Donaukommission
Commission du Danube
Дунайская Комиссия

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Economic Analysis Report on Freight Potentials for the Danube from Third Neighbouring Countries – Focus on Türkiye

Work package:	WP 2 Facilitate IWT and Modal Shift Task 2.3.2 - Facilitate freight flows EU - Neighbouring third countries in the Rhine-Danube corridor
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Table of Contents

1. The focus and scope of the report

Work Package 2 - Facilitate Inland Waterway Transport (IWT) and Modal Shift, of the Grant Agreement[1] concluded between the European Commission/DG MOVE and the Danube Commission in May 2023 incorporates Task 2.3.2 - Facilitate freight flows EU - Neighbouring third countries in Rhine-Danube corridor. This task covers the period from 01/01/2023 till 30/06/2026 and foresees the following activities:

- Identifying freight potentials in non-EU countries connected via the Danube and via the 'Short-sea shipping' in the Black Sea with a special focus on Serbia, Moldova, Ukraine, Western Balkans, Georgia, and Turkey; provision of an economic analysis report

- Identification of the infrastructure investment needs in the Danube ports fostering cargo flows from these countries as part of the economic analysis report

- Facilitation of the development of EU-funded projects which lead to higher volumes on the Danube and in Danube ports.

- Participate in events promoting the use of the Danube River waterway organized by partner organizations in the framework of EUSDR PA1A and EU-funded projects

- Organise a yearly workshop promoting the Danube as a logistics solution with stakeholders from a selected neighbouring third country in cooperation with national or transnational business organisations active in the promotion of Danube transportation.

The work program of the task foresees two deliverables:

D2.3.2.1 Economic analysis report on freight potentials for the Danube from third neighbouring countries (Georgia, Moldova, Serbia, Türkiye, Western Balkan), including related infrastructure investment needs in Danube ports

D2.3.2.2 (Co-)organizing a yearly workshop promoting the Danube waterway with stakeholders from a selected neighbouring third country in the year 2024, 2025 and 2025

There is a close thematic and organisational link between Deliverable D2.3.2.1, the economic analysis of freight transport potential for the Danube from EU neighboring third countries, and Deliverable D2.3.2.2, the annual workshop to promote transport with EU neighboring third countries.

On the one hand, the economic analysis is intended to support the preparation and realization of the workshops by providing economic facts and figures; on the other hand, the results of the workshops are intended to supplement and expand the analysis report gradually.

[1] Project ref. 101127323 – 22 – HU – TG – GRANT 3 – Danube

The yearly workshop is intended to form a starting point for close cooperation between public and private stakeholders of EU states and the neighboring third country and thus shall lead to follow-up activities as part of the implementation of Task 2.3.2 in subsequent years. However, Task 2.3.2 also aims to ensure that the yearly workshop initiated by DC triggers further promotional activities carried out by organizations pursuing the same goal, namely to stimulate cargo flows on the Danube waterway and thus support the EU's transport and climate goals by shifting cargo to the ecologically sustainable Danube waterway.

The analysis report is intended to become a living document issued in releases that are expanded through the annual workshops and at the same time is continuously updated for the workshops taking into consideration the findings of the workshops such as transport services infrastructure investments or infrastructure needs.

The Russian Federation's war of aggression against Ukraine has not only changed the geopolitical situation in Europe, but has also led to significant changes in the flow of goods. The closure of the Ukrainian Black Sea ports and the ports on the Sea of Azov as a result of Russian aggression in February 2022 led to the establishment of the EU-UA Solidarity Lanes, which are being implemented along the lines of the EU Action Plan[2] adopted in May 2022. The Danube Commission supports the European Commission in the implementation of the EU-UA Solidarity Lanes as part of Grant III/Task 2.3.1.

The Ukrainian Danube ports and the Romanian Black Sea port of Constanta have become essential logistics hubs for the export of Ukrainian grain and the import of important economic goods. From February 2022 to mid-June 2024, almost 37 million tonnes of grain and edible oils were exported via the Danube Solidarity Lane, making an important contribution to global food security.

On 23 June 2023, the European Council granted Ukraine, together with Moldova, the status of candidate country at a European Council summit in Brussels. On 8 November 2023, the European Commission recommended to the European Council that Georgia be granted candidate country status, which it did on 14 December 2023. With Serbia which was granted candidate country status at the EU summit on 1 March 2012 (accession negotiations began on 21 January 2014) all 10 Danube states are either EU member states (7 states) or have the status of an EU candidate (3 states). On 21 March 2024, the heads of state and government of the European Union agreed at the EU summit in Brussels to open accession negotiations with Bosnia and Herzegovina.

Bosnia and Herzegovina borders the Sava River which is a major tributary of the Danube River and forms part of the Rhine-Danube TEN-T core corridor. Before the war which led to the break-up of Ex-Yugoslavia, the Sava River counted several million tons of cargo transported by inland barges.

The Republic of Türkiye (hereinafter 'Türkiye') is a key economic partner of the EU and a candidate country. An EU-Turkey Custom Union entered into force in 1995. EU accession negotiations started in 2005 but have been at a standstill since 2018 in line with the decision of the European Council as a reaction to the deterioration in the key

[2] COM(2022) 217 final

areas of the rule of law, fundamental rights, and democracy. The EU remains engaged with Türkiye, cooperating in areas of common interest, such as trade, migration, counterterrorism, public health, climate, energy, transport, and regional issues.

The EU is the biggest trading partner of Türkiye with a total volume of trade in goods amounting to €198.3 billion in 2022. Türkiye is eligible for EU financial support through the Instrument for Pre-accession Assistance (IPA III 2021-2027) and also from the European Fund for Sustainable Development Plus (EFSD+). To support public and private investments in the priority areas of the EFSD+ (Green Deal, Global Gateways, and Decent Jobs), the Turkey Investment Platform was established in 2022.

Bearing in mind the geopolitical situation and the economic interaction of the European Union and thus also the Danube states with neighboring third countries, the Secretariat of the Danube Commission proposed to carry out two activities in 2024 under Task 2.3.2 Grant III:

- A Workshop promoting cargo flows on the Danube Waterway and Danube River- and seaports from and to Türkiye, organised with the help of the Turkish Embassy in Budapest as well as with actors from the Hungarian – Turkish business community. This event took place on 6 June 2024.

- A workshop in the Port of Brčko (Bosnia and Hercegovina) promoting cargo flows from the Danube region to and from Brčko as well as into its economic hinterland of Bosnia and Hercegovina. This event is planned to take place on 18-19 September 2024 in Brčko.

The first release of this report focuses on the trade and cargo flows between Türkiye and the Danube states with special attention to Romania and Bulgaria as these Danube countries are essential for current and future maritime connection with Türkiye. In addition, the cargo flows between Hungary and Türkiye are highlighted as the Hungarian business community is a key target audience for the event bearing in mind Budapest was the location of the event.

After the event, the analysis report will be supplemented with specific results of the discussions between the event participants and the analyses will be expanded to include also more detailed information on other trade and traffic of the other Danube countries with Türkiye. Building on the results of the first event with Türkiye, the intention is to organise a follow-up workshop next year either in Belgrade or Constanta.

Another report will subsequently be prepared for the workshop in Brčko to provide a supplementary factual basis and trade and traffic flow analysis between the Danube states and Bosnia and Hercegovina.

With the workshops planned for 2025 and 2026, the analysis report will be both updated and continuously supplemented in terms of content (following a release plan).

The freight potential is broken down into two parts:

1. Trade statistics: trade (export/import) values among HU, RO, BG, and TR filtered by year, destination, type of goods, and mode of transport

2. Freight statistics: general and Inland Waterway Transport volumes (loaded/unloaded/total) among HU, RO, BG, and TR filtered by type of cargo and port

For an easier understanding of the geographical aspects of the discussed topic, a map was created that shows the locations of the ports and settlements, mentioned in the report.

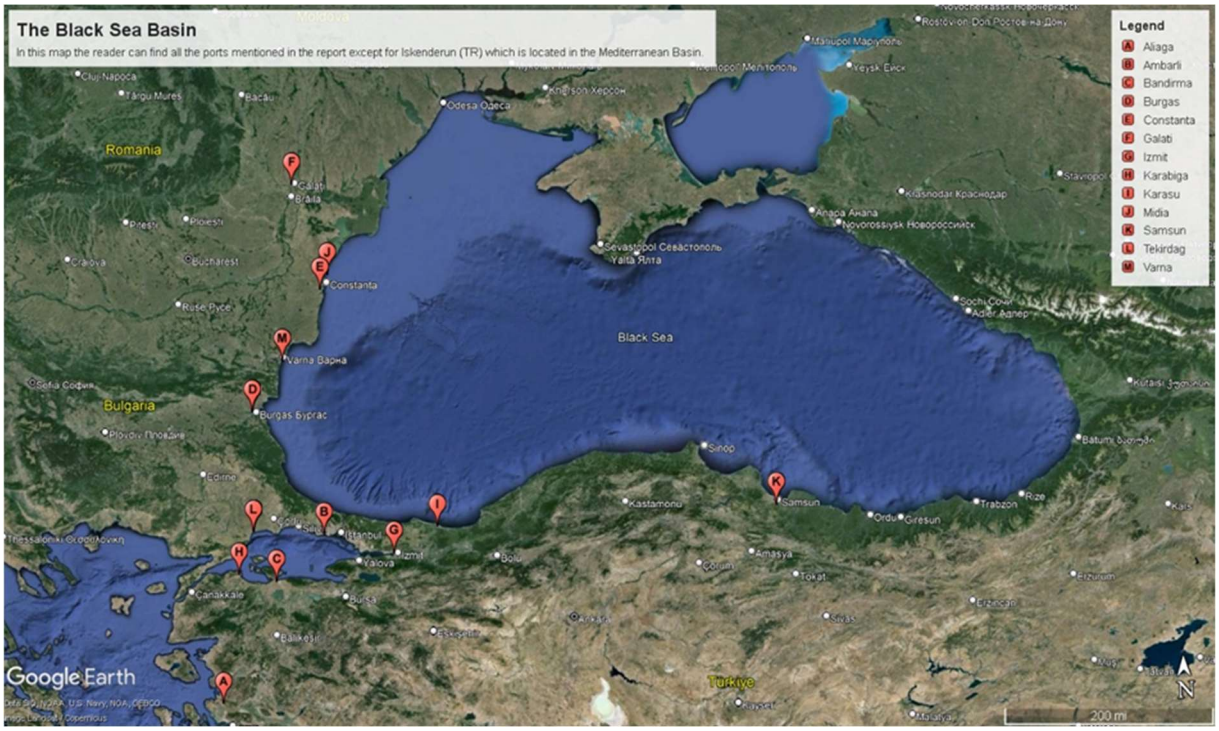


Figure 1. Locations of ports on analyzed transport routes

The DC has defined two years as subjects of analysis and comparison: 2019 – as a reference year before COVID-19 and 2022 as the last year with 100% comprehensive accessible quantitative data within the subject. The two main sources were certain datasets of Eurostat such as its country-wise 'Gross weight of goods transported to/from main ports' tables and the datasets of the Turkish Statistical Institute (TURKSTAT).

Note:

The aim of the report is to collect basic information on the flow of goods between the TR and the Danube region. These flows should help to understand the current economic interaction of the TR with selected destinations in the Danube Region and the current transportation routes of TR import and export flows. The analysis will help to identify business sectors and stakeholders that could be targeted for participation in facilitation workshops. Given the purely supportive nature of the report for the workshops and the planned limited resource allocation for its preparation, the report does not aim to provide a methodologically correct freight potential analysis. Such an analysis would need to include a more detailed collection of data on volumes, frequencies, routes, costs,

infrastructure details, regulatory aspects, a trend analysis to assess future development, an assessment of the competitive elements of routes for different market segments, the definition of development scenarios, a freight flow simulation based on the infrastructure network, etc. The DC Secretariat does not have the necessary software tools for such an economic analysis and calculation of the freight potential, nor does it have the necessary budget under the Grant 3 Agreement.

2. General economic facts on Türkiye

Türkiye is the 17th largest economy in the world, according to the International Monetary Fund (IMF), with a GDP of $1.024 trillion as of 2023. It is a member of the OECD and the G20.

Table 1. General information (Türkiye, 2023)

Metric	2023
Population, million	85.8
GDP, current US$ trillion	1 024.0
GDP per capita, current US$	11 939.0
Life Expectancy at Birth, years	76.0

Source: https://data.worldbank.org/

In 2023, Türkiye's GDP expanded a 4.5%, fueled mainly by robust increases in private consumption (12.8% in real terms), investment (8.9%), and government consumption (5.2%). Exports contracted 2.7% in 2023 while imports grew firmly at 11.7%, dragging on growth. Sector-wise, the service sector grew by 4.8% and construction by 7.8%, benefiting from earthquake recovery efforts. The labor market remained resilient, with a 9.1% unemployment rate in January 2024.

Table 2. Economic outlook (Türkiye, 2021-2026)

	2021	2022	2023	2024f	2025f	2026f
Real GDP growth, at constant market prices	11.4	5.5	4.5	3.0	3.6	4.3
Private Consumption	15.4	18.9	12.8	2.3	3.1	4.2
Government Consumption	3.0	4.2	5.2	2.5	2.1	1.7
Gross Fixed Capital Formation	7.2	1.3	8.9	2.9	2.9	3.1
Exports	25.1	9.9	-2.7	4.5	5.2	5.9
Imports	1.7	8.6	11.7	3.7	4.2	5.6
Real GDP Growth, at constant factor prices	12.7	6.2	4.5	3.0	3.6	4.3
Agriculture	-3.0	1.3	-0.2	1.4	1.5	1.5
Industry	13.0	-0.6	3.7	4.6	4.8	5.0
Services	13.2	10.1	4.7	2.5	3.3	4.2
Inflation (CPI), avg.	19.6	72.3	53.9	57.8	28.9	16.4
Current Account balance (% of GDP)	-0.9	-5.4	-4.2	-2.8	-2.4	-2.5
Net Foreign Direct Investment (% of GDP)	0.8	1.0	0.7	0.9	1.1	1.4
Fiscal Balance (% of GDP)	-2.6	-0.8	-5.4	-5.4	-3.7	-2.4
Debt (% of GDP)	40.4	30.8	29.7	29.9	30.5	31.2

Source: https://data.worldbank.org/

3. Key macroeconomic indicators of the examined countries'

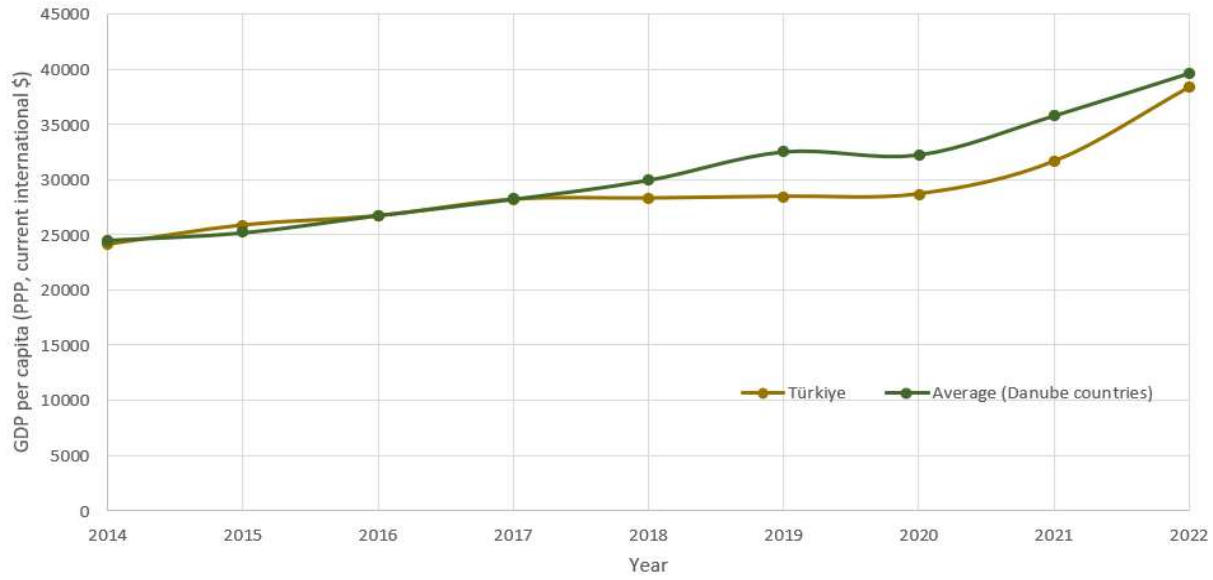
In this first subchapter, the Secretariat would like to portray the change in some key macroeconomic indicators of Türkiye and the Danube countries in the past years.

