POST-COVID EUROPEAN RECOVERY PLANS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT OF MARITIME TRANSPORT AND SEAPORTS IN THE EUROPEAN UNION AND THE REPUBLIC OF CROATIA

ZLATKA KOŽIĆ
Zidarska 105, 51260 Crikvenica, Croatia
e-mail: zlatka.kozic@gmail.com
Corresponding author

INES KOLANOVIĆ
The University of Rijeka, Faculty of Maritime Studies, Studentska 2, 51000 Rijeka, Croatia
e-mail: ines.kolanovic@pfri.uniri.hr
Orcid: 0000-0001-9545-8601

TANJA POLETAN JUGOVIĆ
The University of Rijeka, Faculty of Maritime Studies, Studentska 2, 51000 Rijeka, Croatia
e-mail: tanja.poletan@pfri.uniri.hr
Orcid: 0000-0001-8248-3015

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Abstract

With the appearance of the COVID-19 pandemic, the whole world faced its effects on various aspects of human life. This paper describes the impacts of the COVID-19 pandemic on maritime shipping and seaports in the European Union. The study compares cargo maritime transport and the volume of production activity of seaports in the EU and the Republic of Croatia before and after the removal of restrictions prompted by a pandemic. The paper analyzes the changes and negative effects of the maritime transport market in that period. Therefore, the EU has adopted specific recovery plans to help its member states recover as quickly and easily as possible from this crisis caused by the pandemic. This paper aims to overview the EU and Croatian national recovery plans in the context of sustainable maritime transport and seaport development after the COVID-19 pandemic. The main EU plans are covered in this paper and include the Multiannual Financial Framework 2021-2027, NextGeneration EU and the European Green Deal. The paper also presents an example of the use of these plans in the Republic of Croatia, which made significant use of their benefits. This paper shows how EU subsidies, which, although not directly related to maritime as such, still have a significant impact on its recovery.

1 INTRODUCTION

In December 2019, a disease appeared in China, and the first people were infected with an unknown virus. The number of patients increased rapidly, and due to the spread of the disease, which interfered with everyday life, in March 2020, the World Health Organization (WHO) declared a pandemic and officially called it COVID-19 [1]. The pandemic caused a public health crisis with numerous negative consequences for society, politics, and the economy. The consequences affected the entire world and followed almost as quickly as the spread of the virus itself. Due to the spread of the disease and the consequences it caused, governments around the world made decisions and took measures to alleviate the resulting economic and social problems and protect people's health. Soon, restrictions on travel outside the country's borders on movement in general were globally implemented, and recommendations related to social distancing, quarantine and self-isolation were adopted.

Restrictions on movement soon had negative consequences on the society and economy of the European Union, especially on the transport sector, whose activity is overcoming spatial and temporal distances to transport people and goods. Maritime transport is essential for the world economy, considering that the most significant quantities of goods by volume are transported by this branch, which has the most significant impact on transporting and handling goods in seaports [2].

This paper analyses the maritime transport of goods in seaports in the European Union, especially in the Republic of Croatia as a member state, to observe the negative consequences of the pandemic on this sector. The paper aims to analyse the plans, packages, instruments, and measures adopted by the European Union and the member states to recover faster from the crisis that occurred, which may be repeated in this or another form.

Therefore, the paper is arranged so that the first section of this work analyzes the impact of the COVID-19 pandemic on goods traffic in European ports. It utilizes statistical data to examine how these changes in traffic patterns affected port operations. Following this analysis, the paper presents a detailed representation of European recovery plans. These plans that will be presented aim to help EU member states to navigate the COVID-19 crisis as effectively as possible. The next chapter of the paper follows the specific implementation of these recovery plans in the territory of the Republic of Croatia. The last chapter is conclusion in which the results of the conducted research are synthesized.

