

On the 125th Anniversary of the Construction of the Modern Port of Constanta (Romania), the Largest Port on the Black Sea: Recent Developments, Perspectives, and New Development Strategies

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Abstract

The port of Constanta, the largest Black Sea port in terms of operating capacity, has celebrated 125 years from the start of its modernization works. At present, it is also the largest cereal port in Europe.

The recently evolution of the cargo traffic in this port, in terms of structure, indicates some trends that could continue in the near future, especially regarding the development of the traffic within the Constanta port, as a river port, on the Danube, through the Danube - Black Sea Canal, back and forth from the countries bordering the Danube.

There are important projects, in different development phases, which could lead to the modernization and development of the activity of the port of Constanta.

This paper aims to identify the most significant directions and priority development projects of the port of Constanta in the short and medium term.

Key words: port of Constanta, Romania, the Black Sea, evolution, development strategies and projects

J.E.L. classification: F63, H80, H83, L21, L52, L91, L98, M21, N70, N73, O18, O21, P48, R41

1. Introduction

The largest seaport in Romania and the largest Black Sea port, in terms of total operating capacity, the port of Constanta celebrated, on October 16, 2021, 125 years from the official inauguration of its construction and modernization works, in the presence of King Carol I. That moment represented the beginning of the creation of the "modern" port; however, the port of Constanta has an ancient history, closely linked to the history of Constanta City, the ancient Greek fortress Tomis, dating from the sixth century, BC.

The ancient port city of Tomis, or the fortress of Tomis, founded by the Greek settlers, was originally organized as an *emporion*, i.e., a trade center between the Greek merchants and the native peoples on the western shores of the Black Sea. In fact, the Greek influence lasted in ancient Tomis until the 1st century AD, when it came under the rule of the Roman Empire, a period in which the port experienced a prosperous economic life.

The Byzantine period followed, when the evolution of the port of Tomis was marked by numerous migrating peoples' invasions, which made the merchants look for other markets.

The Romanian rule of these places was short, at that time, given that the Dobrudja region, which included the port of Tomis, came under the rule of the Ottoman Empire, between the years 1421 and 1878, a period in which the city received the Turkish name Kustendje or Kustendje. The town of Kustendje had, in 1878, a small port, with a 7-ha basin, with a wooden quay, just 200 m long, where the vessels docked (Stefan, 1928, p.40).

After the return of Dobrudja to the Romanian Principalities, following the Russo-Turkish War, respectively the Romanian War of Independence, in 1878, commenced the interest in the construction of a modern port, in Constanta.

With the inauguration of the Bucharest-Fetesti railway line and the bridge over the Danube, in 1895, the direct railway connection between Constanta and the center of the country was ensured. The time had come for the expansion and modernization of the port of Constanta, in order to meet the new cargo traffic requirements that made up most of the country's imports, as well as exports.

The first studies for the creation of the new port began in 1881, expanded in 1888, and in 1896 the development and modernization works started. The works lasted until 1909, when the "modern" port was officially inaugurated. Dredging works were carried out, the sea wall, the jetty and the Southern dam were built, the quays, 6 basins, oil tanks and cereal silos. In 1904 the construction of the silos and the oil basin began, and in 1909 a silo and a part of the oil station were inaugurated (Stefan, 1928, p.41).

During the interwar period, new elements of infrastructure were added to the port. However, the port suffered greatly following the destruction brought by the Two World Wars.

In 1963, the expansion works in the port of Constanta began, and in 1984 the Danube-Black Sea Canal was inaugurated, an important moment, which made the port of Constanta also a river port, on the Danube.

The present paper aims at analyzing the recent evolutions of the cargo traffic in the port of Constanta and identifying some directions regarding its evolution perspectives.

2. Literature review

Even though no written evidence has been preserved about the period of the establishment of the settlement, which is the current port city of Constanta, archaeological evidence shows that a dense population lived here even before the Greek colonization, founded between the 7th and 6th centuries BC (Ciorbea, 1995, p. 5).

Ports, along with the phenomenon of globalization, have become logistics centers that play an increasingly important role in the stimulation of the development of the national economy and in the development of regional and international economic relations (Popa and Zburlea, 2020, p.1).