Table 3. *GDP per capita* (PPP in current int. dollars, Danube countries and TR, 2015-2022)

Country	2015	2016	2017	2018	2019	2020	2021	2022
Austria	49 866	52 684	54 173	56 938	60 575	58 611	63 421	70 976
Bulgaria	18 386	20 066	21 458	23 006	25 527	25 736	29 407	35 470
Germany	47 610	50 580	53 071	55 196	58 252	57 905	61 940	66 616
Croatia	23 391	25 319	27 267	28 980	32 124	30 447	36 954	42 171
Hungary	26 799	27 942	29 496	31 909	35 153	35 016	38 644	43 659
Moldova	9 313	10 488	11 464	12 435	13 319	12 513	15 122	15 719
Romania	21 624	23 905	26 943	29 568	33 551	34 295	37 971	43 240
Serbia	14 928	15 858	16 611	17 718	19 689	20 066	22 575	25 062
Slovakia	30 054	29 738	30 142	31 370	33 943	35 000	37 795	41 013
Ukraine	10 164	11 148	11 861	12 634	13 348	13 103	14 289	12 675
Tot. Danube	252 136	267 726	282 487	299 753	325 480	322 692	358 118	396 602
Avg. Danube	25 214	26 773	28 249	29 975	32 548	32 269	35 812	39 660
Türkiye	25 856	26 696	28 193	28 299	28 461	28 680	31 638	38 355

Source: https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD

Figure 2. GDP per capita (PPP in current int. dollars, Danube countries and TR, 2015-2022)



Source: https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.CD

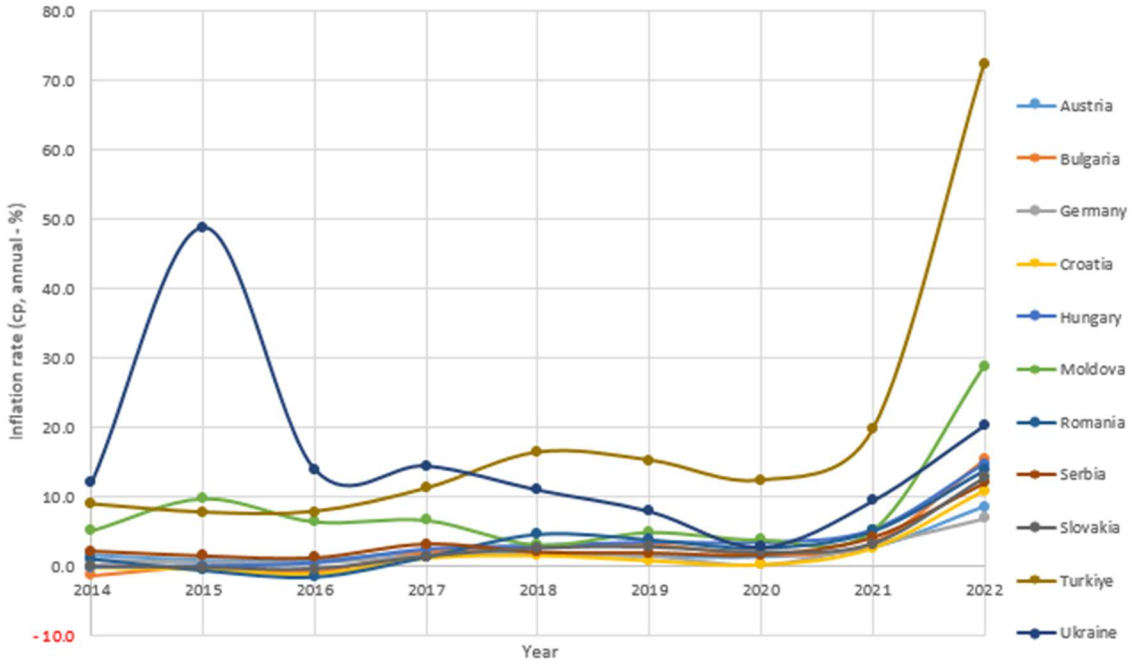
The average GDP per capita (PPP) of the Danube countries was 32 548 dollars in 2019 and 39 660 dollars in 2022. Turkey's GDP per capita (PPP) was only a few thousand less in the two highlighted years (28 461 dollars in 2019 and 38 355 dollars in 2022). It is also interesting to note that before 2017 the two values were even closer to each other. But as of 2017, the gap between the two countries started to open with Turkey falling behind. However, by 2022 Turkey could close the gap again to almost zero.

Table 4. Annual inflation rate
(consumer prices in percent,
Danube countries and Türkiye, 2013-2022)

Country	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria	1.6	0.9	0.9	2.1	2.0	1.5	1.4	2.8	8.5
Bulgaria	- 1.4	- 0.1	- 0.8	2.1	2.8	3.1	1.7	3.3	15.3
Germany	0.9	0.5	0.5	1.5	1.7	1.4	0.1	3.1	6.9
Croatia	- 0.2	- 0.5	- 1.1	1.1	1.5	0.8	0.2	2.6	10.8
Hungary	- 0.2	- 0.1	0.4	2.3	2.9	3.3	3.3	5.1	14.6
Moldova	5.1	9.7	6.4	6.6	3.0	4.8	3.8	5.1	28.7
Romania	1.1	- 0.6	- 1.5	1.3	4.6	3.8	2.6	5.1	13.8
Serbia	2.1	1.4	1.1	3.1	2.0	1.8	1.6	4.1	12.0
Slovakia	- 0.1	- 0.3	- 0.5	1.3	2.5	2.7	1.9	3.1	12.8
Ukraine	12.1	48.7	13.9	14.4	11.0	7.9	2.7	9.4	20.2
Avg. Danube	2.1	6.0	1.9	3.6	3.4	3.1	1.9	4.4	14.4
Türkiye	8.9	7.7	7.8	11.1	16.3	15.2	12.3	19.6	72.3

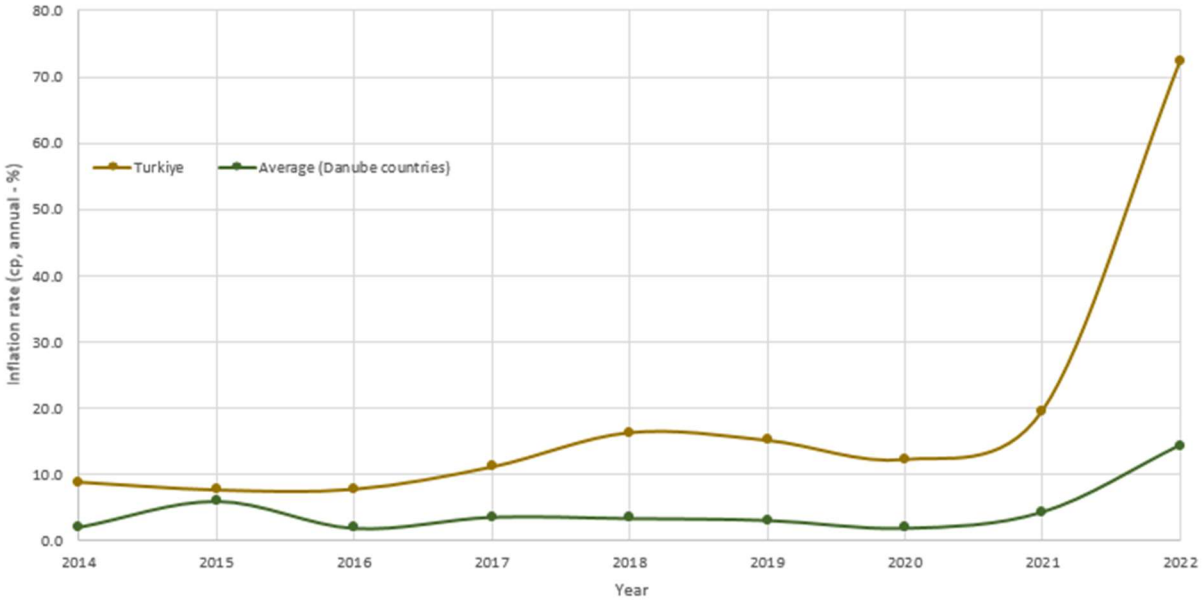
Source: https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?end=2022&start=2013

Figure 3. Annual inflation rate
(consumer prices in percent, Danube countries and Türkiye, 2013-2022)



Source: https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?end=2022&start=2013

Figure 4. Annual inflation rate
(consumer prices in percentage,
the average of the Danube countries' and Türkiye, 2013-2022)



Source: https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?end=2022&start=2013

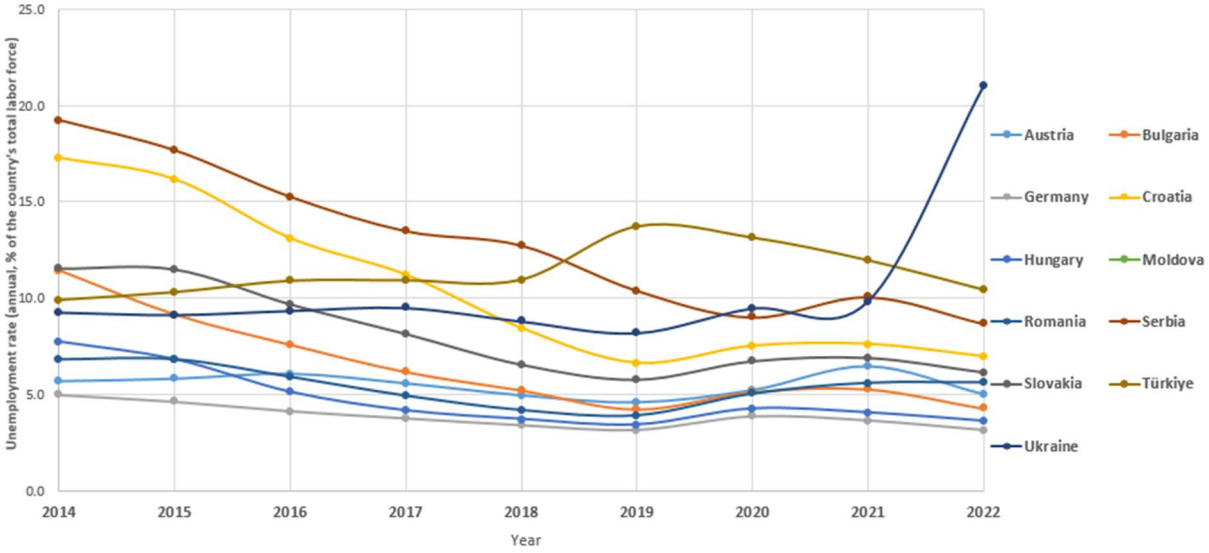
From 2019 to 2022 the average annual inflation rate of the Danube countries has increased from 3 to 14 % while Türkiye's has increased from 15 to 72 %.

Table 5. Annual unemployment rate
(% of the country's total labor force,
Danube countries and Türkiye, 2013-2022)

Country	2014	2015	2016	2017	2018	2019	2020	2021	2022
Austria	5.7	5.8	6.1	5.6	4.9	4.6	5.2	6.5	5.0
Bulgaria	11.4	9.1	7.6	6.2	5.2	4.2	5.1	5.3	4.3
Germany	5.0	4.6	4.1	3.7	3.4	3.1	3.9	3.6	3.1
Croatia	17.3	16.2	13.1	11.2	8.4	6.6	7.5	7.6	7.0
Hungary	7.7	6.8	5.1	4.2	3.7	3.4	4.3	4.0	3.6
Moldova	1.5	1.8	1.6	1.6	1.2	1.5	1.2	0.8	0.9
Romania	6.8	6.8	5.9	4.9	4.2	3.9	5.0	5.6	5.6
Serbia	19.2	17.7	15.3	13.5	12.7	10.4	9.0	10.1	8.7
Slovakia	11.5	11.5	9.7	8.1	6.5	5.8	6.7	6.9	6.1
Ukraine	9.3	9.1	9.4	9.5	8.8	8.2	9.5	9.8	21.0*
Avg. Danube	9.5	8.9	7.8	6.9	5.9	5.2	5.7	6.0	6.5
Türkiye	9.9	10.3	10.9	10.9	11.0	13.7	13.1	12.0	10.4

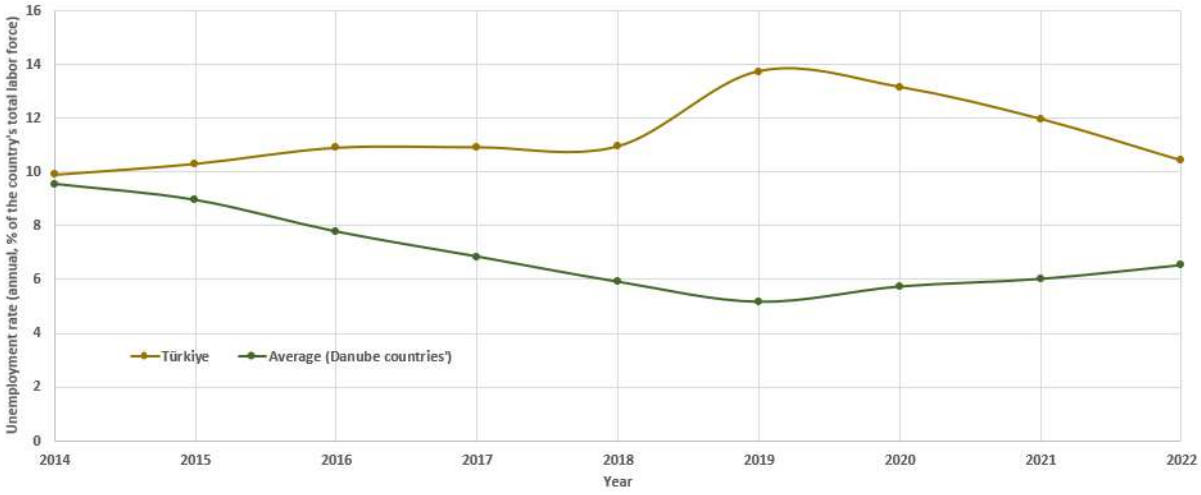
Source(s): https://data.worldbank.org/indicator/SL.UEM.TOTL.NE.ZS, https://www.ilo.org
**The unemployment rate for Ukraine in 2022 is an estimation made by the International Labor Organization.*

Figure 5. Annual unemployment rate
(% of the country's total labor force,
Danube countries and Türkiye, 2013-2022)



Source(s): https://data.worldbank.org/indicator/SL.UEM.TOTL.NE.ZS; https://www.ilo.org
*The unemployment rate for Ukraine 2022 is an estimation made by the International Labor Organization.

Figure 6. Annual unemployment rate
(% of the country's total labor force,
the average of the Danube countries' and Türkiye, 2013-2022)



Source(s): https://data.worldbank.org/indicator/SL.UEM.TOTL.NE.ZS
https://www.ilo.org
*The unemployment rate for Ukraine 2022 is an estimation made by the International Labor Organization.

From 2019 to 2022 the average unemployment rate of the Danube countries has increased from 5.2 to 6.5 % while the unemployment rate in Türkiye's is a lot higher, but showing a decreasing trend (from 13.7 to 10.4 %).

4. Trade Statistics

For this chapter, the Secretariat has deeply examined the databases of the Turkish Statistical Institute (TSI) and Eurostat. When listing Danube countries, we opted to list them in 'Danube downstream' order.

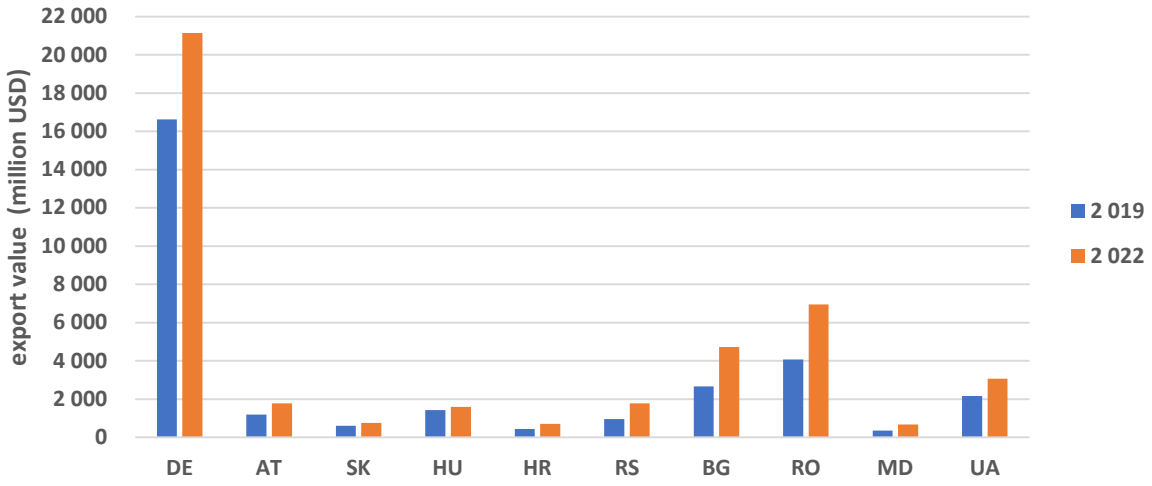
4.1 Reporting country: Türkiye (Source: Turkish Statistical Institute)

Table 6. Export to Danube countries
(million USD, from Türkiye to Danube countries, all modes of transport, 2019 and 2022)

Export destination	2019	2022	2019=100
Germany	16 617	21 142	127
Austria	1 184	1 779	150
Slovakia	599	759	127
Hungary	1 423	1 597	112
Croatia	442	702	159
Serbia	954	1 771	186
Romania	4 073	6 947	171
Moldova	343	663	193
Ukraine	2 156	3 059	142
Bulgaria	2 668	4 722	177
Total	30 460	43 142	142

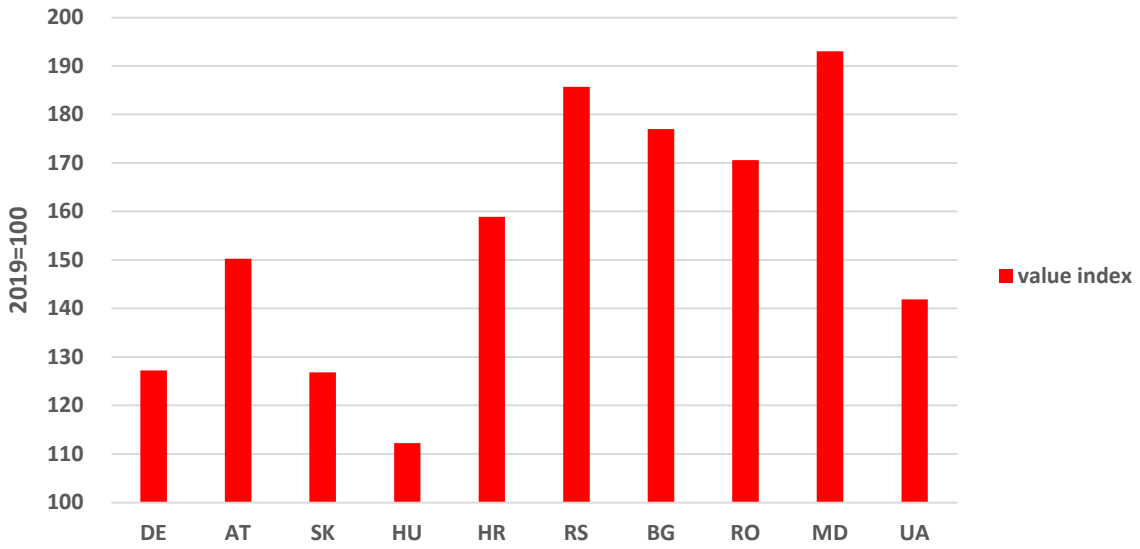
Source: https://data.tuik.gov.tr/

Figure 7. Export to Danube countries
(million USD, from Türkiye to Danube countries, all modes of transport, 2019 and 2022)



Source: https://data.tuik.gov.tr/

Figure 8. Export to Danube countries
(2019=100, from Türkiye to Danube countries, all modes of transport, 2022)



Source: https://data.tuik.gov.tr/

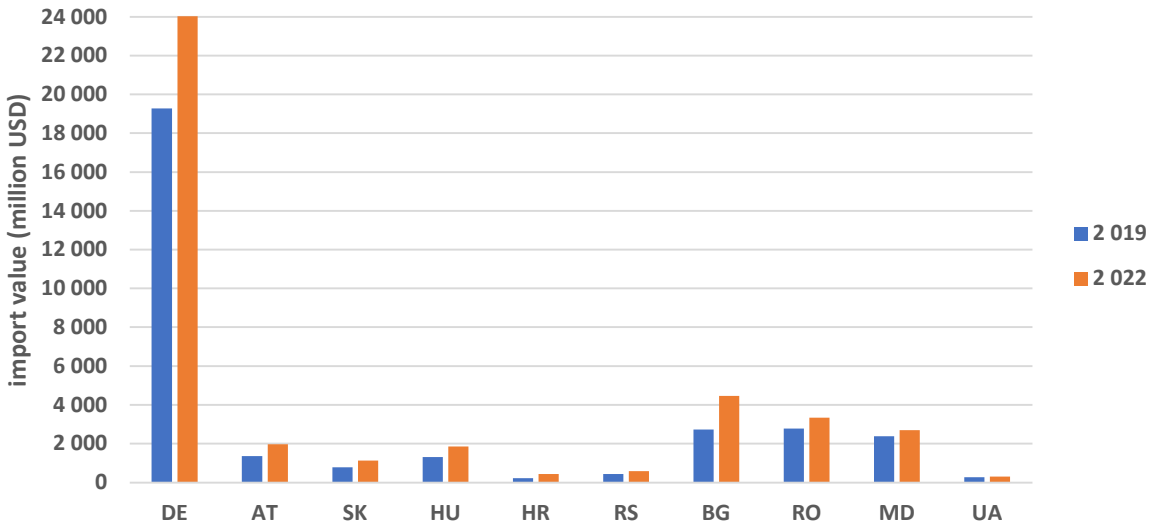
In 2019 and 2022 Germany, Romania and Bulgaria are the top 3 export partners of Türkiye by value. However, Germany significantly outnumbers all the other Danube export partners of Türkiye.