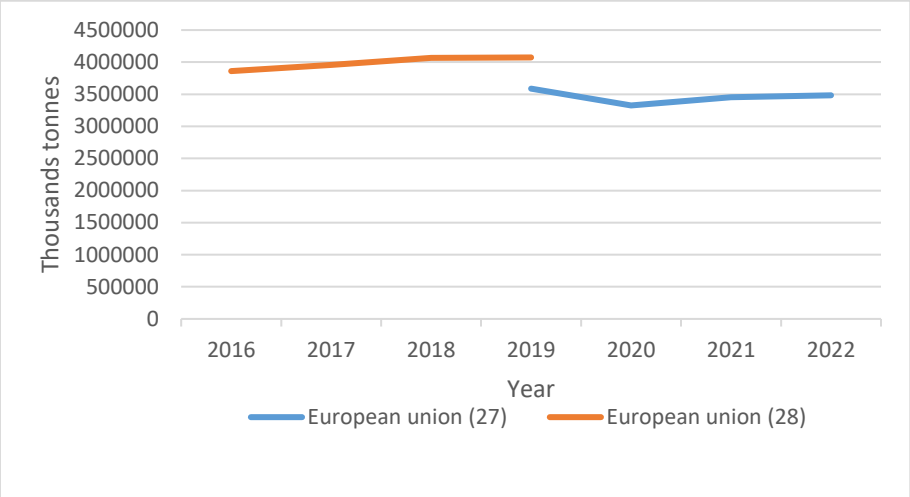
2 ANALYSIS OF MARITIME TRANSPORT AND TRANSPORT IN SEAPORTS IN THE EU AND THE REPUBLIC OF CROATIA AFTER THE PANDEMIC OF COVID-19

The COVID-19 pandemic had a significant impact on maritime transport both at the EU and global levels. The pandemic has disrupted the relationship between supply and demand and negatively affected the decline in transport, causing economic uncertainty. The maritime sector was particularly affected, given that almost 80% of world trade is carried out by sea. Despite this, maritime transport was significant due to its importance in supplying the most demanded goods, such as food, medicines and fuel [2].

The crisis caused by the pandemic can best be shown through the amount of transported goods in maritime transport and the amount of handled goods in seaports in the European Union, especially the Republic of Croatia, as its member.

Figure 1 shows the total amount of handled goods in the ports of EU member states according to data published by Eurostat. The data shown for EU 28 includes the United Kingdom, while the data for EU 27 does not include the United Kingdom.

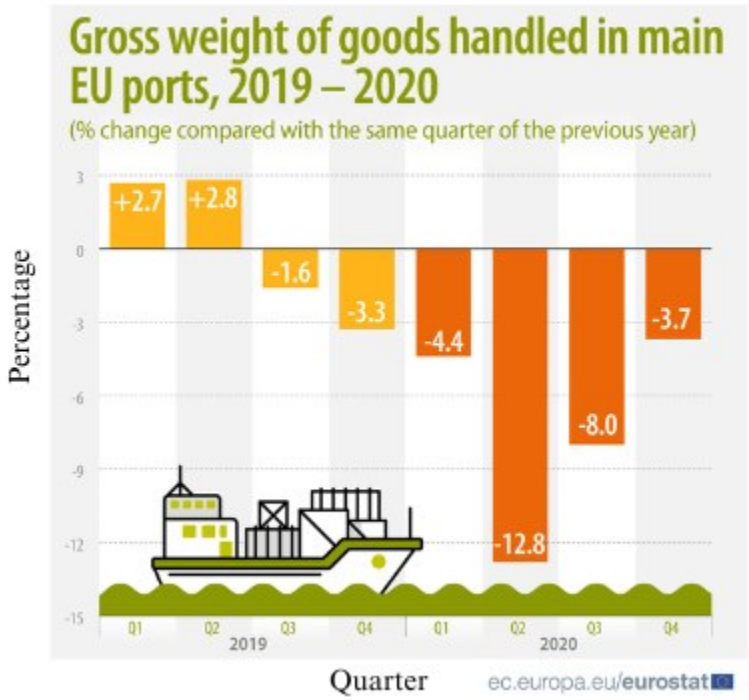
Figure 1. Gross weight of goods handled in all ports in the EU (thousand tonnes) [3]



Analysing the total quantity of goods handled in the ports of the European Union in the observed period from 2016 to 2022, it can be noticed that the least amount of goods was handled precisely in 2020 when the pandemic was at its peak, but this decline was also influenced in a certain way by the exit of Great Britain from the European Union. Thus, during 2020, slightly fewer goods were handled than in 2016, when the smallest amount of goods was handled over the observed seven-year period. The most significant amount of handling was in 2019 (3.6 billion tons), and this amount of handled goods was not reached even in 2022 when the market had already mainly recovered from the problems caused by the pandemic.