The main advantage of maritime transport is that it uses an infrastructure that does not require high investment costs: water from the seas, oceans, and rivers. Moreover, port infrastructure requires lower investment budgets compared to those for the railway or road infrastructure. Another advantage of maritime transport is that it can connect those "peripheral" regions, which are difficult or even impossible to reach, regions such as the Baltic Sea, the Black Sea and the Mediterranean Sea. From this point of view, Short Sea shipping is the most important means of commercial cargo transport between Eastern and Western Europe and between the countries located in the Mediterranean basin (OECD, 2021, p. 44).

In recent years, Romania has consolidated its position as the main producer and exporter of cereals in Europe, which has also led to an increase in cereal traffic through the port of Constanta. After 2010, the volume of cereals transported by sea and inland waters exceeded the quantities transported by road and railway, reaching a share of 59% in 2016 (Nistor and Popa, 2019, p. 3).

Stinga and Olteanu wrote a paper on the particularities of the bulk terminal within the port of Constanta, starting from an analysis of the transport sector at European level, highlighting the fact that the port of Constanta occupied, in 2017, the 6th place, being the only port on the Black Sea found in the top 10 European ports (Stinga and Olteanu, 2019, p. 300). Another study was conducted on the container terminal in the port of Constanta, belonging to the SOCEP company, using a simulation model designed to help the terminal's management in optimizing their handling, storing and container transport activities (Rusca *et al.*, 2020, p. 213).

3. Research methodology

The theoretical part of this paper is an empirical desk research, based on information on some significant historical landmarks of the evolution of the port of Constanta, since the beginning of its modernization works, 125 years ago. The secondary information source used has been obtained from publications and specialized research regarding theoretical and practical aspects concerning the problems faced by the port and cargo transport activities by sea, especially in the Black Sea and

in inland waters (on the Danube) (Jupp, 2020, pp. 113-115; 117-119).

In the case study, we have combined the quantitative research on the evolution of cargo traffic through the port of Constanta, in total and in structure, especially during the last 10 years, with the qualitative research based on focus-group type of direct discussions (Jupp, 2020, pp. 209-210), with representatives of the management of the port of Constanta and with managers of some of the most important port operators in the port of Constanta. For the quantitative research we have used secondary information, collected in a longitudinal profile (Juganaru, 1998, p. 25), represented by statistical data and other relevant information, obtained from the website of the Maritime Ports Administration Constanta, as well as from two of its publications: its annual publication (Handbook 2021-2022) and the Special Report, published on the occasion of the 125th anniversary.

4. Findings

4.1. Some technical features of the current port of Constanta

The total surface of the port of Constanta is 3,926 ha, of which 1,313 ha mainland and 2,613 ha water. The port of Constanta has 156 berths, of which 140 are operational, the total length of its quays is 32 km and it has depths between 7 and 19 m. All these features are comparable to the other major ports in Europe and allow the access of oil tankers with a capacity of up to 165,000 dwt, as well as bulk carriers with a capacity of up to 220,000 dwt.

In the river port of Constanta any type of riverboat can dock, and the Danube-Black Sea Canal shortens the distance between the Danube and the Sea by 400 km. The Danube River offers one of the most advantageous means of transport, due to the large volumes of goods that can be transported and the low costs. Recently, the works at the Barge Terminal have been completed, an investment meant to improve the facilities for mooring riverboats in the Southern part of Constanta port, being able to face the future increase in river traffic.

The port of Constanta has a number of important advantages, compared to the other ports in the region, its main advantage being its advantageous position, on the Black Sea, being located at one end of the pan-European Rhine-Main-Danube transport corridor. Its position, at the intersection of the trade routes connecting the markets of the Central and Eastern Europe countries with those from Central Asia and the Far East, conveys to the port of Constanta an important role within the European intermodal transport network. Among the other advantages of the port of Constanta, as an important distribution center in the Central and Eastern European Region, we can mention, mainly, the fact that it is a multifunctional port, with modern facilities and sufficiently large depths of the water in the port basin that allow the mooring of the largest ships transiting the Suez Canal; it is a container distribution center across the Black Sea ports; it has good connections with all the other means of transport: railway, road (A2 Constanta-Bucharest motorway), river, air and pipeline; it has Ro-Ro (roll on/roll off) terminals that provide fast connections to the ports in the Black Sea and the Mediterranean Sea; it has direct access to the Central and Eastern Europe countries, through the Pan-European Corridor VII – the Danube; it has modern facilities for mooring passenger ships; it has port status with fiscal and customs facilities, respectively a Free Zone. The fact that it has generous areas of land available for future developments is also added to these advantages.