Table 7. Import from Danube countries
(million USD, from Danube countries to Türkiye, all modes of transport, 2019 and 2022)

Origin of import	2019	2022	2019=100
Germany	19 280	24 033	125
Austria	1 361	1 970	145
Slovakia	772	1 127	146
Hungary	1 308	1 849	141
Croatia	224	440	196
Serbia	438	574	131
Romania	2 771	3 336	120
Moldova	2 385	2 693	113
Ukraine	264	293	111
Bulgaria	2 725	4 455	163
Total	31 528	40 771	129

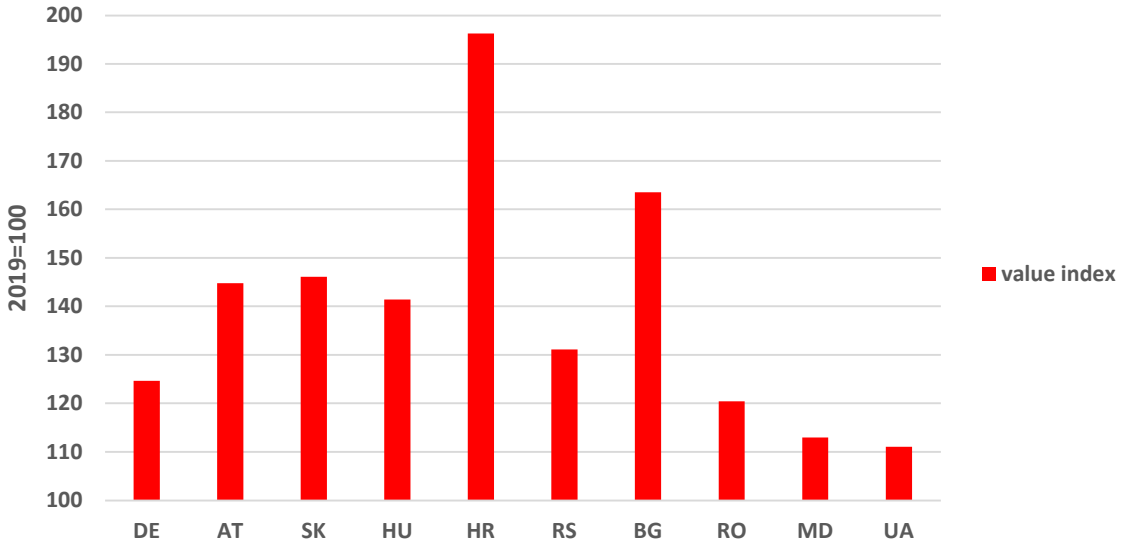
Source: https://data.tuik.gov.tr/

Figure 9. Import from Danube countries
(million USD, from Danube countries to Türkiye, all modes of transport, 2019 and 2022)



Source: https://data.tuik.gov.tr/

Figure 10. Import from Danube countries
(2019=100, from Danube countries to Türkiye, all modes of transport, 2022)



Source: https://data.tuik.gov.tr/

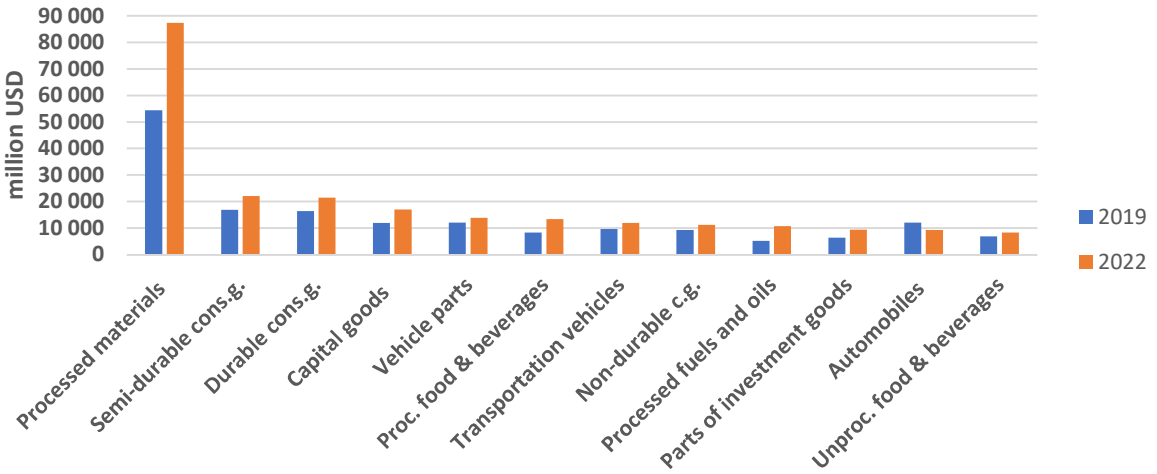
The top 4 Danube countries importing to Türkiye in 2019 and 2021 are Germany, Bulgaria, Romania, and Moldova.

Table 8. Export by main categories
(million USD, from Türkiye to all the countries of the world,
all modes of transport, 2019 and 2022)

Category of good (BEC)	2019	2022	2019=100
Processed materials incidental to industry	54 380	87 272	160
Semi-durable consumption goods	16 866	22 108	131
Durable consumption goods	16 402	21 493	131
Capital goods (except transportation vehicles)	11 925	17 084	143
Parts of transportation vehicles	12 128	13 836	114
Processed food and beverages	8 338	13 433	161
Transportation vehicles incidental to industry	9 682	11 951	123
Non-durable consumption goods	9 362	11 203	120
Processed fuels and oils	5 193	10 762	207
Parts of investment goods	6 363	9 376	147
Automobiles	12 095	9 345	77
Unprocessed food and beverages	6 903	8 347	121
Total (all categories of goods)	180 833	254 170	141

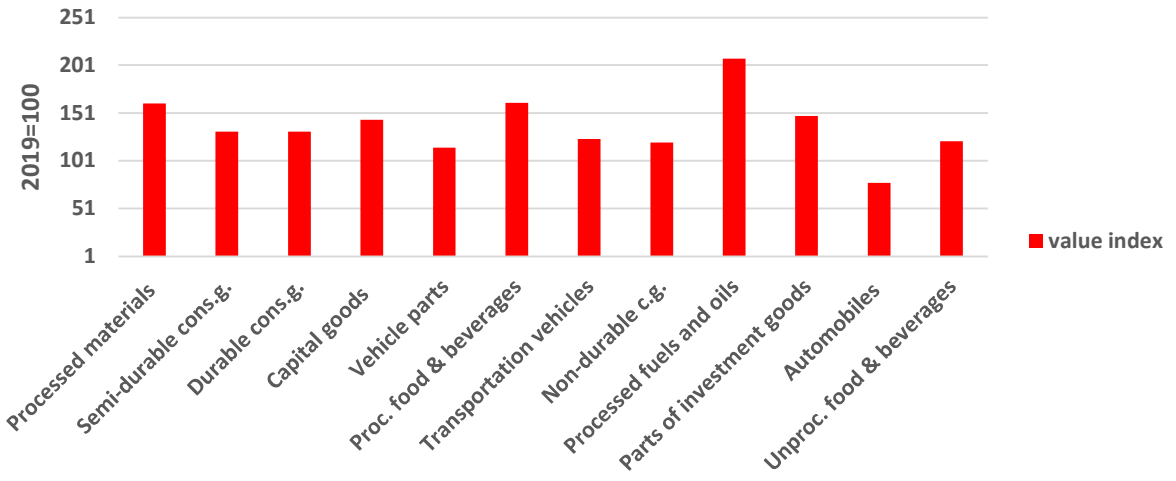
Source: https://data.tuik.gov.tr/

Figure 11. Export by main category
(million USD, from Türkiye to all the countries of the world,
all modes of transport, 2019 and 2022)



Source: https://data.tuik.gov.tr/

Figure 12. Export by main category
(2019=100, from Türkiye to all the countries of the world, all modes of transport, 2022)



Source: https://data.tuik.gov.tr/

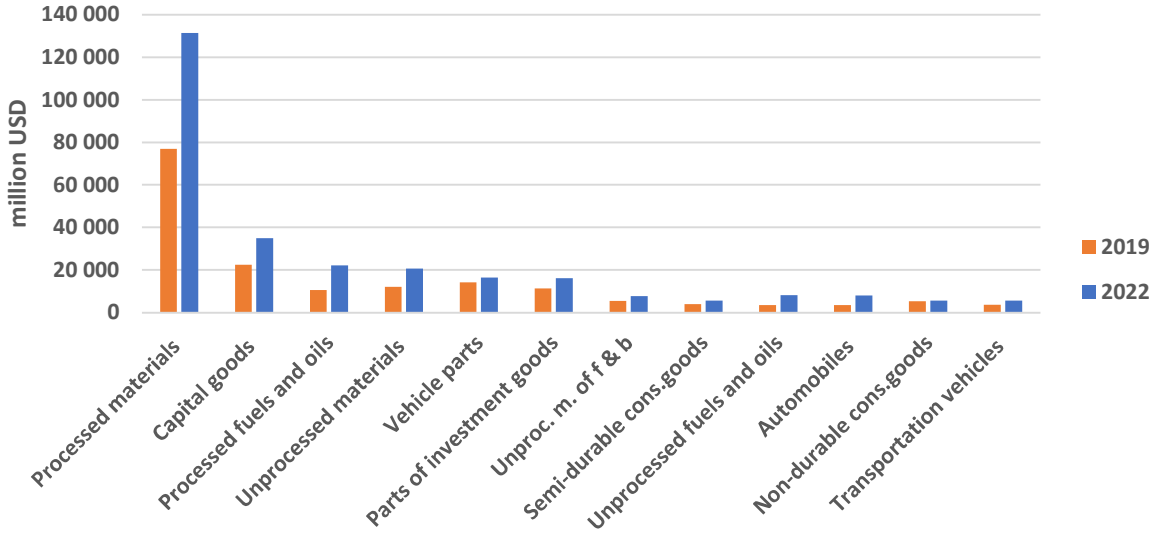
As a methodology, the Secretariat has selected the 10 largest categories of Turkish exports and imports for both 2019 and 2022. The ranking of the top 10 export categories of Türkiye did not change drastically during the three-year period. However, two categories (*'processed fuels and oils*' and *'parts of investment goods'*) were only among the top values in 2022 and two others were ('automobiles' and *'unprocessed food and beverages'*) only in 2019. This is why the Secretariat ended up with the portrayal of 12 different categories. The three export categories that experienced the largest change were '*processed materials incidental to industry'*, '*processed food and beverages'* and *'processed fuels and oils'.* The only category to record a decline was "automobiles" - a decline that seems all the greater when you consider that the value indicators themselves rose significantly from 2019 to 2022 due to high inflation rates both in Türkiye and in other countries.

Table 9. Import by main categories
(million USD, from all the countries of the world to Türkiye, all modes of transport, 2019 and 2022)

Category of good (BEC)	**2019**	**2022**	**2019=100**
Processed materials incidental to industry	76 917	131 409	171
Capital goods (except transportations vehicles)	22 378	34 995	156
Processed fuels and oils	10 534	22 130	210
Unprocessed materials incidental to industry	12 062	20 711	172
Parts of transportation vehicles	14 220	16 350	115
Parts of investment goods	11 354	16 156	142
Unprocessed materials of food and beverages	5 508	7 720	140
Semi-durable consumption goods	3 859	5 621	146
Unprocessed fuels and oils	3 532	8 191	232
Automobiles	3 535	7 977	226
Non-durable consumption goods	5 228	5 581	107
Transportation vehicles incidental to industry	3 690	5 540	150
Total	210 345	363 711	173

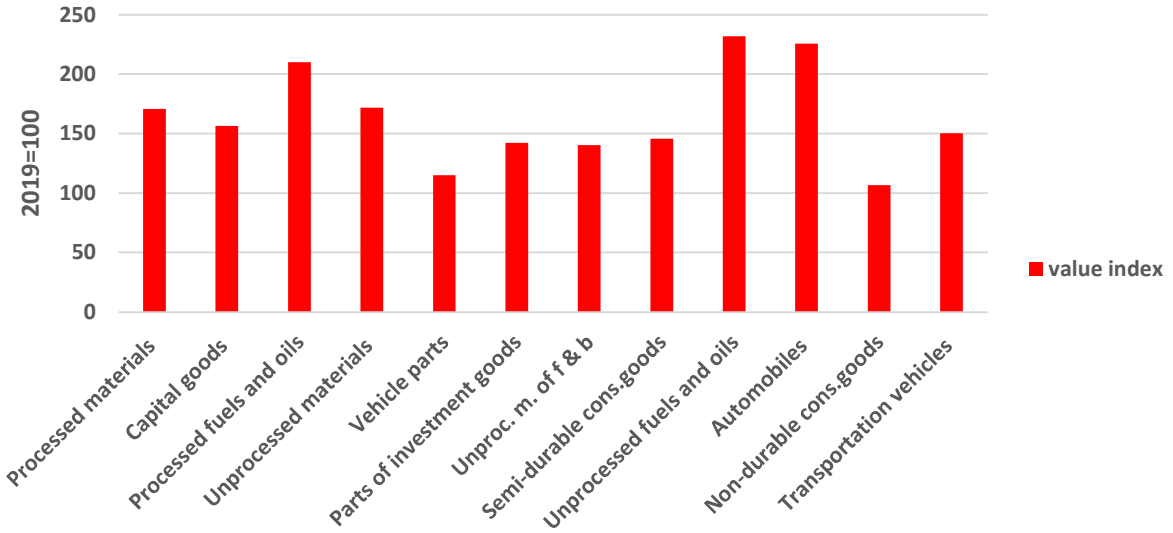
Source: https://data.tuik.gov.tr/

Figure 13. Import by main categories
(million USD, from all the countries of the world to Türkiye,
all modes of transport, 2019 and 2022)



Source: https://data.tuik.gov.tr/

Figure 14. Import by main categories
(2019=100, from all the countries of the world to Türkiye, all modes of transport, 2022)



Source: https://data.tuik.gov.tr/

In the examined period, the ranking among the top 5 import categories has partly changed, and there were also two - two categories that were only included in the top 10 one year from the two examined – *'unprocessed fuels and oils*' and '*automobiles*' only in 2022 and *'non-durable consumption goods'* and *'transportation vehicles incidental to industry'* only in 2019.

It is also interesting to note that the largest relative change in the import values of Türkiye has occurred in a sector in which change was not outstanding on the absolute scale – *'unprocessed fuels and oils'*. This means that the growth rate of this import sector

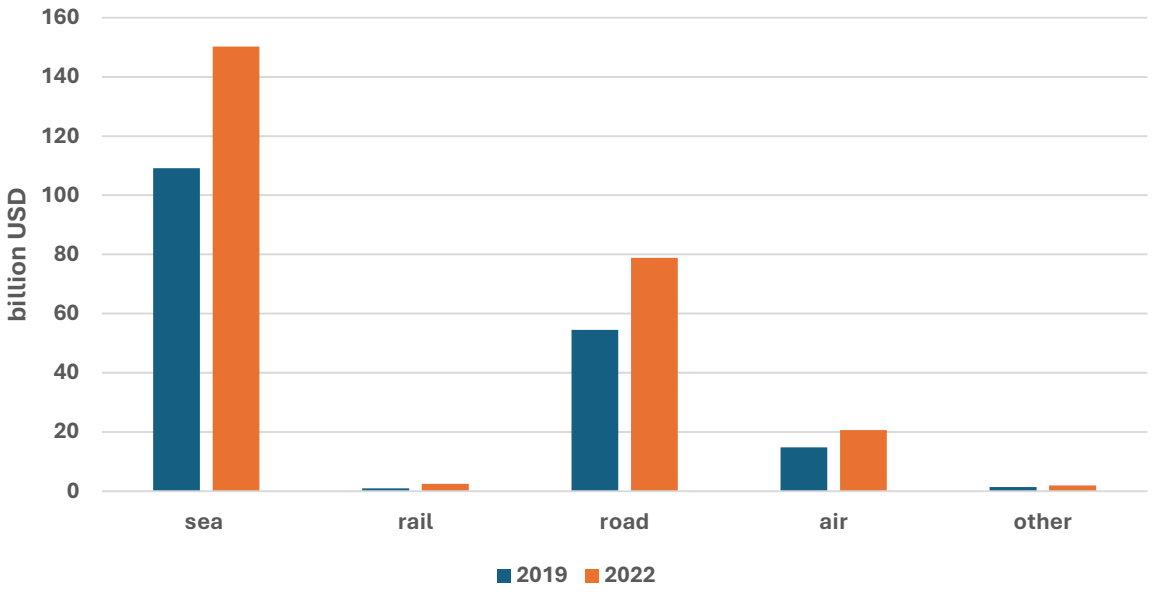
is huge but its absolute trade values are still much smaller than many other sectors'. In 2019, this sector was not even in the top 10 export sectors, but in 2022 it was.