Figure 2 shows the number of handled goods in the ports of the European Union in 2019 and 2020 because, in those years, due to the declaration of the pandemic, the most significant drop in transport in seaports in the European Union was observed.

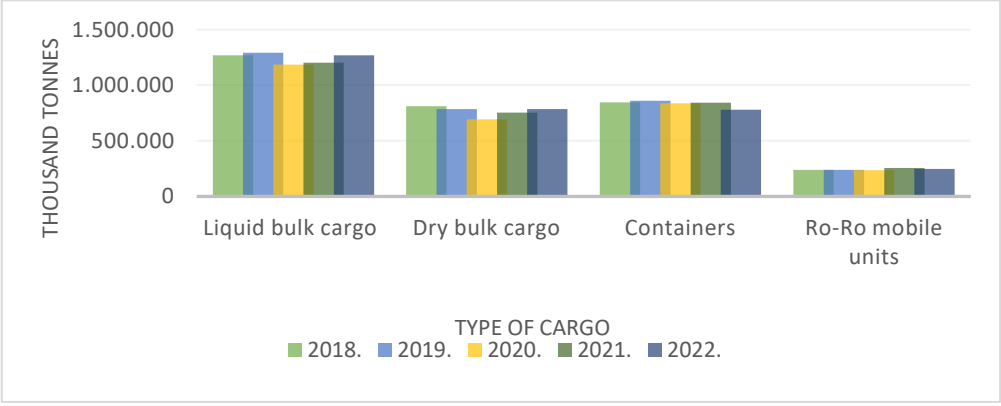
Figure 2. The gross weight of goods handled in main EU ports, 2019. – 2020. (% change compared with the same quarter of the previous year) [4]



When analysing only 2019 and 2020, it can be concluded that in 2020, 7% less goods were handled in the ports of the European Union than in 2019, which is a consequence of the pandemic, i.e. the restrictions established by the member states, but also the whole world. The last two quarters of 2019 and all four quarters of 2020 show a negative transport trend in seaports, especially comparing it with the quarters in the years before the pandemic. The second and third quarters of 2020 were particularly affected by the drop in port transport of 13% and 8%. The amount of goods handled in the main EU ports in 2020 decreased and was approximately the same as in 2015 [4].

In the main ports of the EU, which are considered to be those ports where more than 1 million tons of cargo are handled annually, liquid bulk cargo is mostly handled there. In addition to liquid bulk cargo, containers were handled in EU ports, followed by dry bulk cargo and Ro-Ro cargo. Figure 3 shows the amount of handled cargo by type from 2018 to 2022.

Figure 3. The gross weight of goods handled in main ports (27) by type of cargo (thousand tonnes) [5]

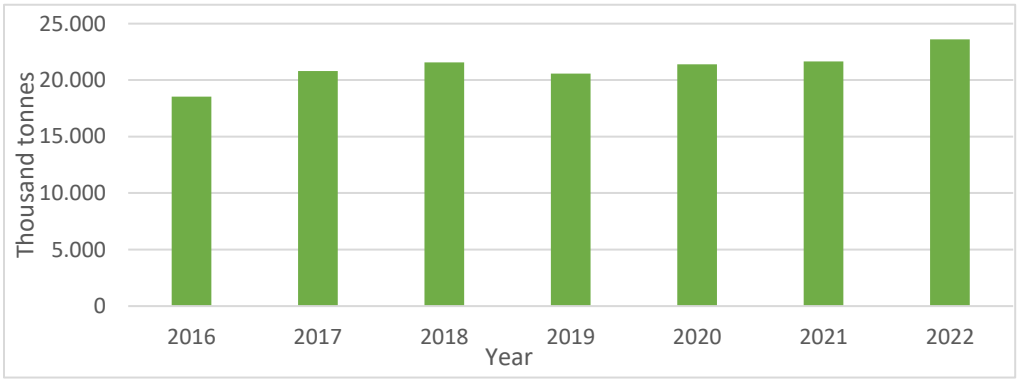


During the pandemic year 2020, container transport prices increased, but this did not cause reduced demand but led to an imbalance between supply and demand in the market [6].