The hinterland of the port of Constanta includes a vast Central and Eastern Europe region. In recent years, the port of Constanta has successfully served the flow of goods coming from or leaving towards Central and Eastern European countries, such as: Austria, the Czech Republic, Slovakia, Hungary, Serbia, Bulgaria, Moldova and Ukraine. Due to the competitive advantages of the port of Constanta, it has kept its traditional transport routes, despite the numerous economic and political events that have taken place in recent years, this port acting as the main center for storage and distribution of goods in the region. The port of Constanta is a multimodal transport center for any type of cargo and an important commercial gateway for the Central and Eastern Europe countries, as well as for the Black Sea basin countries (NC MPA Constanta, 2021b, p.10).

4.2. The evolution of the cargo traffic through the port of Constanta

The evolution of the cargo traffic in the seaports under the management of the Maritime Ports Administration Constanta (respectively, the seaports of Constanta, Mangalia and Midia, but also the river port Basarabi, located on the Danube-Black Sea Canal) has known several successive periods of growth, but also significant decreases (NC MPA Constanta, 2021a, pp. 20-21). Thus, while in the year 1970, the total volume of operated goods was 14,3 million tons, in the following years there were significant annual increases, without interruption, until 1980, when the traffic reached was 47,6 million tons. Then there were two years of decline (1981 and 1982), during the global economic recession that followed the oil crisis of 1979, after which, during the 1982-1988 years, a new period of uninterrupted annual growth followed, reaching 62,3 million tons in 1988.

During the 1989-1992 years, the decreases in the values of cargo traffic were dramatic, registering a real collapse, down to 26,9 tons in 1992, due to the transformations that occurred after the change of the political regime in Romania, respectively the transition from a centralized economy to the beginning of the transition to the market economy. Then began the process of privatization of the port operators, and also the beginning of the loss of Romania's commercial fleet. This was followed by a period of increases in port traffic, between 1992 and 1996, when a total traffic of 44,2 million tons was reached, followed by another period of decreases, between 1996 and 1999, and slight increases in 2000 and 2001. Between 2001 and 2005 the annual increases in traffic were again spectacular, reaching 60,6 million tons in 2005, then slight decreases in 2006 and 2007, followed by a new peak in 2008, when an annual traffic of 61,8 million tons was recorded.

A new traffic collapse took place in 2009 (at 42 million tons), as a result of the global economic and financial crisis, then an increase in 2010, followed by a decrease in 2011, then again followed a period of successive increases until 2016, a slight decrease in 2017 and significant increases in the following two years, reaching, in 2019, the historical peak of cargo traffic in these ports (over 66,6 million tons). However, as expected, in 2020, as a result of the restrictions caused by the COVID-19 pandemic, there was a decrease of almost 10% compared to 2019, respectively a traffic of 60,4 million tons of goods (NC MPA Constanta, 2021a, pp. 20-21).

Table no. 1 show the evolution of cargo traffic through the port of Constanta in the 2011-2020 period, both in terms of total traffic and in structure, differentiated, by bulk, liquid and solid goods.

Table no. 1. Traffic data – total & bulk, 2011-2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total traffic (1,000 tons)	45,97 2	50,585	55,13 8	55,64 2	56,33 7	59,42 5	58,37 9	61,30 4	66,60 3	60,376
Total bulk (1,000 tons)	35,34 9	39,672	44,99 7	45,18 2	45,48 9	48,85 2	48,20 8	51,21 5	56,50 4	51,006
Liquid bulk	10,61 7	10,015	10,09 1	12,51 6	12,20 4	13,66 3	13,35 4	14,02 3	14,92 1	12,426
Solid bulk	24,73 3	29,657	34,90 6	32,66 6	33,28 5	35,18 9	34,85 4	37,19 3	41,58 3	38,581

Source: Constantza Port Handbook 2021-2022, Twelfth Edition

The main goods operated through the port of Constanta, in the 2011-2020 period were cereals, crude oil, petroleum products and fertilizers (Table no. 2). The largest increase was recorded in cereal traffic, from 9,535 thousand tons in 2011 to 21,894 thousand tons in 2020, while for crude oil and petroleum products, although there were increases, the evolution of the operated quantities fluctuated, with increases and decreases, from one year to another. Significant increases, although with significant annual fluctuations, were also registered regarding chemical fertilizers, from 2,015 thousand tons, in 2011, to 4,420 thousand tons in 2020.