Table 10. Export by mode of transport
(billion USD, from Türkiye to all the countries of the world, 2019 and 2022)

Mode of transport	2019	2022	2019=100
Sea	109	150	138
Rail	1	2	253
Road	54	79	145
Air	15	21	139
Other	1	2	132
Total	181	254	141

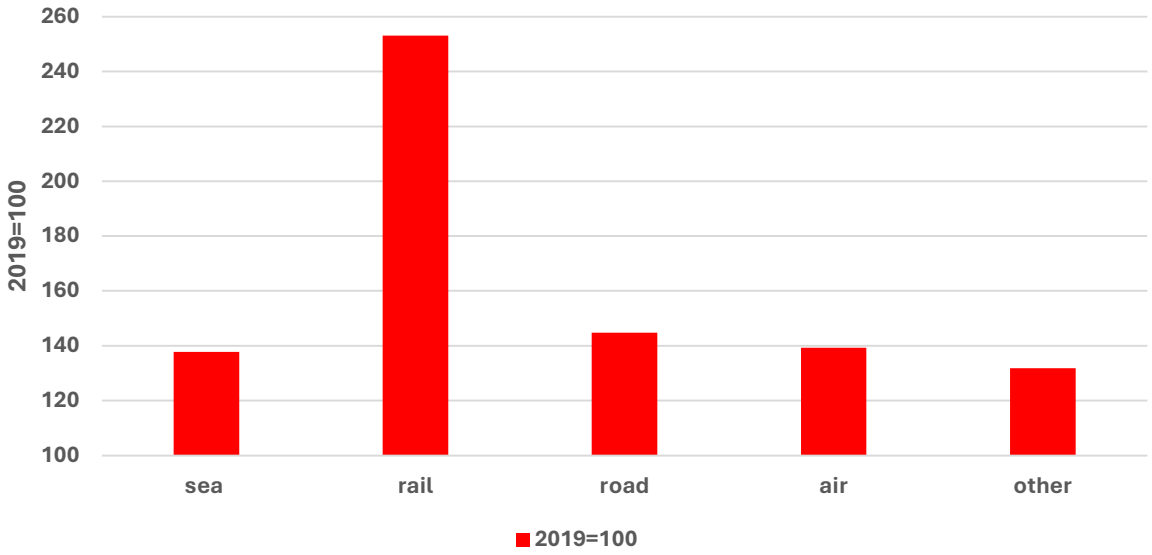
Source: https://data.tuik.gov.tr/

Figure 15. Export by mode of transport
(billion USD, from Türkiye to all the countries of the world, 2019 and 2022)



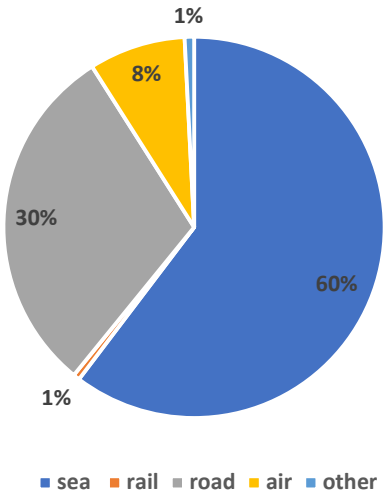
Source: https://data.tuik.gov.tr/

Figure 16. Export by mode of transport
(2019=100, from Türkiye to all the countries of the world, 2022)



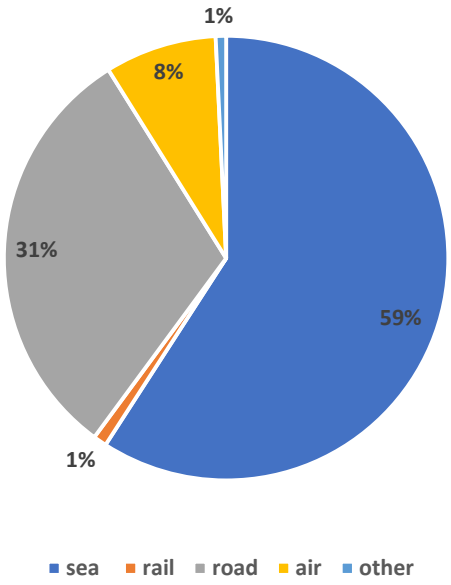
Source: https://data.tuik.gov.tr/

Figure 17. Export by mode of transport
(modal split, from Türkiye to all the countries of the world, 2019)



Source: https://data.tuik.gov.tr/

Figure 18. Export by mode of transport
(modal split, from Türkiye to all the countries of the world, 2022)



Source: https://data.tuik.gov.tr/

On the export side of Türkiye there is a huge growth rate (250) of the railway sector which is still small (around 1%) in absolute terms, compared to the values of other sectors. In all the other sectors the value indices increased almost equally to each other, while the modal split of the modes of transport – as in the case of rails - remained practically unchanged. The term *'other'* is highly likely to refer to pipelines but the Turkish Statistical Institute does not make any deeper explanations on it.

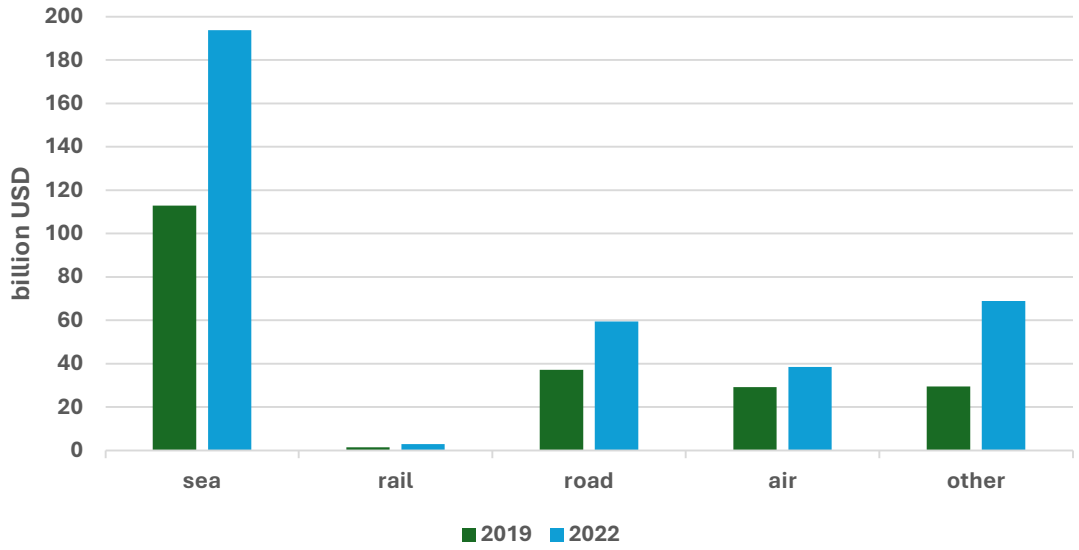
Türkiye's export and import statistics also show that maritime transport as a mode of transport massively exceeds all other modes of transport in absolute terms, which, even in aggregated form, do not reach the total value of goods transported by sea. The share of sea transport is 50-60% in both years for both relations.

Table 11. Import by mode of transport
(billion USD, from all the countries of the world to Türkiye, 2019 and 2022)

Mode of transport	2019	2022	2019=100
Sea	113	194	172
Rail	1	3	205
Road	37	59	160
Air	29	39	132
Other	30	69	234
Total	210	364	173

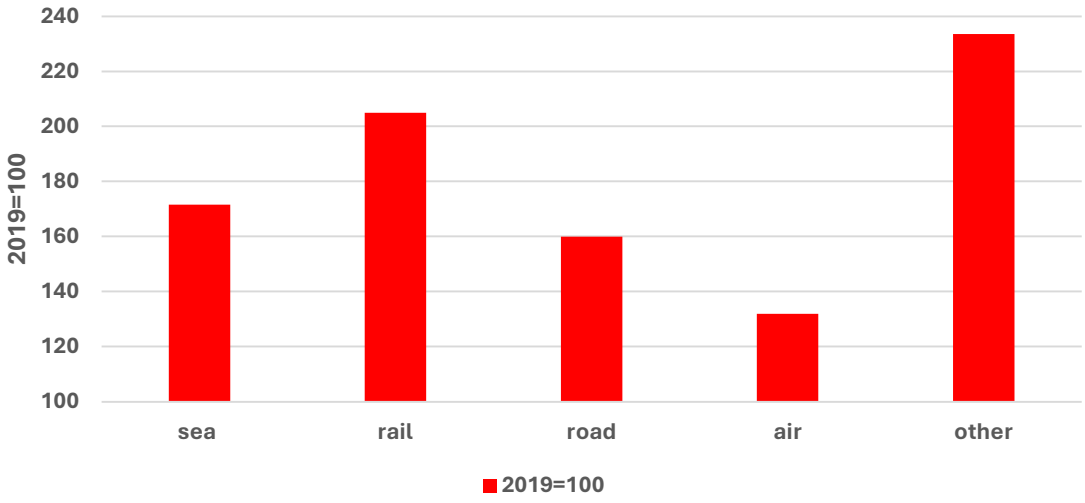
Source: https://data.tuik.gov.tr/

Figure 19. Import by mode of transport
(billion USD, from all the countries of the world to Türkiye, 2019 and 2022)



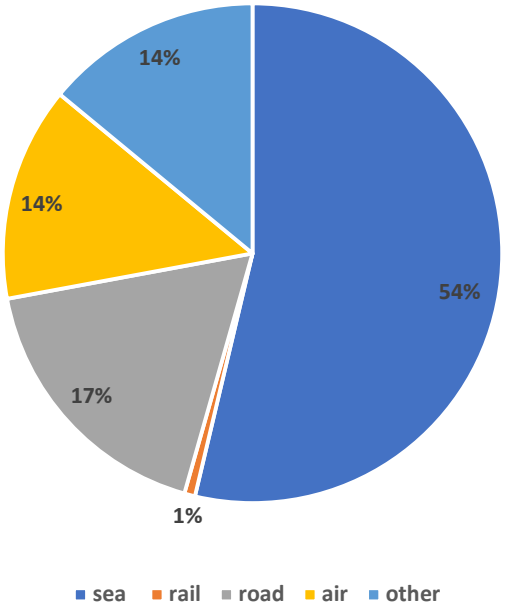
Source: https://data.tuik.gov.tr/

Figure 20. Import by mode of transport
(billion USD, from all the countries of the world to Türkiye, 2019 and 2022)



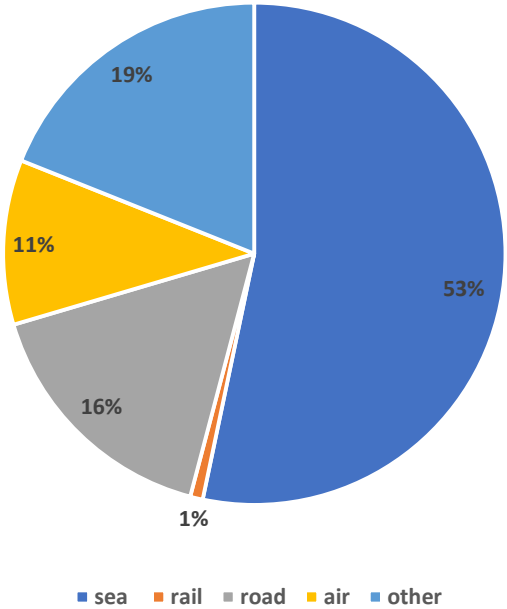
Source: https://data.tuik.gov.tr/

Figure 21. Import by mode of transport
(modal split, from all over the world to Türkiye, 2019)



Source: eurostat.com

Figure 22. Import by mode of transport
(modal split, from all over the world to Türkiye, 2022)



Source: eurostat.com

The largest relative increase in the trade values of Türkiye in the different modes of transport is in the category '*other*'. Between 2019 and 2022, its trade value more than doubled, while its share of the total market increased by 39 percent points. The most plausible explanation for this is the Russian aggression against Ukraine, which has turned Türkiye (as the owner of a good maritime and pipeline infrastructure and a good

geopolitical position) into an important intermediary in oil and gas transportation between Russia and the rest of the world, which has increased the country's importance in global energy logistics.

5. Freight Statistics

In this chapter, the Secretariat has recorded the "unloaded" and "total" volume of goods transported between the named trade partners. The word "unloaded" is always to be understood from the perspective of the reporting country, while the word "total" here means the sum of "loaded" and "unloaded" goods between the two countries. The Secretariat does not present the "loaded" data separately, as this would make the report redundant, since what is "loaded" on one side is "unloaded" on the other, which is already indicated in each case.

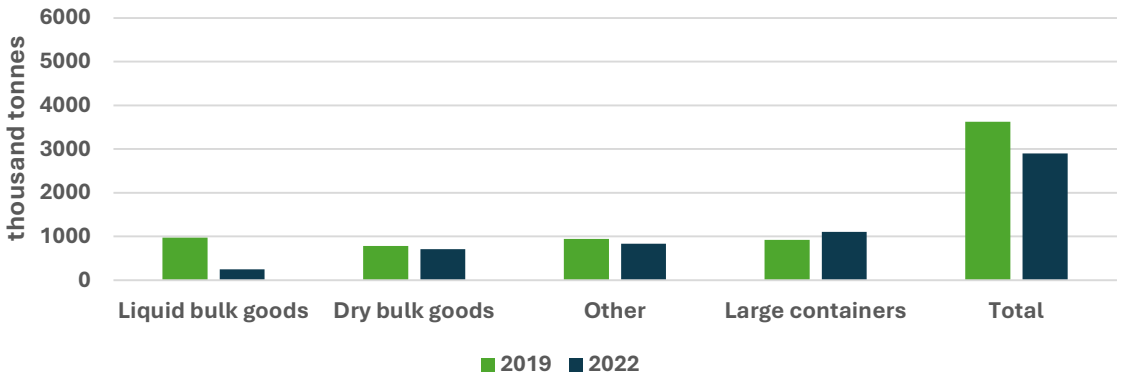
5.1 Reporting country: Türkiye (Eurostat)

Table 12. Unloaded goods by cargo type
(From Bulgarian maritime ports to Turkish maritime ports, thousand tonnes, 2019 and 2022)

Cargo type	2019	2022	(2019=100)
Liquid bulk goods	975	251	26
Dry bulk goods	781	713	91
Other	946	832	88
Large containers	921	1 106	120
Total	3 623	2 903	80

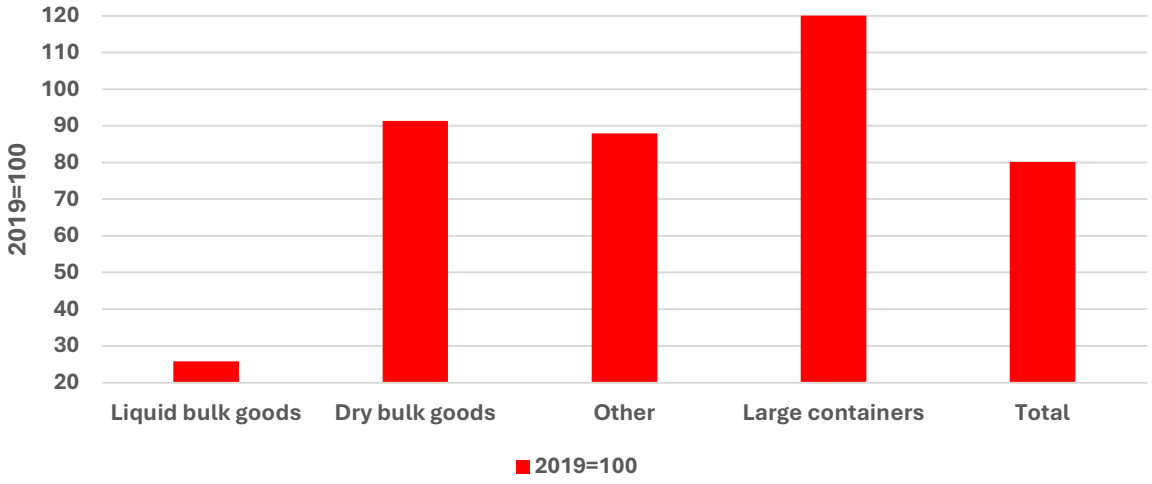
Source: eurostat.com

Figure 23. Unloaded goods by cargo type
(From Bulgarian maritime ports to Turkish maritime ports, thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 24. Unloaded goods by cargo type
(From Bulgarian maritime ports to Turkish maritime ports, thousand tonnes, 2019=100)



Source: eurostat.com

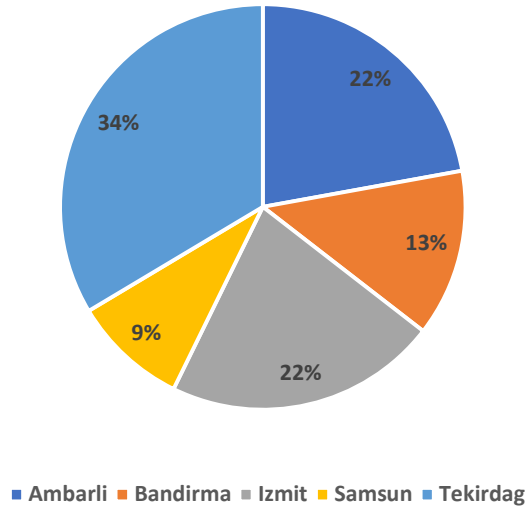
Comparing the 2019 figures with those of 2022 all the different types of transported cargo from Bulgarian maritime ports to Turkish maritime ports experienced a decrease except for '*large containers*' which experienced an increase of 20% which could be due to changes in supply patterns during and after the pandemic as a result of the economic downturn and the disruption and re-orientation of the logistics chains. The most drastic decrease was in the category – '*liquid bulk goods*' which fell to a volume more than four times smaller than its value in 2019. The decline in the sector is most likely due to a combination of the sanctions on Russia, lower demand due to the economic recession and changes in supply chains both in general and due to Russian aggression.