Container transport did not change significantly in the observed period, except for 2022, when a drop of 7.4% was recorded. This decline is attributed mainly to the new geopolitical situation related to the Russian invasion of Ukraine in February 2022. After the beginning of the invasion, Europe introduced sanctions against the Russian Federation, and then the reduction of container transport in European ports began. In addition, during March, a wave of the COVID pandemic occurred again in China, which resulted in the suspension of work in the largest container port in the world, i.e. the port of Shanghai, which caused significant disruptions in the container market. High inflation is another impact on the decline in container transport [7].

At the same time, in the Republic of Croatia, an EU member, from 2016 to 2022, the number of handled goods did not change significantly. However, a certain decrease was recorded in 2019. Regardless of the pandemic, the amount of cargo handled in the ports gradually increased in the following years. Even this tiny growth means a lot for the Republic of Croatia as a small Mediterranean country. Figure 4 shows the total amount of goods handled in all ports in the Republic of Croatia from 2016 to 2022.

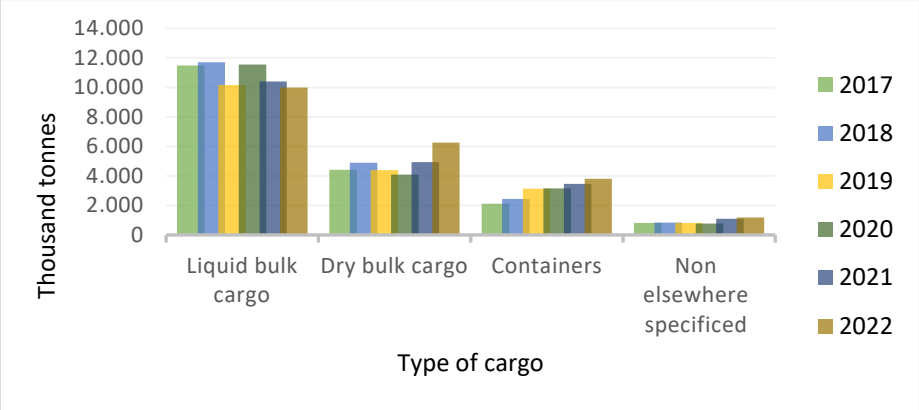
Figure 4. The gross weight of goods handled in all ports in the Republic of Croatia (thousand tonnes) [3]



In the Croatian ports, most goods were handled in 2022, i.e. after the COVID-19 pandemic, which is also the most considerable amount of handled goods in the seven-year observed period. In 2020, at the peak of the pandemic, when the least amount of goods were handled in the EU's main ports, more goods were handled in the ports of the Republic of Croatia than in 2019. Also, in the following two years, 2021 and 2022, there was an increase in the total amount of handled goods in ports in the Republic of Croatia, which was not the case at the level of ports in the EU.

In the main ports of the Republic of Croatia, liquefied bulk goods were handled, followed by dry bulk goods, containers and other cargo (not elsewhere specified), which is shown in figure 5.

Figure 5. The gross weight of goods handled in main ports, by type of cargo, in the Republic of Croatia (thousand tonnes) [5]



The main ports of the Republic of Croatia are considered to be those ports that have achieved a total annual turnover of goods greater than or equal to 1 million tons in the previous three years: Omišalj, Ploče, Rijeka, Bakar and Split [8].