Table no. 2. Traffic data – main products

Main products (1,000 tons)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cereals	9,535	12,628	15,262	17,421	19,616	20,394	17,891	17,964	21,329	21,894
Crude oil	5,534	5,043	5,397	6,751	6,593	7,487	7,352	7,475	8,027	6,638
Others	6,529	6,958	6,545	6,782	6,850	6,897	6,526	6,567	6,561	6,349
Petroleum products	3,480	4,000	3,820	4,714	5,166	5,654	5,473	5,898	6,296	5,042
Fertilizers	2,015	2,154	1,763	1,742	1,843	2,927	3,094	3,008	4,025	4,420

Source: Constantza Port Handbook 2021-2022, Twelfth Edition

4.3. The evolution of container commercial transport in the port of Constanta

In Romania, the beginnings of the use of container cargo transport date from the first part of the '70s of the last century, with the design of the first specialized container terminal in the port of Constanta.

After the change of political regime in Romania, in 1989, the reorganization of port activities began, and the process of privatization of port activities started, including the container cargo transport in the port of Constanta. Thus, there were spectacular increases in container cargo traffic in this port, reaching a number of 118,645 TEUs in 2001.

In 2004, the largest specialized container terminal started operating in the port of Constanta, managed by DP World company (Dubai Ports World), with a current operating capacity of 1.2 million TEUs per year. The operational area of the terminal is 52 ha and it has minimum quay depths of 15.5 m, so this terminal can operate Post-Panamax port container vessels.

In 2007, a record 1,411,387 TEUs were reached in the port of Constanta, and after the onset of the global economic and financial crisis, the decreases in traffic were dramatic, reaching about 600,000 TEUs in 2009 and even a minimum of 556,694 TEUs in 2010.

Table no. 3 shows the comparative evolution of container cargo traffic and general cargo in the port of Constanta, in the 2011-2020 period. One can notice that, during this time, the share of the quantity of containerized cargo was more than double in relation to that of the general cargo category, but there were also some more significant decreases in the general cargo category.

Table no. 3. Traffic data – general cargo and containers

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
General cargo (1,000 tons)	3,966	4,233	3,598	3,681	3,998	3,675	3,647	3,525	3,547	3,024
Containers (1,000 tons)	6,518	6,680	6,543	6,779	6,850	6,897	6,524	6,564	6,552	6,346

Source: Constantza Port Handbook 2021-2022, Twelfth Edition

Table no. 4 presents the evolution of the number of calls in the cargo traffic in the port of Constanta, both in terms of maritime and river traffic, during the 2011-2020 years. There is a noticeable decrease in the number of calls related to maritime traffic and an increase in the calls related to river traffic, which can be explained by the fact that the average capacity of vessels operating in maritime transport has increased, whereas riverboats have smaller capacities.

Table no. 4. Traffic data – calls

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total										
Maritime	4,872	5,057	4,833	4,771	4,605	4,331	4,093	4,139	4,176	4,031
River	8,096	9,405	9,280	10,053	9,769	10,203	9,272	9,487	10,395	10,344

Source: Constantza Port Handbook 2021-2022, Twelfth Edition

Analyzing, by structure, the situation of the number of calls in the maritime traffic (Table no. 5) we notice a significant decrease in the cargo, tank, portcontainer categories and increases in the categories bulk carrier and others. Regarding passenger ship traffic, from annual increases in the number of operated ships in 2011 (44 ships), it reached a maximum of 95 in 2014, followed by annual decreases, to only 11 calls in 2018, with a return to 17 in the year 2019 (as well as in 2016) and until the collapse in 2020, when no passenger ship was operated. From the latest information, received from the port’s administration, in 2021 only a passenger ship was operated in the port of Constanta, as a result of the restrictions caused by the COVID-19 epidemic. However, the main cause for the drastic reduction in the number of cruise ships that docked in the port of Constanta (before the pandemic) was related to the hesitation of the operators of these ships to bring cruise ships in the Black Sea, after the annexation of Crimea and the military operations in the Eastern Ukraine.