Table 13. Unloaded goods by ports
(From all maritime ports (BG) to their top 5 destinations in TR, thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Ambarli	638	698	109
Bandirma	384	333	87
Izmit	627	726	116
Samsun	264	74	28
Tekirdag	967	565	58

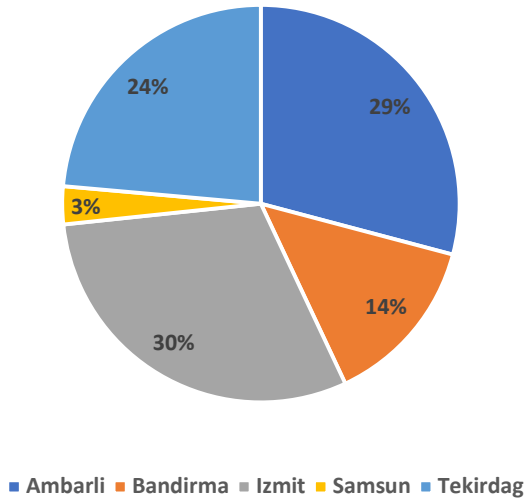
Source: eurostat.com

Figure 25. Unloaded goods by ports
(From all maritime ports (BG) to their top 5 destinations in TR,
shares in percentage, 2019)



Source: eurostat.com

Figure 26. Unloaded goods by ports
(From all maritime ports (BG) to their top 5 destinations in TR,
shares in percentage, 2022)



Source: eurostat.com

In the distribution of the volumes unloaded from the Bulgarian maritime ports between their five main maritime destinations in Türkiye, there is a 7 and 8 percent point increase for ports Izmit and Ambarli and there is a 10 percent point decrease for port Tekirdag.

Ambarlı was the leading container port in Turkey for the first half of 2022, managing 1.47 million TEU, which represents 23% of the total container throughput of Turkish ports. This substantial increase can be attributed to its strategic location near Istanbul, acting as a crucial hub for transit cargo between Europe and Asia. From January to June 2022, Ambarlı handled 9.6 million tons of cargo, marking significant growth from

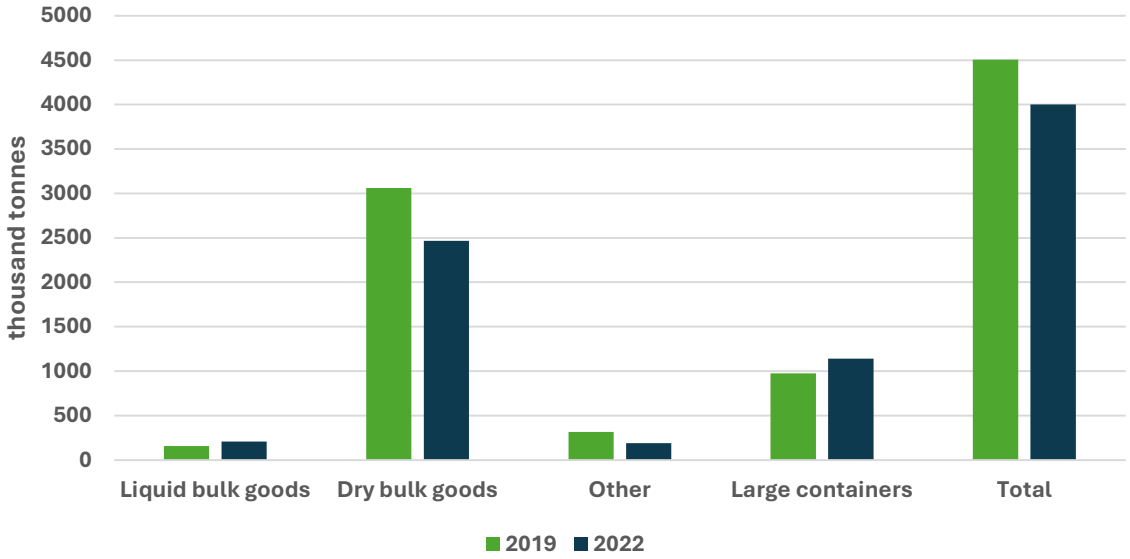
previous years. This increase is probably due in large part to the shifts in the flow of goods as a result of the Russian war of aggression.

Table 14. Unloaded goods by cargo type
(From Romanian maritime ports to Turkish maritime ports, thousand tonnes, 2019 and 2022)

Cargo type	2019	2022	2019=100
Liquid bulk goods	158	208	132
Dry bulk goods	3 060	2 466	81
Other	315	189	60
Large containers	973	1 139	117
Total	4 505	4 001	89

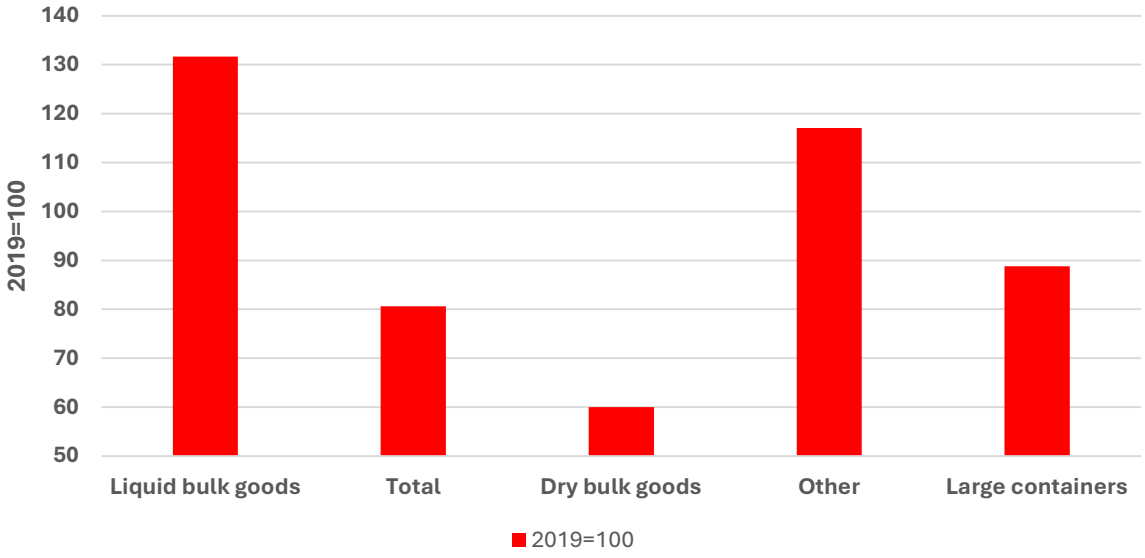
Source: eurostat.com

Figure 27. *Unloaded goods by cargo type*
(From Romanian maritime ports to Turkish maritime ports, thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 28. Unloaded goods by cargo type
(From Romanian maritime ports to Turkish maritime ports, thousand tonnes, 2019=100)



Source: eurostat.com

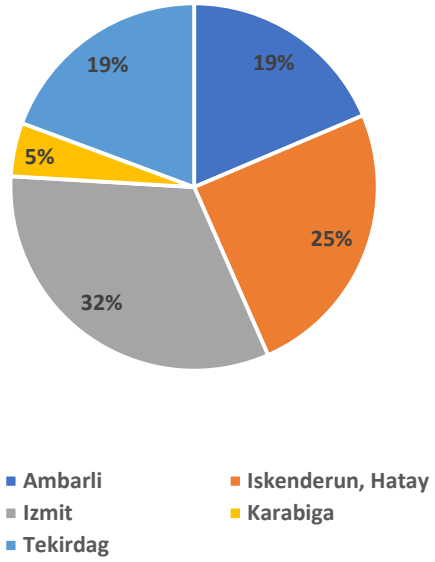
In this category from 2019 to 2022 all the different types of transported cargo experienced a decrease except for *'liquid bulk goods'* and '*other'* which experienced an increase of 12 and 30%. The most drastic decrease was in the category – *'dry bulk goods'* which fell back to two-thirds of its 2019 volume during the examined three-year-long period which might be due to the fact that such important industries (e.g. construction, manufacturing etc.) that use dry bulk materials may have been working on a smaller level of capacity during the pandemic.

Table 15. Unloaded goods by ports
(From all maritime ports (RO) to their top 5 destinations in TR, thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Ambarli	573	607	106
Iskenderun, Hatay	763	247	32
Izmit	1 002	903	90
Karabiga	146	257	176
Tekirdag	595	651	109

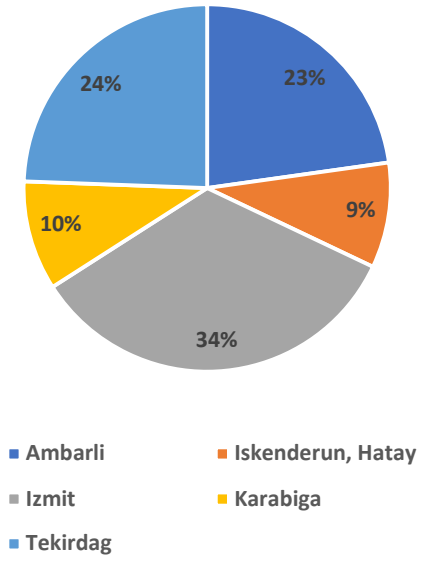
Source: eurostat.com

Figure 29. Unloaded goods by ports
(From all maritime ports (RO) to their top 5 destinations in TR,
shares in percentage, 2019)



Source: eurostat.com

Figure 30. Unloaded goods by ports
(From all maritime ports (RO) to their top 5 destinations in TR,
shares in percentage, 2022)



Source: eurostat.com

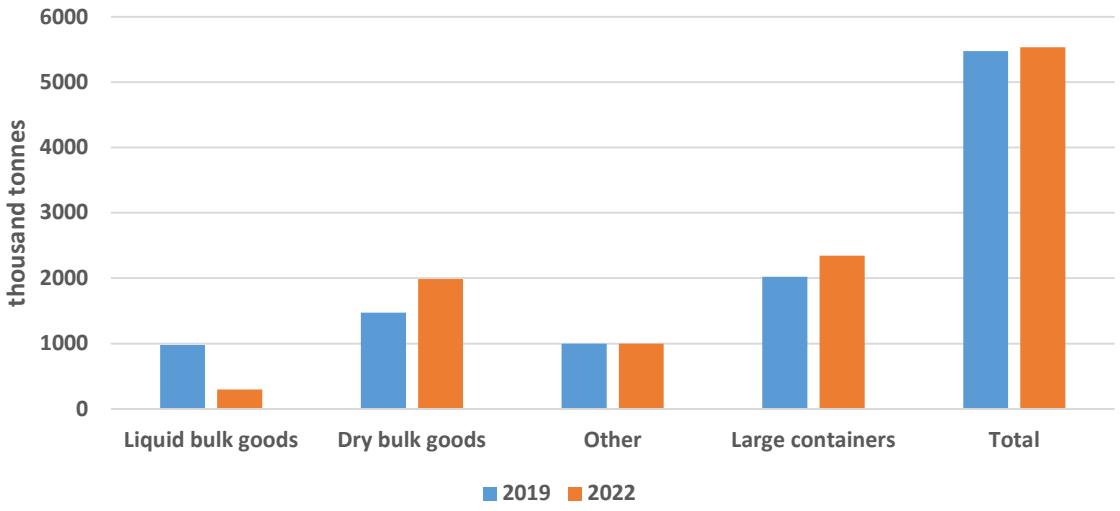
In the distribution of the volumes unloaded from Romanian ports between their five main maritime destinations in Türkiye the most drastic decrease was in the shares of Iskeredun (from 25% to 9%) which caused the increase of the shares of all the other four large ports in a balanced way.

Table 16. Total goods by cargo type (Between maritime ports (BG and TR), thousand tonnes, 2019 and 2022)

Cargo type	2019	2022	(2019=100)
Liquid bulk goods	977	299	31
Dry bulk goods	1 475	1 990	135
Other	999	998	100
Large containers	2 022	2 345	116
Total	5 474	5 532	101

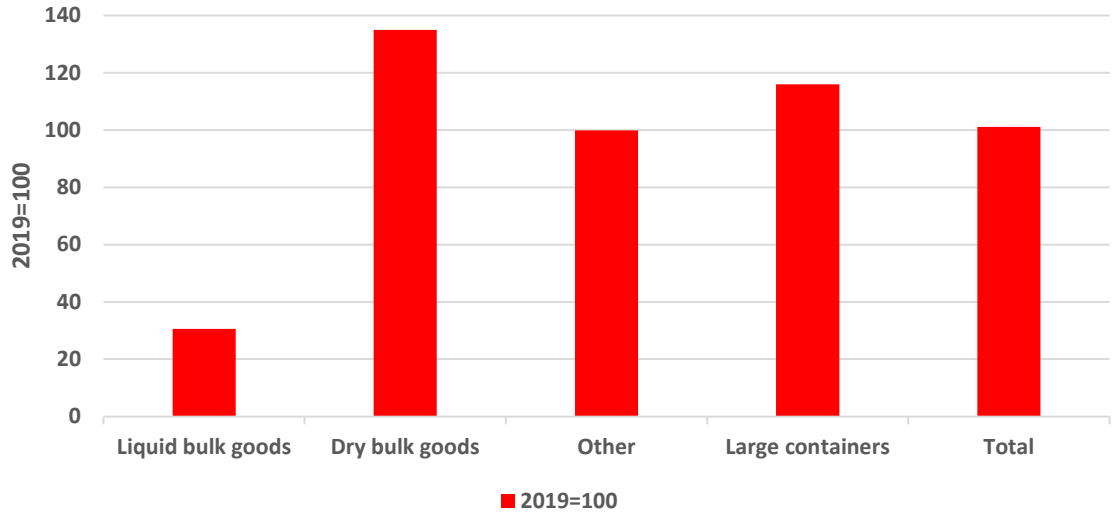
Source: eurostat.com

Figure 31. Total goods by cargo type (Between maritime ports (BG and TR), thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 32. Total goods by cargo type (Between maritime ports (BG and TR), 2019=100)



Source: eurostat.com

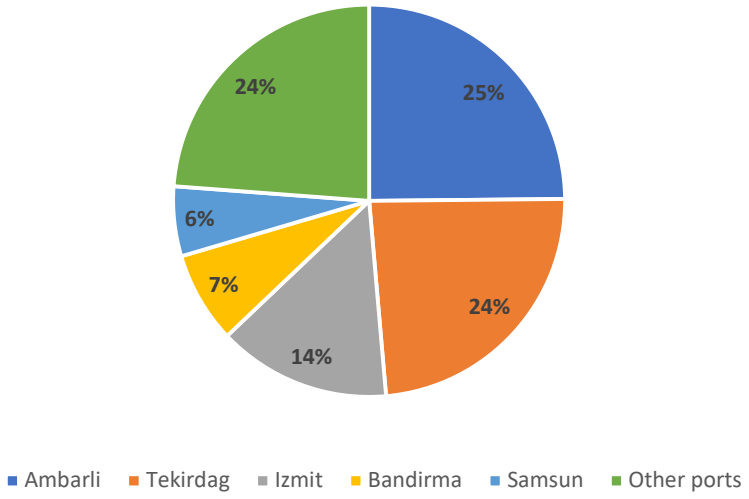
What relates to the goods transported between Bulgarian maritime ports and Turkish maritime ports almost all the different cargo types remained the same or increased in volume when comparing 2019 figures with those of 2022, except for *'liquid bulk goods'* which experienced a huge 70 % decrease.

Table 17. Total goods by ports
(Between maritime ports (BG) and their top 5 destinations in TR, thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Ambarli	1 360	1 519	112
Tekirdag	1 302	1 030	79
Izmit	781	996	128
Bandirma	412	339	82
Samsun	316	372	118
Other	1 303	1 276	98
Total	5 474	5 532	101

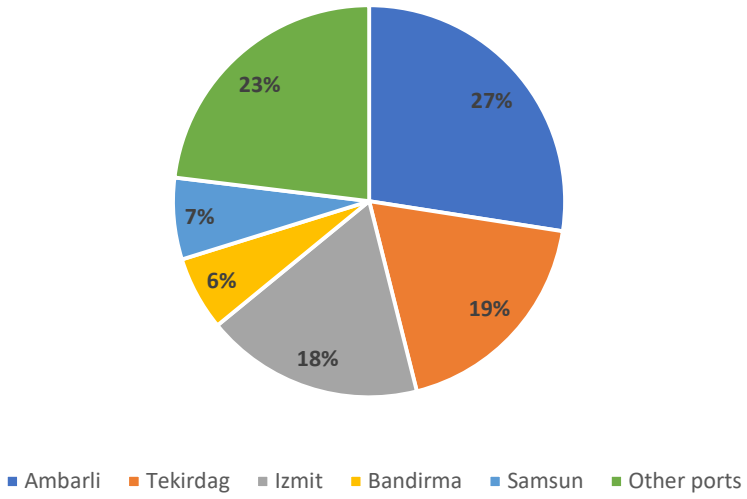
Source: eurostat.com

Figure 33. Total goods by ports
(Between maritime ports (BG) and their top 5 destinations in TR, shares in percentage, 2019)



Source: eurostat.com

Figure 34. *Total goods by ports*
(Between maritime ports (BG) and their top 5 destinations in TR, shares in percentage, 2022)



Source: eurostat.com

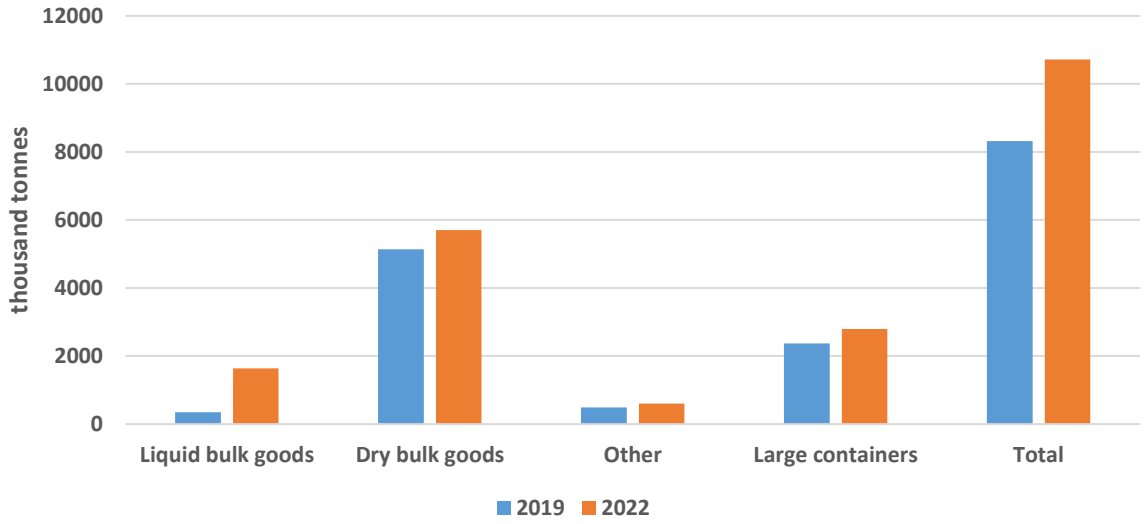
In the distribution of the total volumes of goods transported between Bulgarian maritime ports and their five main maritime destinations in Türkiye Ambarli, Izmit and Samsun have experienced a moderate increase while Tekirdag, Bandirma and other ports have experienced a moderate decrease.