From 2017 to 2022, liquid bulk goods were handled the most, followed by dry bulk goods, containers and other cargo (not elsewhere specified). When analysing 2019, the most significant drop was noticed in liquid cargo handling. A somewhat smaller drop occurred in handling dry bulk cargo while the handling of containers increased. In 2020, there was an increase in the handling of liquid cargo, while the handling of dry bulk cargo decreased, and the handling of containers remained at almost the same level as in 2019. In the years after the pandemic, in 2021 and 2022, the handling of all types of cargo grew, but the handling of liquid cargo had a negative trend.

After the analysis of the effectuated transport in seaports, it may be concluded that in the period after the pandemic, the transport in the main ports of the EU had a positive trend; however, the transport in 2022 was not yet at the level of the transport that was effectuated in 2019, the year when the period of crisis began due to the spread of disease. At the same time, transport, i.e. handling in seaports in the Republic of Croatia, recorded continuous growth except for less effectuated handling in 2019.

When analysing handling by cargo group in the main EU ports in the period from 2020 to 2022, there was recorded an increase in the handling of liquid and dry bulk cargo and a slight decrease in the handling of containers, while in the ports of the Republic of Croatia, a smaller amount of handling was effectuated in the same period, i.e. a decrease in handling of liquid cargo, and the growth of the handling dry bulk cargo and containers.

3 PLAN FOR THE RECOVERY OF MARITIME TRANSPORT AND SEAPORTS IN THE EU AFTER THE PANDEMIC OF COVID-19

According to the analysis of effectuated handling in the ports of the EU and the Republic of Croatia, it may be concluded that the COVID-19 pandemic had negative consequences on the development of maritime transport and handling in the seaports of the EU and the Republic of Croatia.

Therefore, during the pandemic, the European Commission adopted measures to facilitate or contribute to solving the pandemic's consequences on all segments of society and the economy. For this purpose, the EU developed instruments and strategies for developing the **Multiannual Financial Framework 2021 - 2027**, emphasising the European Green Deal and the Digital Transition. The **Multiannual Financial Framework** has further strengthened the *NextGeneration EU* (NGEU) recovery instruments, which the EU developed to address

the pandemic's socioeconomic consequences. The main goal of these strategies and instruments is to return the economy to the level before the pandemic and build resistance to possible future crises [9].

In the context of aid, it is in the interest of the European Union to enable and encourage faster and easier recovery in all member states and shape the future after the pandemic. To shape the future, the European Sea Ports Association (ESPO), in its report, emphasises that European ports are crucial, not only for maritime transport but also as hubs of energy, industry and economy that can significantly contribute to a sustainable, digital and resilient European economy within the framework of multimodal supply chains [10]. Thus, the EU adopted a temporary framework for state aid, and in this way, the member states can help their companies with aid according to the existing rules on state aid [11].

Together *with the multi-year financial framework, the NextGeneration EU* instrument constitutes an incentive package worth 800 billion euros and provides one of the most extensive financial assistance packages ever. The budget is distributed in such a way that 723.8 billion euros are designated for recovery and resilience, of which 338 billion are aids in the form of non-refundable assistance, and 385.8 billion are soft loans with low-interest rates, which is especially important for countries with a low credit rating [12].

Considering that the pandemic did not have an equal impact on the economy of each EU member, the members created their national recovery plans by reviewing and presenting the economy segments that were most affected by the pandemic, for which they needed higher financial support. The members submitted the national recovery and resilience plans for 2021 and 2022, where they thoroughly presented plans for the future through measures, reforms, and public investments up to 2026. In this way, the EU provided financial support to the states to mitigate the consequences of the pandemic while at the same time following the guidelines and interests of the EU in terms of priorities. The priorities highlighted by the EU are the following: stimulating growth, job creation, economic and social resilience, and green and digital transition. Accordingly, it was determined that 37% of the funds are intended for the area of climate and environmental sustainability, 20% for the digital transition, and the rest of the funds are intended for the specific needs of each member state according to the national recovery and resilience plans of each member state [13].