The most important increases in cargo traffic in recent years have been due to river traffic. Unfortunately, there are still no regular river-sea shipping lines on the Danube, and their establishment should be a priority in the coming period. However, first it is necessary to carry out the dredging works throughout the Danube, especially in the part belonging to the Bulgarian sector, so as to ensure the seaworthiness of Danube throughout the year. Furthermore, the Danube ports will have to make the necessary investments and to ensure the necessary machinery and equipment for handling and storing containers in these ports.

The improvements that will be made regarding the road and railway facilities, as well as in terms of the conditions offered by the multimodal terminals from Constanta port will increase the efficiency of cargo transport, will cut costs and will therefore lead to the revival of cargo transport in the Romanian ports.

Table no. 5. Maritime calls

Calls	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Cargo	2,879	2,692	2,525	2,143	1,971	1,812	1,815	1,785	1,807	1,927
Passenger	44	52	68	95	37	17	13	11	17	0
Portcontainer	577	651	579	578	610	684	592	524	510	475
Tank	632	673	636	719	668	665	608	670	687	581
Bulk carrier	401	439	533	555	589	607	574	628	622	558
Others	60	550	492	681	730	546	491	521	533	490
Total	4,872	5,057	4,833	4,771	4,605	4,331	4,093	4,139	4,176	4,031

Source: Constantza Port Handbook 2021-2022, Twelfth Edition

Apart from the obvious strengths and opportunities, the Danube ports (not the port of Constanta) also have some weaknesses, which should be eliminated or at least minimized. Among these, we can mention: excessive, unused or underused port capacities, as well as the lack of the resources needed to provide and improve the road and railway connections of the ports with the rest of the network. Moreover, a number of external threats to these ports, such as navigation hindrances along the Danube, as well as strong competition from road and railway transport serving industrial and commercial centers along the Danube, directly from the Koper, Rijeka and Trieste seaports and even from more distant ports, located in North-Western Europe, such as Rotterdam, Amsterdam, Antwerp, Hamburg and others (Marcu & Raileanu, 2020, p. 252).

4.4. Development prospects of maritime transport in Romania

The 2021-2024 Government Program of the Political Coalition that supports the current Romanian government, led by Prime Minister Nicolae Ciuca, regarding the maritime transport strategy, states that, for the next 3 years, the priority areas for action will focus mainly on the capitalization of the huge potential offered by the Danube and the river transport, the development of the Danube commercial ports and the transformation of the port of Constanta into a regional leader.

Among the priorities included in the Government Program in the field of maritime transport, the following stand out: the elaboration of the maritime strategy; the development of the port of Constanța, through a major investment plan, meant for it to reach its maximum potential and to expand its hinterland, thus laying the ground for becoming the most important port in the region; increasing the safety of traffic in ports: digitization and management of the waterway through the development of the Port Community System computer platform, etc. (Government of Romania, 2021, p. 29).

The concerns for the adoption of a new strategy for the development of maritime transport start from the desire to achieve a correct and concrete planning of investments in the Romanian ports, a resizing of tariff and customs policies, as well as the creation of strategic alliances between the states located within the Caspian Sea - Black Sea Corridor. (Government of Romania, 2021, p. 33).

Another priority is to ensure the necessary conditions in order for the navigation on the Danube to be possible, without interruptions, throughout the year, and the river ports to be developed by creating facilities for the storage and operation of containers, as well as providing facilities for container transport on the Danube River. Moreover, the integration of the Romanian river ports on the Danube into the European tourist circuit and the development of some tourist circuits specific to river tourism will be pursued.

The multimodal transport strategy will be correlated with the one concerning the development and modernization of the transport infrastructure, so as to contribute to cost reduction, but also with the one concerning the emissions from transports, by transferring, at least partially, the travels, from the road to other more sustainable means of transport, such as railway or waterway. It will also aim to increase the efficiency of multimodal transport, through the complementary development of logistics platforms directly connected by road-railway-air / sea.