Table 18. Total goods by cargo type
(Between maritime ports (TR and RO), thousand tonnes, 2019 and 2022)

Cargo type	2019	2022	2019=100
Liquid bulk goods	339	1 633	482
Dry bulk goods	5 134	5 695	111
Other	482	596	124
Large containers	2 365	2 795	118
Total	8 320	10 719	129

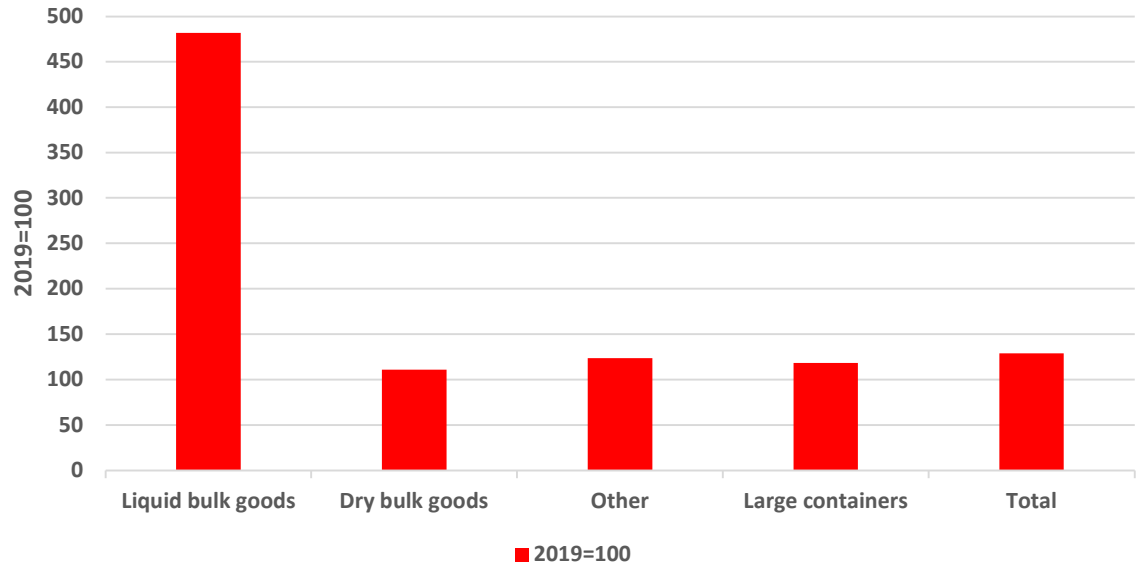
Source: eurostat.com

Figure 35. *Total goods by cargo type*
(Between maritime ports (TR and RO),
thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 36. Total goods by cargo type
(Between maritime ports (TR and RO),
thousand tonnes, 2019=100)



Source: eurostat.com

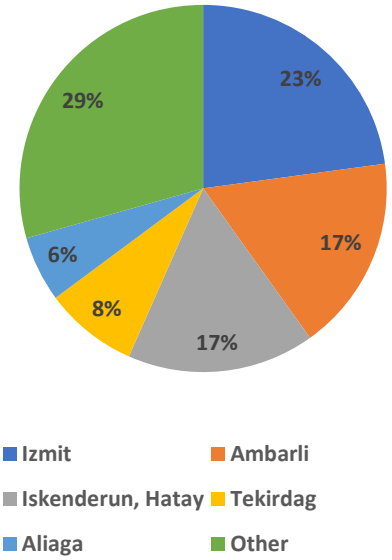
In this category from 2019 to 2022 all the different types of transported cargo have experienced some moderate increase except for the *'liquid bulk goods'* category which multiplied its volume by almost five times during the examined three year long period.

Table 19. *Total goods by ports*
(Between maritime ports (RO) and their top 5 destinations in TR, thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Izmit	1 901	2 208	116
Ambarli	1 435	1 134	79
Iskenderun, Hatay	1 374	1 224	89
Tekirdag	686	1 387	202
Aliaga	480	930	194
Other	2 444	3 836	157
Total	8 320	10 719	129

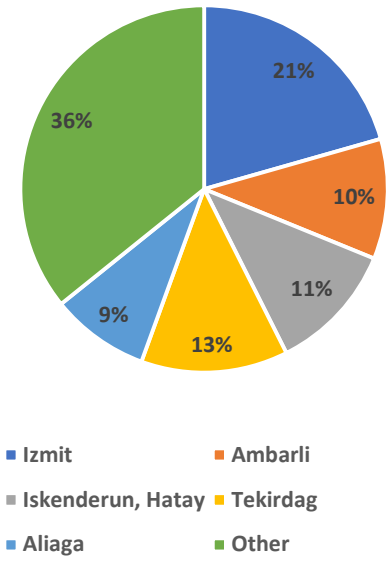
Source: eurostat.com

Figure 37. Total goods by ports
(Between maritime ports (RO) and their top 5 destinations in TR, shares in percentage, 2019)



Source: eurostat.com

Figure 38. Total goods by ports
(Between maritime ports (RO) and their top 5 destinations in TR, shares in percentage, 2022)



Source: eurostat.com

In this category, Tekirdag and Aliaga have experienced a significant increase as both of them have doubled their volumes during the three-year period. Yet, their shares have not doubled which means not only these two ports have increased their volumes but also the whole market has grown significantly in absolute terms. Here, too, it can be assumed that the increase is due to the improvement in the economic situation and the reorganization of goods flows as a result of the Russian aggression against Ukraine.

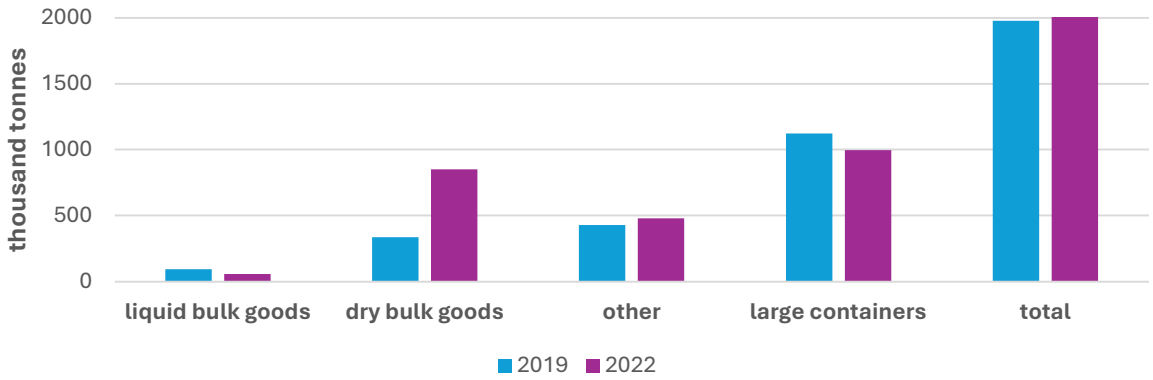
5.2 Reporting country: Bulgaria (Eurostat)

Table 20. Unloaded goods by cargo type
(From all maritime ports (TR) to their destinations in BG, thousand tonnes, 2019 and 2022)

Type of cargo	2019	2022	2019=100
Liquid bulk goods	975	251	26
Dry bulk goods	781	713	91
Other	946	832	88
Large containers	921	1 106	120
Total	3 623	2 903	80

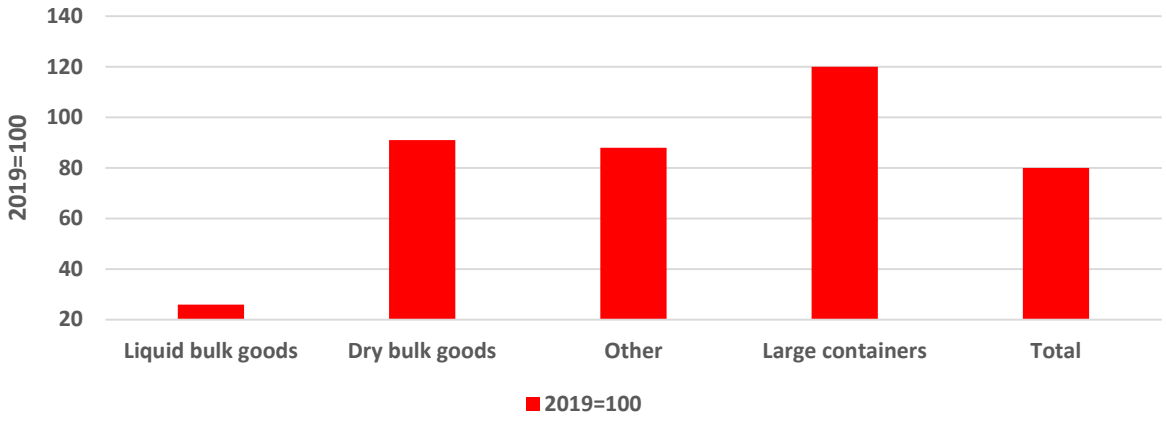
Source: eurostat.com

Figure 39. Unloaded goods by cargo type
(From all maritime ports (TR) to their destinations in BG,
thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 40. Unloaded goods by cargo type
(From all maritime ports (TR) to their destinations in BG,
thousand tonnes, 2019=100)



Source: eurostat.com

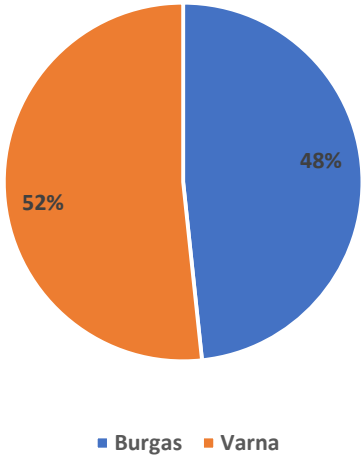
In this category from 2019 to 2022 there is a moderate increase for '*large containers*' and a huge decrease for '*liquid bulk goods*'.

Table 21. Unloaded goods by ports
(From all maritime ports (TR) to their destinations in BG,
thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Burgas	955	1 280	134
Varna	1 022	1 101	108
Total	1977	2381	120

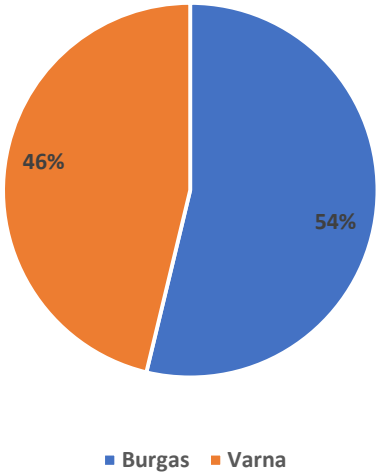
Source: eurostat.com

Figure 41. Unloaded goods by ports
(From all maritime ports (TR) to their destinations in BG,
shares in percentage, 2019)



Source: eurostat.com

Figure 42. Unloaded goods by ports
(From all maritime ports (TR) to their destinations in BG,
shares in percentage, 2022)



Source: eurostat.com

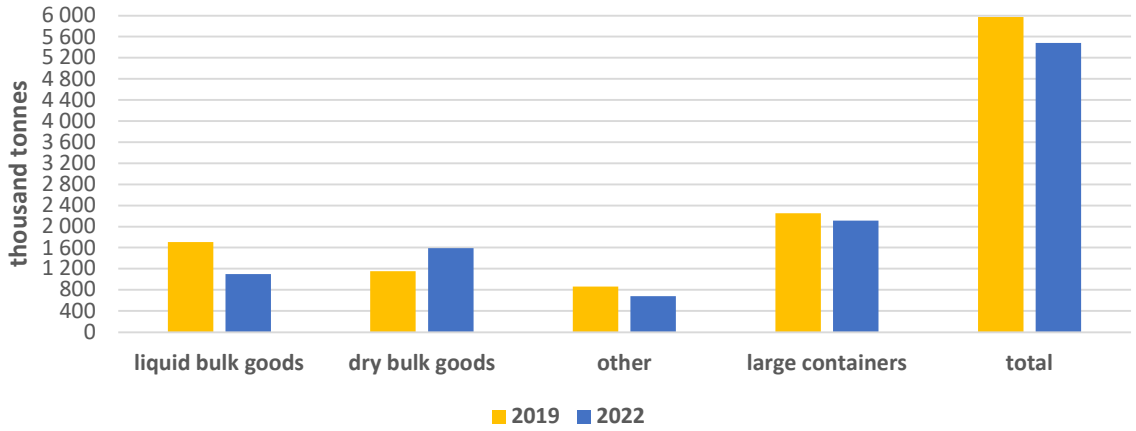
From 2019 to 2022 not only has the gap between Burgas and Varna been doubled but also Burgas has become the new leader in the volumes of unloaded goods.

Table 22. Total goods by cargo type
(Between all maritime ports (TR and BG),
thousand tonnes, 2019 and 2022)

Type of cargo	2019	2022	2019=100
Liquid bulk goods	1 705	1 096	64
Dry bulk goods	1 153	1 590	38
Other	861	680	79
Large containers	2 254	2 115	94
Total	5 973	5 481	92

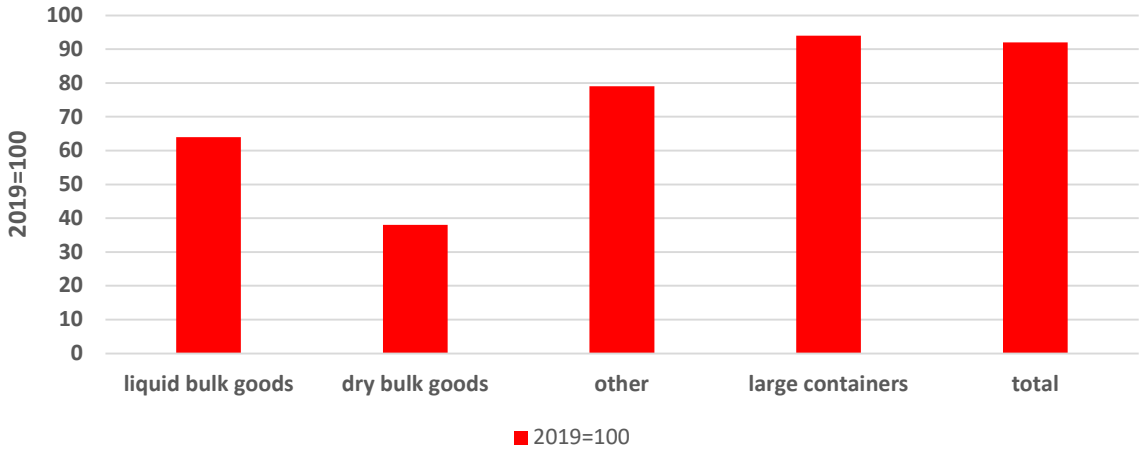
Source: eurostat.com

Figure 43. Total goods by cargo type
(Between all maritime ports (TR and BG),
thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 44. Total goods by cargo type
(Between all maritime ports (TR and BG),
thousand tonnes, 2019=100)



Source: eurostat.com

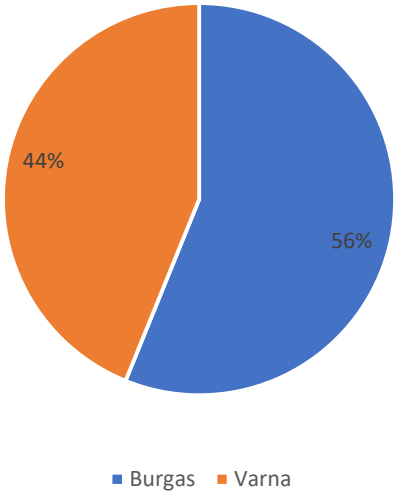
What relates to the volumes between Turkish maritime ports and Bulgarian maritime ports there is a decrease in all the volumes from 2019 to 2022 of the different types of goods being transported.

Table 23. Total goods by ports
(Between all maritime ports (TR and BG),
thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Burgas	3 352	3 025	90
Varna	2 621	2 455	94
Total	**5973**	**5480**	**92**

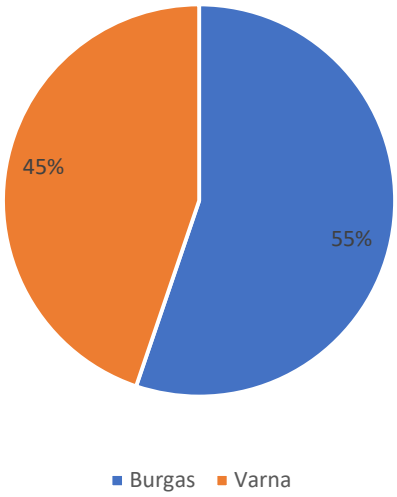
Source: eurostat.com

Figure 45. Total goods by ports
(Between all maritime ports (TR and BG),
shares in percentage, 2019)



Source: eurostat.com

Figure 46. Total goods by ports
(Between all maritime ports (TR and BG),
shares in percentage, 2022)



Source: eurostat.com

From 2019 to 2022 there is a small, around 5-10 %, decrease in the total volumes of transported goods at both ports.

