bass as 148 thousand 907 tonnes and sea bream as 109 thousand 749 tonnes.

Table 67. Agriculture Production

Type of Fish	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Inland Water	-	-	-	-	-	-	-	-	-	-
Trout (Rainbow Trout)	100,239	111,335	122,873	107,533	100,411	99,712	101,761	103,192	113,678	126,101
Trout (Salmo sp.)*	-	-	-	450	755	1,585	1,944	1,695	2,375	1,804
Carp	207	222	146	157	206	196	233	212	203	173
Sturgeon*	-	-	-	17	28	6	13	2	-	14
Tilapia*	-	-	-	32	12	58	8	12	6	13
European Catfish**	-	-	-	-	-	-	8	5	121	92
Frog*	-	-	-	50	43	44	43	49	43	39
Marine Water	-	-	-	-	-	-	-	-	-	-
Trout (Rainbow Trout)	7,697	3,234	5,186	4,812	6,187	4,643	4,972	9,235	9,411	18,182
Trout (Salmo sp.)*	-	-	-	798	685	1,073	980	375	281	507
Sea Bream	32,187	30,743	35,701	41,873	51,844	58,254	61,090	76,680	99,730	109,749
Sea Bass	47,013	65,512	67,913	74,653	75,164	80,847	99,971	116,915	137,419	148,907
Common Seabream*	-	-	-	106	143	225	20	2	5	1
Bluespotted Seabream**	-	-	-	-	-	-	122	74	74	-
Redbanded Seabream**	-	-	-	-	-	-	66	1	-	-
Corb*	-	-	-	39	61	20	125	30	47	26
Meagre*	-	-	-	3,281	2,801	2,463	697	1,486	3,375	7,428
Dentex*	-	-	-	113	132	43	51	24	27	-
Sharpsnout Seabream*	-	-	-	8	59	2	-	-	-	-
Blue Spatled Bream*	-	-	-	75	90	61	107	70	66	-
Bluefin Tuna*	-	-	-	1,136	1,710	3,834	3,802	3,571	2,327	4,338
Mussel	5	-	-	-	3	329	489	907	4,168	4,037
Other	1,442	1,364	1,575	-	-	-	-	-	-	-
Total	**188,790**	**212,410**	**233,394**	**235,133**	**240,334**	**253,395**	**276,502**	**314,537**	**373,356**	**421,411**

*It was compiled starting from 2014. **It was compiled starting from 2017.
Source: Data on Administrative Register of Ministry of Agriculture and Forestry

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 (202 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 1,640 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.

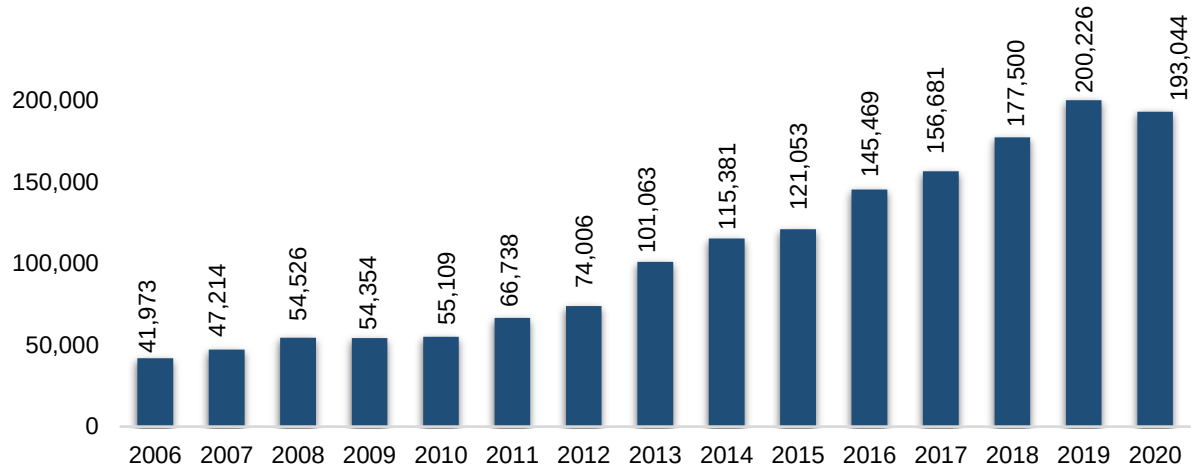
Fishing vessels in Turkey are generally small vessels, which are suitable for shore fishing. There are 18,008 fishing vessels in total and 83% of these boats consists of vessels of 5 -12 meters which perform shore fishing.

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%.

Graph 56. Exports of Water Production (2006-2020) Amount (Tonnes)

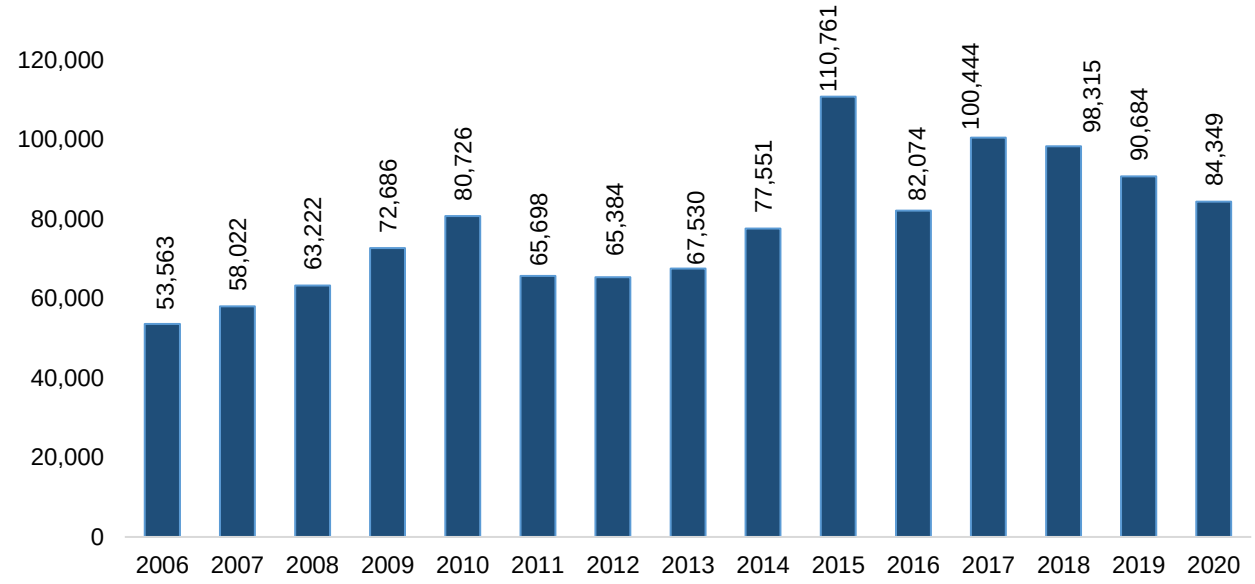


Source: Ministry of Agriculture and Forestry

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 57. Imports of Water Products (2006-2020) (Amount (Tonnes))



Source: Ministry of Agriculture and Forestry

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 in order to comply with the provisions of Water Products Law No: 1380, Water Products Regulation and European Union Directives.

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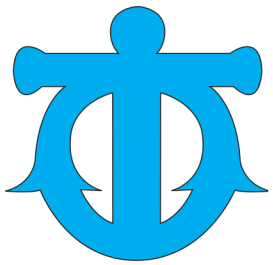

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