The EU Strategy for the Danube Region or the "Danube Strategy" initiative, launched in 2008, as a joint proposal of Romania and Austria, supported by all Danube riparian countries, starts from the need for the Danube Region to be tackled in an integrated way, from an economic, transport, social and cultural point of view. One of the main objectives of this strategy is to improve the seaworthiness of Danube, especially for the cargo transport and the protection of the environment, respectively the fight against pollution.

By improving the navigation conditions on the Danube, the necessary premises will be created for increasing the river traffic, including through the port of Constanța. To this end, works will be carried out to improve the seaworthiness of Danube, in the sector between Calarasi and Braila and a joint inter-ministerial commission will be set up within the government to unblock the Fast Danube project, regarding the improvement of navigation conditions on the Romanian-Bulgarian Danube common sector, and, in order to do this, the intervention of the European Commission will be requested. (Government of Romania, 2021, p. 33)

The Romanian Government has undertaken, through the **National Recovery and Resilience Plan** - PNRR, a series of reforms and investments, at national level, including, in the maritime sector, those regarding the development of specialized terminals in the port of Constanța-South, wharf III and wharf IV South, the modernization of the port infrastructure, by ensuring the increase of the depths of the fairways and the basins, as well as the safety of navigation in the port of Constanța, as well as other infrastructure works in the port.

4.5. Concerns regarding the preparation of port infrastructure for supplying ships with electricity and alternative fuels

Transport contributes 25% to global CO₂ emissions, of which 7% - maritime transport, 12% - air transport, 75% - road transport, and 6% - other means of transport (OECD, 2021, p. 43). Onshore electricity supply installations, within ports, can be important sources of clean energy for maritime and inland waterway transport. The electricity supplied ashore can make a significant contribution to reducing the environmental impact of maritime ships (European Parliament, 2014, pp. 7-8).

According to the provisions of Directive 2012/33/EU of the European Parliament and of the Council, by the end of 2025, respectively 2030, a central network of LNG supply points should be available in maritime and inland ports, but also in other ports outside the core network. In accordance with the provisions of Directive 2014/94/EU (art. 2), the notion of "alternative fuels" refers to fuels or energy sources that serve, at least in part, as a substitute for fossil oil sources used to supply energy for transport and which have the potential to contribute to decarbonisation and to improve the environmental performance of the transport sector. Along with electricity, the category of alternative fuels includes: hydrogen, biofuels, synthetic and paraffinic fuels, natural gas, including biomethane in gaseous form (compressed natural gas-CNG) and liquefied form (liquefied natural gas-LNG), as well liquefied petroleum gas - LPG (European Parliament, 2014, p. 13).

One of CN APM (National Company Maritime Ports Administration Constanța)'s priorities is the streamlining of Romanian seaports from an energetic point of view. The company is a partner in the EALING project, which analyzes the possibilities of supplying ships during their stay in ports, thus eliminating fuel consumption and reducing pollution in port areas by reducing gas emissions in the atmosphere and the noise produced by the power generators on the respective vessels. The project responds to the need for implementing OPS (Onshore Power Supply) solutions in TEN-T seaports.

The "Modernization of the electricity distribution network in the port of Constanța" project, with EU funding, through the Large Infrastructure Operational Program, amounting to over 113.39 million lei, was signed on November 24, 2021. Through this project, which is in line with EU strategies for green ports and increasing the technical and economic efficiency of electricity use, 75% of the electricity network in the port of Constanța will be replaced. A new electricity supply management system will also be installed.

4.6. Projects and development perspectives of the port of Constanța

Among the priorities in the field of maritime transport in Romania, an important place is occupied by the development of the port of Constanța, through an investment plan which intends for this port to reach its maximum development potential, to become a regional leader and to expand its hinterland.

In recent years, the port of Constanța has seen significant increases in cargo traffic on the Danube, through the Danube-Black Sea Canal and has become the most important cereal port in the region and one of the largest in Europe. If the necessary Danube dredging works will always be carried out on time, in order to ensure the optimal conditions of seaworthiness throughout the year, especially in the Romanian-Bulgarian common sector of the river, there are very good prospects for the development of cargo traffic on the Danube in the coming years, and the port of Constanța will be able to register considerable increases in traffic.