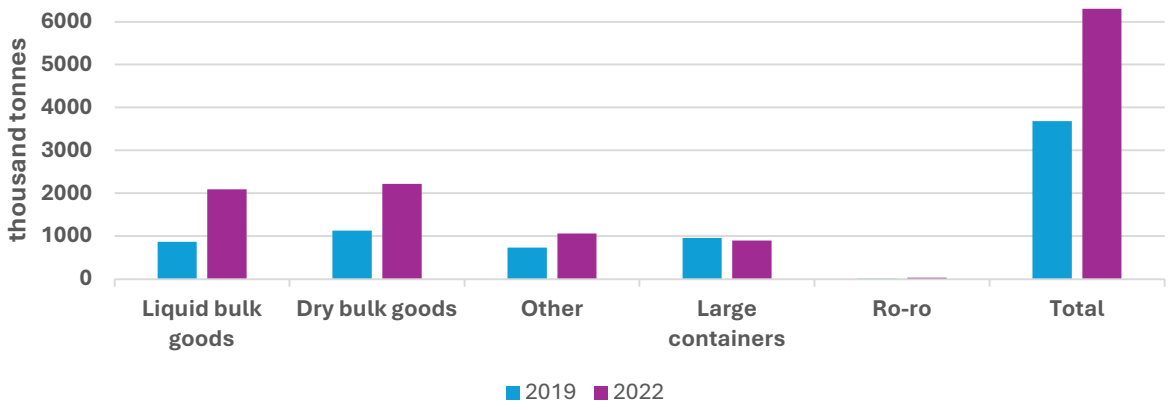
5.3 Reporting country: Romania (Eurostat)

Table 24. Unloaded goods by cargo type
(From all maritime ports (TR) to their destinations in RO, thousand tonnes, in 2019 and 2022)

Cargo type	2019	2022	2019=100
Liquid bulk goods	863	2 094	243
Dry bulk goods	1 126	2 221	197
Other	731	1 059	145
Large containers	953	900	94
Ro-ro	11	29	264
Total	3 685	6 303	171

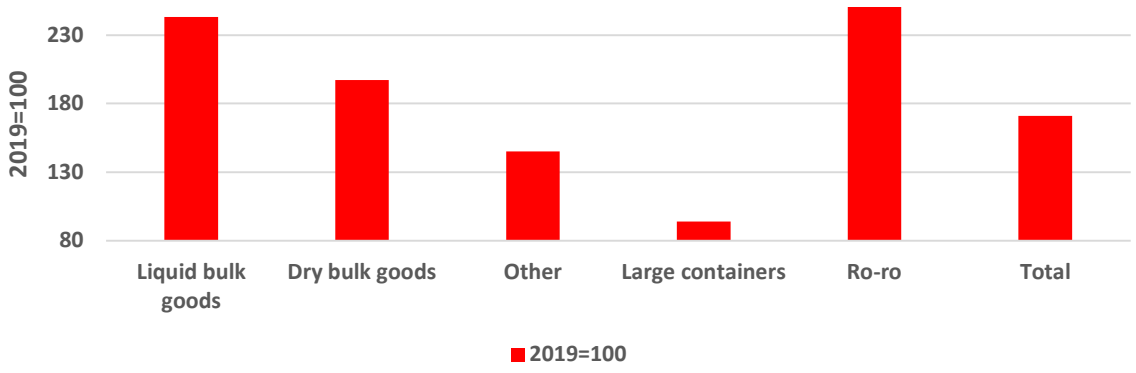
Source: eurostat.com

Figure 47. Unloaded goods by cargo type
(From all maritime ports (TR) to their destinations in RO, thousand tonnes, in 2019 and 2022)



Source: eurostat.com

Figure 48. Unloaded goods by cargo type
(From all maritime ports (TR) to their destinations in RO, thousand tonnes, 2019=100)



Source: eurostat.com

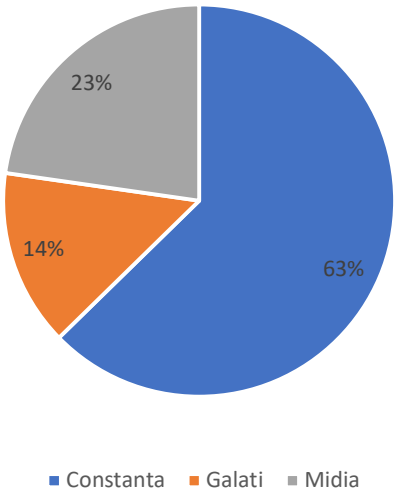
Despite '*large containers*' all categories of volumes of goods being transported from Türkiye to Romania experienced a huge increase in 2022 compared to 2019 which can be attributed to the already mentioned supply chain transformation due to Russian aggression.

Table 25. Unloaded goods by ports
(From all maritime ports (TR) to their destinations in RO, thousand tonnes, in 2019 and 2022)

Port	2019	2022	2019=100
Constanta	2 310	5 430	235
Galati	537	873	163
Midia	838	0*	0
Total	3685	6303	171

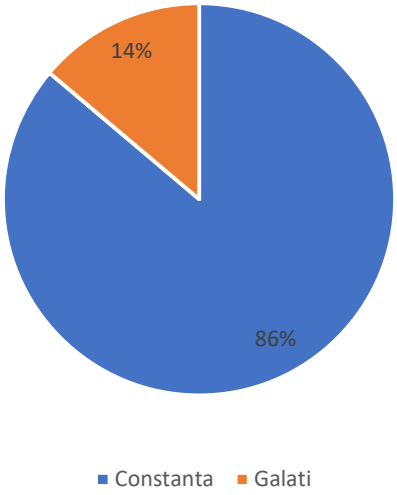
Source: eurostat.com
**The Port of Midia has been statistically unified with the Port of Constanta in 2022*

Figure 49. Unloaded goods by ports
(From all maritime ports (TR) to their destinations in RO, shares in percentage, 2019)



Source: eurostat.com

Figure 50. Unloaded goods by ports
(From all maritime ports (TR) to their destinations in RO,
shares in percentage, 2022)



Source: eurostat.com

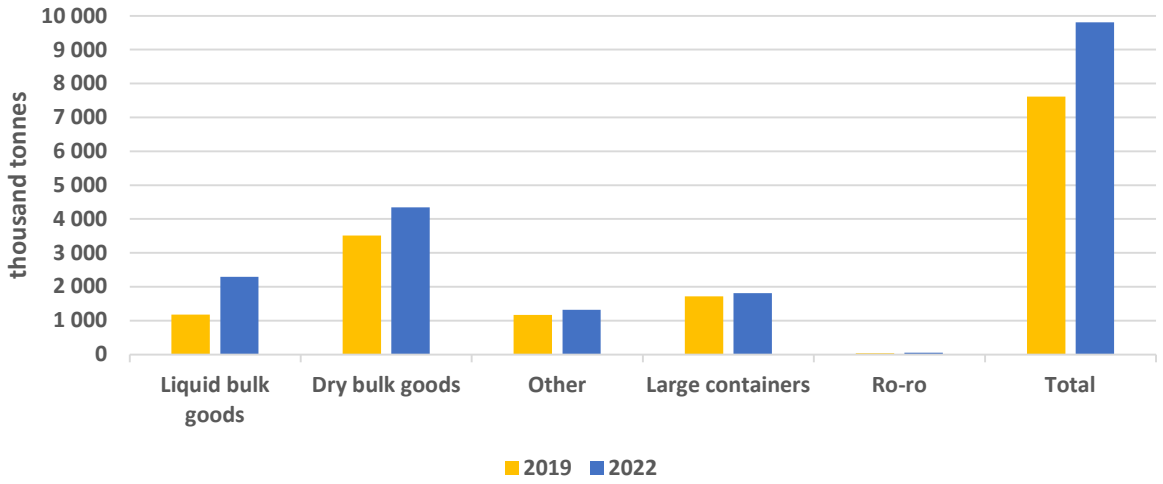
From 2019 to 2022 the port of Constanta has increased its share by 23 percent points however part of this increase is due to the fact that the port of Midia merged into the Statistical port Constanta. Galati consistently keeps its 14 percent share, however its volumes grow in line with the overall volume growth (71%).

Table 26. Total goods by cargo type
(Between all maritime ports (TR and RO),
shares in percentage, 2019)

Cargo type	2019	2022	2019=100
Liquid bulk goods	1 181	2 290	193
Dry bulk goods	3 511	4 341	124
Other	1 171	1 318	113
Large containers	1 717	1 811	105
Ro-ro	29	50	172
Total	7 612	9 810	129

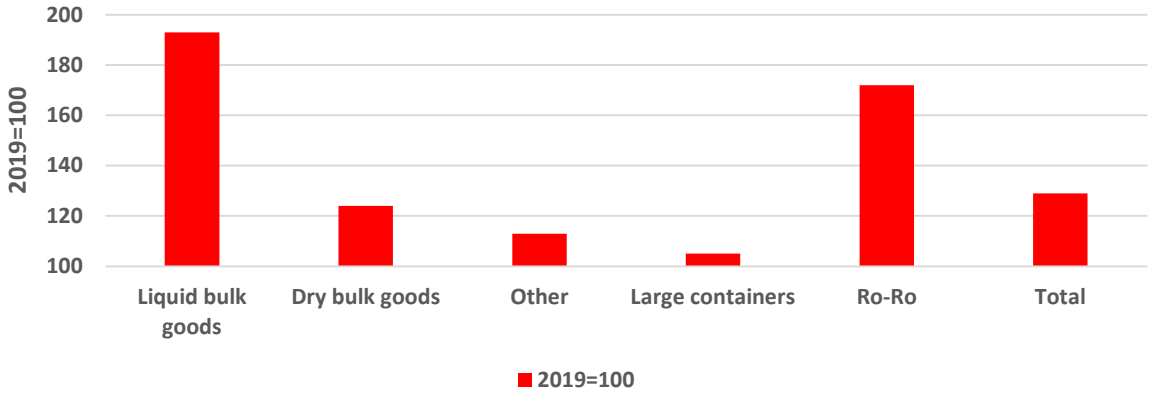
Source: eurostat.com

Figure 51. Total goods by cargo type (Between all maritime ports (TR and RO), thousand tonnes, 2019 and 2022)



Source: eurostat.com

Figure 52. Total goods by cargo type (Between all maritime ports (TR and RO), thousand tonnes, 2019=100)



Source: eurostat.com

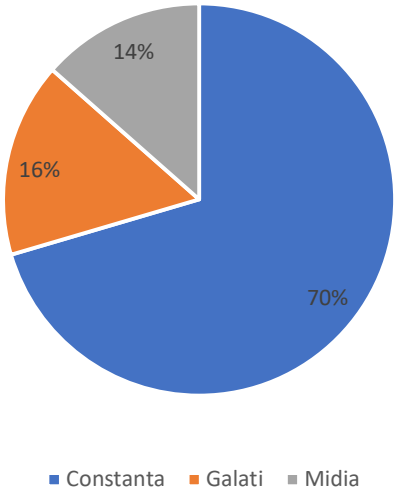
In this category, all cargo types increased their volume from 2019 to 2022, with the strongest growth benefiting the cargo categories "liquid bulk" and "Ro-Ro". Here it can be seen that exactly the same categories are responsible for the increase as in the "unloaded" category - although the increases are lower - from which we can conclude that in the traffic relations between RO and TR, the "from TR to RO" side has experienced a stronger increase than the "from RO to TR" traffic.

Table 27. Total goods by ports
(Between all maritime ports (TR and RO),
thousand tonnes, 2019 and 2022)

Port	2019	2022	2019=100
Constanta	5 363	8 518	159
Galati	1 223	1 292	106
Midia	1 026	0*	0
Total	7 612	9 810	129

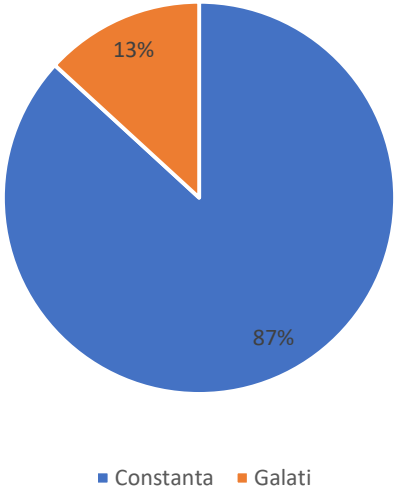
**The Port of Midia has been statistically unified with the Port of Constanta in 2022*
Source: eurostat.com

Figure 53. Total goods by ports
(Between all maritime ports (TR and RO),
shares in percentage, 2019)



Source: eurostat.com

Figure 54. Total goods by ports
(Between all maritime ports (TR and RO),
shares in percentage, 2022)



Source: eurostat.com

From 2019 to 2022 the port of Constanta has increased its share by 17 percent points however part of this increase is due to the fact that the port of Midia merged into the Statistical port Constanta. Meanwhile, Galati has only decreased by 1 percent point.

5.4 Reporting country: Hungary (KSH[3])

As the 'Linking Türkiye by Danube' workshop organized by the Secretariat in June 2024 took place in Budapest, the DC wanted to give a special attention to Hungarian-Turkish trade relations on the occasion. Therefore, in this subchapter the reader can find some specific information on the matter.

Also it is important to note that the data being presented in this subchapter is according to the Hungarian Central Statistical Office's (KSH) publications which way of categorization may seem a bit odd at first sight as for that they do not use such nomenclatures as NST2007 or BEC which would simply classify the transported goods by their type but they use a national nomenclature based method of categorization (TEÁOR) which classifies not simply by the type of the good but by the industry which is 'responsible' as a sender/receiver for the actual loading/unloading.

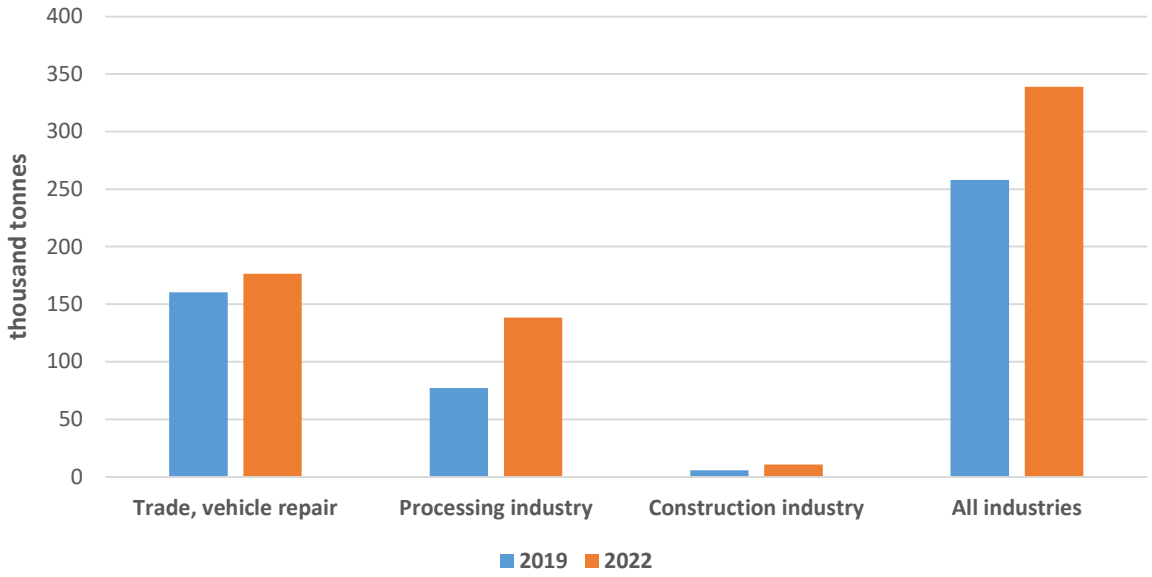
Table 28. Unloaded goods by the largest involved industries
(From Türkiye to Hungary, thousand tonnes, 2019 and 2022)

Industry	2019	2022	2019=100
Trade, vehicle repair	160	176	110
Processing industry	77	138	179
Construction industry	6	11	186
All industries	258	339	131

Source: ksh.hu

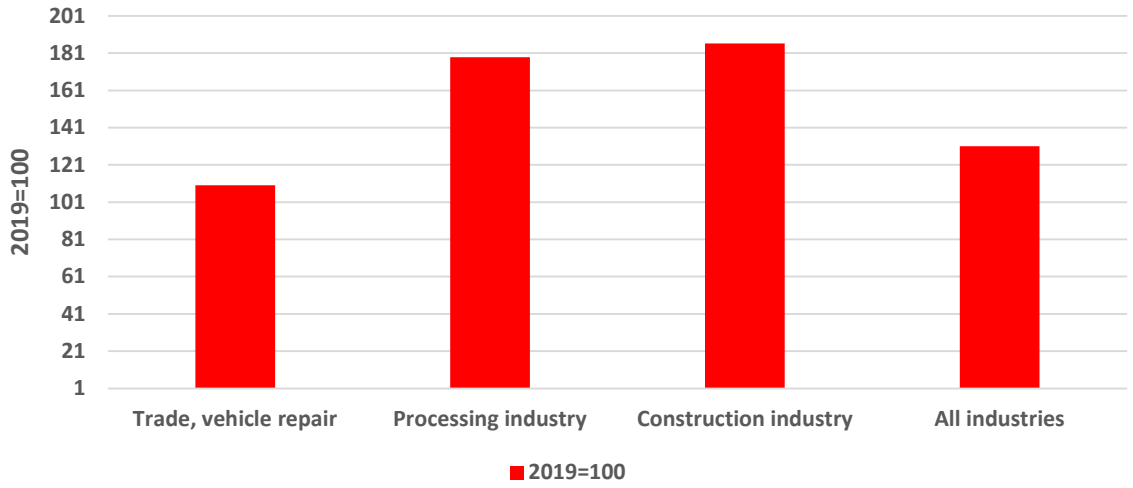
[3] Hungarian Central Statistical Office

Figure 55. Unloaded goods by the largest involved industries
(From Türkiye to Hungary, thousand tonnes, 2019 and 2022)



Source: ksh.hu

Figure 56. *Unloaded goods by the largest involved industries*
(From Türkiye to Hungary, thousand tonnes, 2019=100)



Source: ksh.hu

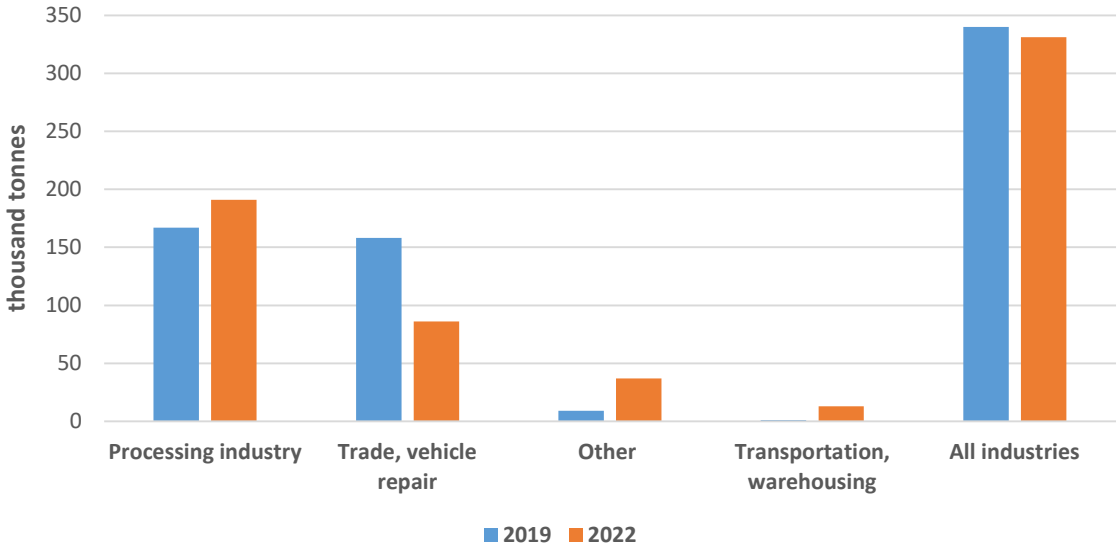
In both 2019 and 2022, the most significant industry of import from Türkiye to Hungary was trade and vehicle repair with more than 150 thousand tonnes of transported goods in both years and a 10 percent increase from 2019 to 2022.