Member States submit draft recovery and resilience plans, and the European Commission discusses these plans with each Member State. After the Member States submit their final recovery plans, the Commission evaluates them and forwards them to the European Parliament and the Council. The Council evaluates and adopts the plans based on the Commission's proposal. Still, if there is a significant inconsistency in the plan, the Council can suspend the adoption of the plan or the payment. Inconsistencies may be related to the plan's criteria, such as EU recommendations to certain member states, contribution efficiency to the green and digital transition, job creation, growth potential, and economic and social resilience. After the plan is aligned with the criteria and the Council adopts the plan, financial resources are disbursed to the member states so that up to 13% of grants and 13% of loans are pre-financed. Member states are obliged to report to the Commission on progress twice a year within the framework of the European Semester, and the Commission regularly reports to the European Parliament and the Council on the implementation of the plans. Funds for recovery and resilience have been allocated until the end of 2023, and reforms and investments that member states have outlined in their national plans must be implemented by 2026 [14]. According to McEvoy [15], by 2 February 2024, only Hungary, Poland, Ireland, the Netherlands and Sweden of the 27 EU member states have not yet received payments.

The *NextGeneration* EU instrument is not directly intended for the recovery of maritime transport. Still, in national plans, guidelines related to digitisation, reduction of greenhouse gas emissions and sustainability can also be applied to maritime transport and seaports. Therefore, the Commission proposed that within the framework of national plans, plans related to maritime transport should be especially emphasised, such as the introduction of clean technologies and fuels, recognition of the potential of electricity, the transition of the maritime industry to alternative fuels, the decarbonisation of maritime transport, investments in the industry in terms of new ecologically designed vessels and the like with an emphasis on the sustainable and resilient recovery of the sector [16].

In addition to the recovery plans, the European Union finances the maritime sector through the CEF (Connecting Europe Facility) program. This instrument provides non-repayable financial resources to stimulate growth, jobs and competitiveness by investing in transport infrastructure, energy and telecommunications. The program aims to connect the mentioned infrastructure networks so that they are environmentally sustainable

and provide high performance, thus supporting the implementation of the European Green Deal. In addition to grants, this program provides innovative financial instruments such as guarantees and project bonds [17].

The program facilitates the connection and cross-border cooperation of public administrations, companies and citizens for member states, makes travelling easier and more sustainable, makes energy security better, and, at the same time, enables wider use of renewable energy sources. The priority of this program is the connection of three main sectors, transport, energy and digitalisation, to achieve stronger interconnection and optimisation and increase efficiency. The planned duration of the program is from 2021 to 2027 [18].

In the transport sector, the program aims to strengthen European transport infrastructure by financing the construction and/or renovation of existing transport infrastructure, emphasising the TEN-T (Trans-European Transport Network) network. By 2030, the basic transport network around nine main multimodal corridors should be completed. By 2050, the goal is to complete a comprehensive transport network and thus ensure the accessibility or connectivity of all European regions. The budget for the transport sector amounts to 25.81 billion euros, of which 1.5 billion is intended for maritime transport. The program covers the financing of 119 seaports located on the TEN-T corridors in 22 member states.[19] The development of maritime infrastructure in member countries is important for achieving competitiveness and a faster recovery of the economy after the crisis caused by the pandemic.

4 EUROPEAN GREEN DEAL

The European Green Deal is the EU's strategy to effectuate the vision of Europe as the first climate-neutral continent by 2050. The plan provides initiatives in the field of policies that seek to ensure a green transition while creating a modern and competitive economy with a fair and prosperous society in the EU territory. On the path to achieving these goals, it is necessary to protect people's health, protect the well-being of citizens from possible adverse effects on the environment, and preserve and increase the natural capital of the EU. Radical changes are needed in the entire society to achieve these goals; therefore, it is necessary to encourage the active participation of citizens and the public in general, as well as a sectoral approach, so that the policies brought by this green plan are accepted and successfully implemented [20]. This strategy thus contains strongly linked initiatives in climate and environment, energy, transport, industry, agriculture and sustainable financing [21].

The European Green Deal is one of the tools with which the EU seeks to ensure a way out of the crisis caused by the COVID-19 pandemic and also to provide a green future through sustainable investments. Thus, from the multi-year financial plan within the NGEU a third of €1.8 billion will be directed to investments in the European Green Deal [22].