The important investment projects to be carried out in the port of Constanța are meant to ensure the increase in accessibility of the port, as well as the increase in the maritime transport capacity, the development of specialized terminals within the port of Constanța South, the modernization of the electricity distribution infrastructure in the New Port area, the modernization of the port infrastructure, by ensuring the depths of the fairways and the basins, as well as the safety of navigation in the port.

Furthermore, the port operators are carrying out their own development and modernization projects. For example, the company COMVEX SA completed, in 2020, an investment in the largest cereal terminal in the port of Constanța (with a capacity of 200 thousand tons). On the other hand, DP World Constanta, the operator of the largest container terminal in the Black Sea region, has

started the project of building a new Logistics Center, on an area of 60 thousand square meters in the port of Constanța.

The “Three Seas Initiative” project, launched by Poland and Croatia in 2015, includes 12 EU member states, located in the Baltic Sea, the Adriatic Sea, and the Black Sea: Poland, Hungary, the Czech Republic and Slovakia, the Baltic countries (Lithuania, Latvia, Estonia), Austria, Slovenia, Croatia, Romania and Bulgaria. This initiative aims at increasing the convergence and cohesion, while reducing the economic development gap between different areas and EU member states, by increasing interconnectivity in this region, in areas such as energy, transport and digitalization (MFA, 2021). As part of this Initiative, Via Carpathia is a project aimed at designing a trans-European corridor, a high-speed road with a length of about 2,500 km, which would become a key connection between Northern and Southern Europe, on the eastern flank of the EU. The Romanian route of Via Carpathia should connect Romania's borders with Hungary, at Bors, with Bulgaria's border, at Calafat, on a length of 462 km. However, for the Romanian authorities, a branch of the project is very important, namely the Episcopate of Bihor-Oradea-Arad-Timisoara-Sibiu-Pitesti-Bucharest-Constanța route, i.e., ensuring the connection with the Black Sea, thus being able to increase the cargo traffic through the port of Constanța.

5. Conclusions

In recent years, the port of Constanța has seen significant increases in traffic, especially in the case of goods transported on the Danube, through the Danube-Black Sea Canal, the largest increase being recorded in cereal transport. In recent years, almost all port operators in the port of Constanța have made investments in the construction of new cereal storage capacities (silos) in the port, and the significant increase in cereal production and exports from Romania and other Danube riparian countries has favored this increase in cereal traffic.

The further increase in the traffic of goods transported on the Danube depends, however, on ensuring the seaworthiness conditions on this river, throughout the year. The Romanian governmental authorities must continue their diplomatic efforts in order to convince the Bulgarian authorities, in particular, of the need to carry out, in a timely manner, the dredging work in the Danube sector corresponding to their country.

Among the priorities of the Romanian maritime sector, an important place is occupied by the development of the port of Constanța, by promoting an investment plan which intends for this port to be able to reach its maximum development potential. The important sums allocated to the investments in transports, in Romania, in the following years, financed both by PNRR and other European and governmental sources, will lead to a considerable improvement in the railway and road connections of Constanța port with the rest of the country and the neighbouring countries.

A particular attention should be paid, by the administration of the Port of Constanța, to ensuring the necessary investments to provide the required technical possibilities for ships docking into the port to be supplied with electricity, as well as a greater diversity of less polluting fuels than fossil fuels used to power ships' engines (hydrogen, biofuel CNG, LNG, LPG, etc.), in accordance with the provisions of the European directives on reducing pollution in maritime transport.

In our opinion, but also that of many managers of companies operating in the port of Constanța, whom we have consulted, it is necessary for the new leadership of the Romanian Ministry of Transport and Infrastructure to understand and to act so as not to continue to perceive in the future the National Company Maritime Ports Administration Constanța only as an important source of profit and income to the state budget, but rather as an administration whose main objective is to ensure the most favorable conditions, so as to attract the highest flows of goods to be operated through the port of Constanța.

A proposal which should be analyzed by the authorities and implemented, as soon as possible, would be to create, on the premises of the port of Constanța, an *industrial park*, in which to carry out non-polluting production activities. The companies that could be attracted to produce in this industrial park could benefit from the customs and fiscal facilities of the port of Constanța and could attract additional flows of raw materials to be processed within the port and then the resulting products to be exported / delivered to other countries.

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