Table 29. Loaded goods by the largest involved industries
(From Hungary to Türkiye, thousand tonnes, 2019 and 2022)

Industry	2019	2022	2019=100
Processing industry	167	191	115
Trade, vehicle repair	158	86	54
Other	9	37	402
Transportation, warehousing	1	13	994
All industries	340	331	98

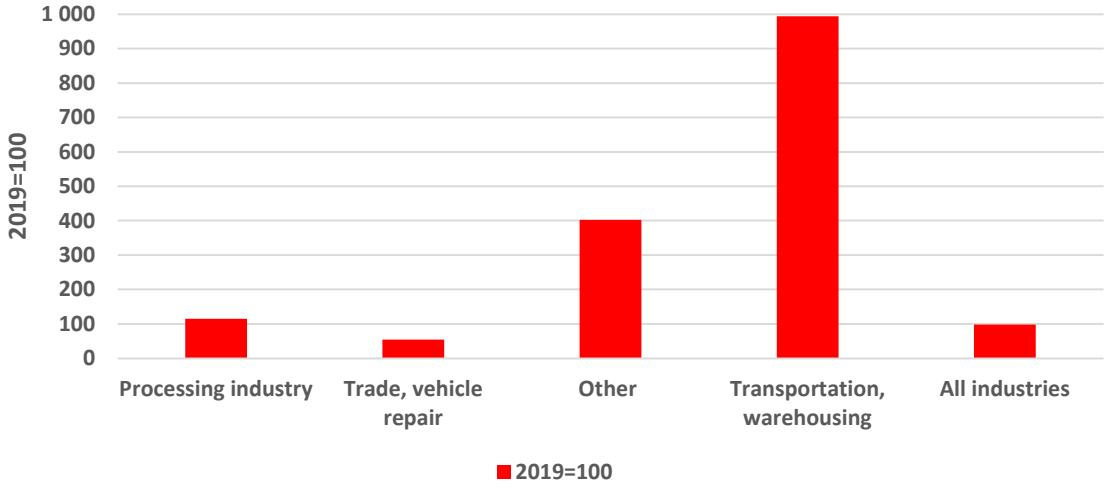
Source: ksh.hu

Figure 57. Loaded goods by the largest involved industries
(From Hungary to Türkiye, thousand tonnes, 2019 and 2022)



Source: ksh.hu

Figure 58. Loaded goods by the largest involved industries
(From Hungary to Türkiye, thousand tonnes, 2019=100)



Source: ksh.hu

In both 2019 and 2022 the most significant industry of export from Hungary to Türkiye was the '*Processing industry*' with more than 150 thousand tonnes of transported goods in both years and a 15 percent increase from 2019 to 2022. However, such industries as

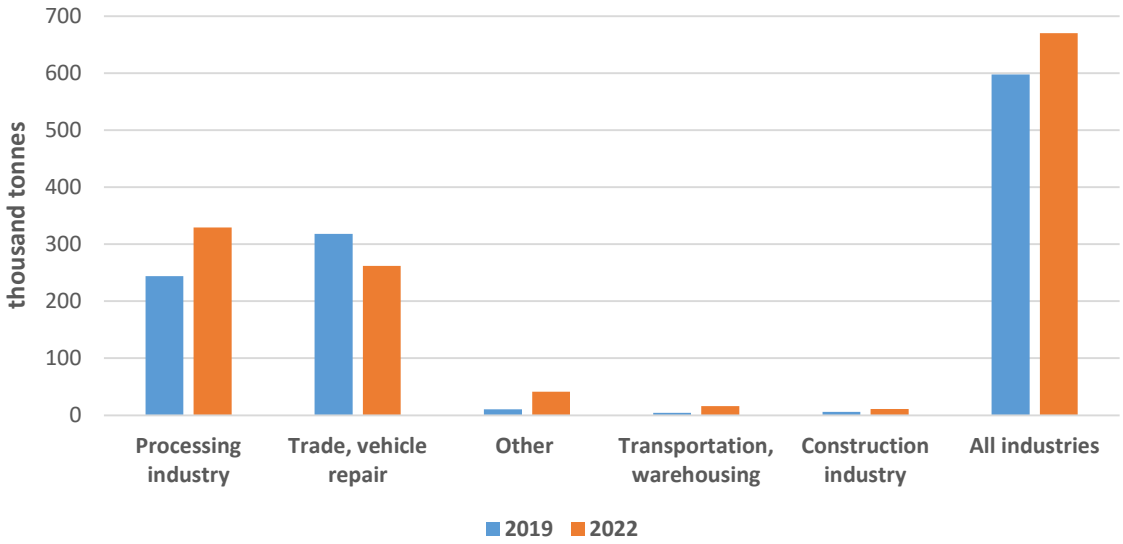
'*Transportation, warehousing*' and *'other*' – despite they were much smaller in absolute volume – have experienced orders of magnitude higher growth (more than 300% and almost 900%).

Table 30. Total goods by the largest involved industries
(Between Hungary and Türkiye, thousand tonnes, 2019 and 2022)

Industry	2019	2022	2019=100
Processing industry	244	329	145
Trade, vehicle repair	318	262	92
Other	10	41	410
Transportation, warehousing	4	16	400
Construction industry	6	11	183
All industries	598	670	133

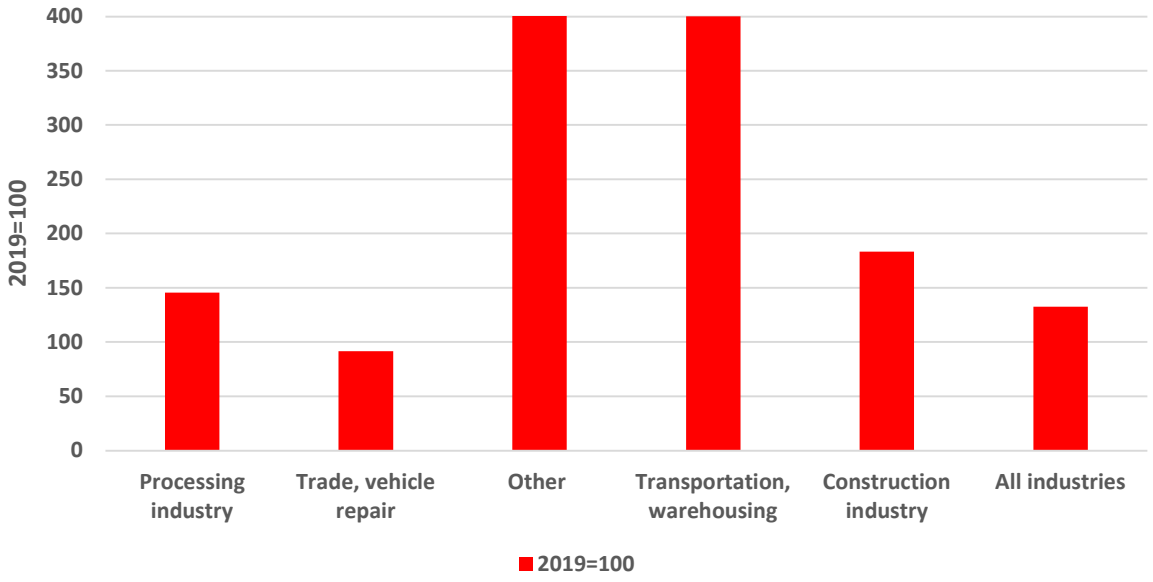
Source: ksh.hu

Figure 59. Total goods by the largest involved industries
(Between Hungary and Türkiye, thousand tonnes, 2019 and 2022)



Source: ksh.hu

Figure 60. Total goods by the largest involved industries
(Between Hungary and Türkiye, thousand tonnes, 2019=100)



Source: ksh.hu

When it comes to the examination of the total traded volumes between the two countries in the examined period – the most significant ones are the '*Processing industry*' and '*Trade, vehicle repair*'. Additionally, it can be noted, that industries '*Transportation and warehousing*' and '*Other*' quadrupled in volumes during the 3-year-long timeframe.

6. Freight potentials and infrastructure investment needs

Most of the information provided in chapter 6. is based on the presentations and speeches of the participants of the workshop 'Linking Türkiye by Danube'.

6.1 The discoveries of the workshop – all modes of transport

At the workshop, the future freight potential for all modes of transport (road, navigation, rail, etc.) between EU countries and Türkiye was identified as significant, with various growth opportunities arising from Türkiye's strategic location and ongoing improvements in logistics and infrastructure. Türkiye's geographical location serves as a bridge between Europe and Asia, making the country an important player on international trade routes such as the Trans-Caspian Corridor. This corridor is forecast to significantly increase container traffic from around 100,000 TEU to 865,000 TEU by 2040, with a transit time of less than 13 days from Asia to Europe. Furthermore, it has been predicted that investments and policy measures could triple the volume by 2030 compared to 2021, while cutting transportation times by half.

However, a certain need for infrastructure investment was identified as crucial to unlocking this potential. Modernization of railroads, intermodal and maritime facilities was identified as essential to improve efficiency and capacity. One example cited by speakers was the completed upgrade of the Baku-Tbilisi-Kars railroad linking Azerbaijan, Georgia and Türkiye, which will increase freight volumes and create a resilient trade route for regional and intercontinental trade. Another example of 'best

practice' was the development of intermodal container terminals such as the MACS terminal in Debrecen (Hungary), which demonstrates a commitment to improving logistics capacity. This terminal, which operates around the clock, offers extensive loading tracks, gantry cranes and truck parking spaces, which are essential for coping with increasing freight traffic.

Ensuring a seamless and efficient multimodal transport network was identified as one of the most important challenges. The integration of rail, road, sea and air transportation requires significant investment in both the physical infrastructure and the regulatory framework. The extension of the Trans-European Transport Network (TEN-T) to Türkiye is one such initiative to improve connectivity. This would better connect the Rhine-Danube core network corridor and the corridor between the Orient and the Eastern Mediterranean with Turkey, enabling smoother trade flows. Türkiye's future inclusion in the TEN-T Regulation, together with the European Investment Bank (EIB) investments and the Customs Union reforms, could also significantly improve the region's logistical performance.

Environmental sustainability and technological progress have also been identified as crucial for shaping the future of freight transport between the EU and Türkiye. The focus on green logistics solutions such as rail and Ro-Ro (roll-on/roll-off) services underlines the need for environmentally friendly transportation options. Another example already in operation came from the company EKOL, whose intermodal corridors in Europe use dedicated trains to reduce carbon emissions and dependence on road transportation, highlighting the importance of sustainable logistics practices.

In addition, the strategic importance of the Danube itself as a transport axis for European trade cannot be overlooked, as it connects Central and Eastern Europe with the Black Sea, facilitates the movement of goods and promotes economic integration and regional development. The creation of dynamic economic areas and trade links along the waterway has been a significant development in recent years and decades, particularly with the integration of the Danube countries into the EU. This integration has led to increased trade and economic growth in the region.

To fully capitalize on the freight potentials between the EU and Türkiye, coordinated efforts were said to be necessary to remove barriers and bottlenecks, prioritize multimodal transport, and invest in sustainable infrastructure. According to several speakers, such measures will not only enhance trade efficiency but also contribute to the broader goals of economic development and environmental sustainability in the region.

6.2 The discoveries of the workshop – IWT

As it was already mentioned in the previous subchapter, freight potential between EU countries and Türkiye via Inland Waterways Transport (IWT) is significant, largely due to the strategic importance of the Danube River, which serves as a vital transport route linking Central and Eastern Europe to the Black Sea. This route is not only cost-effective but also environmentally friendly, making it a preferable option for sustainable logistics solutions.

The Danube River, stretching 2,415 kilometers from Kelheim to Sulina, connects key production, and sales markets across Europe. The potential for increased freight is underscored by the Danube's role in supporting economic integration and reducing transportation costs. For instance, significant volumes of steel, metal products scrap are

already being transported from Austria and Hungary on the Danube to Constanta, Romania, and then to Türkiye. This demonstrates the river's capacity to handle substantial freight volumes. Also, the EU's action plan NAIADES III aims to increase the share of IWT by 25% by 2023 and 50% by 2025, emphasizing the importance of sustainable transport solutions. Though most Danube ports are currently operating under capacity, therefore there is no current need to implement measures increasing port capacity, there were some other – not necessarily primary but significant – infrastructure investment needs of the sector being detected during the event:

- Ensuring stable minimum fairway conditions is critical to maintain navigability, especially during low water periods which have historically caused disruptions. Investments in dredging, construction of reservoirs, and dams are necessary to address these challenges. For that, real-time water level monitoring and state-of-technology fairway maintenance by the waterway administrations including a further transition to modern vessels which can adapt to lower draught can help mitigate the impact of expected longer and more severe low water periods.
- Developing selected Danube ports as central hubs for Türkiye relations could create synergies and economies of scale, making the transport route more efficient and cost-effective.
- Enhancing intermodal connectivity is also vital to ensure seamless transfer between different modes of transport. This involves integrating rail, road, and maritime transport systems with IWT.
- Collaborative water management strategies and international cooperation are necessary to ensure efficient navigation and address administrative barriers.

The future of freight transport between EU countries and Türkiye via the Danube River holds great potential. However, realizing this potential requires mostly regulatory support and the willpower of stakeholders in the form of future contracts and agreements. By addressing these needs, IWT can become a cornerstone of sustainable and efficient logistics in the region, fostering economic growth and strengthening trade links between Europe and Türkiye.

6.3 DPW Constanta info on their new maritime terminal

The DP World Constanta maritime terminal has a broad infrastructure on an 81 ha terminal area with a 2 km quay length at over 16m depth and with 3 rail shunting lines of 600 meters each. When it comes to its equipment it has 5 quay cranes, 13 RTGS, 2 RMGs, and 60 other equipment as well. On average they deal with 421 maritime vessels, 112 barges, 1 281 trains, and 244 thousand trucks annually.

Source: The presentation of DP World Constanta

From July 2024 the company is planned to be starting the operation of a new ro-ro and project cargo terminal with a 70 000 m2 large storage space, dedicated berths at 16 m depth, and also a drive-through X-ray scanner. The terminal's Ro-Ro part will have 400m of dedicated berth with a design for increased efficiency while its semitrailer storage capacity will be 400 units with specialized handling equipment. Meanwhile, the terminal's project cargo part will also have 400 lm of dedicated berth with ample storage space supporting pressures up to 22 tonnes/m2s and with specialized handling equipment.

The new terminal will be serving the planned new RoRo line between Constanta and Karasu operated by the company SEALINES which is also expected to open in the first week of July 2024.

Table 31. The new terminal's planned operating schedule

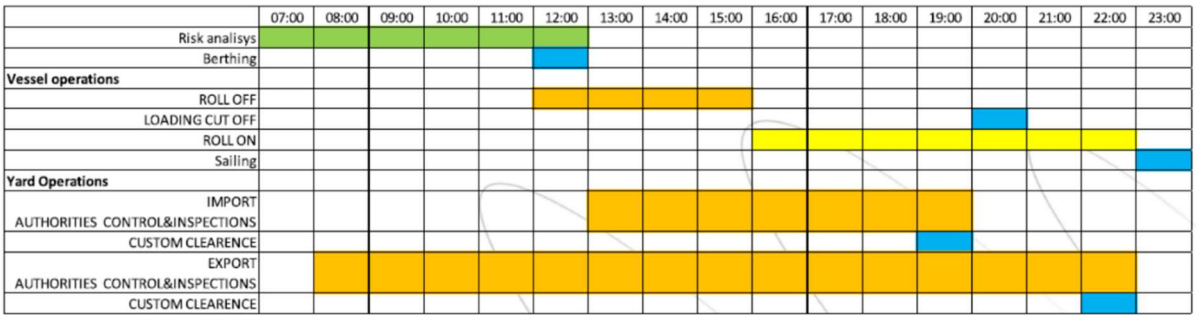
- PORT OPERATOR
- CUSTOMS BROKER
- LOCAL AUTHORITIES
  - BORDER POLICE
  - DSV
  - CUSTOMS
  - BCCO

Karasu – Constanta

Dep	Mon	Tue	Wed	Thu	Fri	Sat	Sun
23:00	●	○	●	○	●	○	●

Constanta – Karasu

Dep	Mon	Tue	Wed	Thu	Fri	Sat	Sun
23:00	○	●	○	●	○	●	○



Source: The presentation of the DP World Constanta