4.1 Fit for 55% package

Among the initiatives covered by the European Green Deal, the initiative that connects the objectives of the European Green Deal with legislation is significant. The 'Fit for 55% package' brings together proposals for auditing and updating the EU legislative framework to ensure that EU policies are in line with climate goals, energy and transport, but also to launch new initiatives. The proposals in this initiative aim to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 [22,23].

The 'Fit for 55% package' contains several proposals of measures to achieve specific climate goals, and some of them are related to [23]:

- more energy-efficient buildings,
- transition from fossil fuels to gases from renewable sources and low-carbon gases,
- reform of the European emissions trading system,
- reduction of emissions from transport, buildings, agriculture and waste,
- achievement of climate goals in the forestry and land use sectors,

• achieving more energy efficiency,

• taxation of energy,

• reduction of methane emissions and

• increasing the use of green fuels in the aviation and maritime sectors.

The package should ensure that climate goals are transposed into law through EU legislation; this complex process requires mutual communication and understanding. The process begins with the European Commission proposing and presenting new regulations discussed in the Council and the European Parliament. Then, representatives of 27 member states exchange opinions and ideas about the proposals at technical discussions. The proposals adopted within this initiative are discussed in several Council structures related to the environment, energy, transport and economic and financial affairs. After an agreement has finally been reached between the ministers representing the member states, representatives of the Council, the Parliament and the Commission begin their trialogues at meetings. In the regular legislative process, they need to reach a compromise for the proposal to become a legal act that applies in all member states [24].

In some parts, this initiative is entirely or partially related to maritime transport. The proposals of the initiative related to maritime transport are as follows [11]:

• a proposal to include shipping emissions for the first time in the EU Emissions Trading System,

• a proposal to audit The alternative fuels infrastructure regulation (AFIR), which explicitly requires that ships have access to clean electricity when they are in major ports,

• proposal on using renewable and low-carbon fuels in maritime transport (*FuelEUMaritime*).

4.2 FuelEuMaritime

The initiative called '*FuelEUMaritime*' is part of the European Green Deal. As part of the 'Fit for 55% package', it aims to increase the demand for and consistent use of renewable fuels with low carbon content and reduce greenhouse gas emissions from the European maritime sector. The aim is to enable the EU to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 and to achieve climate neutrality by 2050 [25].

In this context, in July 2023, the Council adopted a proposal for using renewable and low-carbon fuels in maritime transport. Thus, this law will contribute to decarbonising the maritime sector [25]. The maritime sector relies on fossil fuels that pollute the air when burned, and at the EU level maritime transport has a share of 13.5% of greenhouse gas emissions compared to other branches of transport [26]. Therefore, with this law, the EU wanted to encourage using renewable and low-carbon fuels in this sector and reduce greenhouse gas emissions at the European level, especially from ships. In addition, it wants to ensure smooth maritime transport and avoid disruptions in the market. It also wants to ensure that maritime transport follows the climate goals for 2030 and 2050 and has its role in fulfilling the European climate law.

The key provisions adopted by the Council in this law are [25]:

• measures that will ensure a gradual reduction in the intensity of greenhouse gases in the fuels of the maritime sector, so by 2025, it is intended to be reduced by 2%, and by 2050 by 80%,

• aids regime for renewable fuels of non-biological origin (RFNBO) with high decarbonisation potential,

• exclusion of fossil fuels from the certification process (ships must use certified fuels),

• the obligation of passenger and container ships to supply electricity from land when they are in port in the main EU ports from 2030 aiming to reduce air pollution in ports that are close to densely populated areas,

• Revenue generated from fines related to violations of the Regulation on the *FuelEUMaritime* initiative will seek to be directed to projects that support the decarbonisation of maritime transport.

In support of this initiative, the Commission proposes to extend the EU emissions trading system to the maritime sector and to review the Energy Taxation Directive, which will require ships to use alternative fuels in order not to exceed the permitted amount of emissions (which was achieved in the emissions trading system). In addition to the Energy Taxation Directive, an additional tax will be paid on conventional fuels. In this way, it is also intended to speed up the transition to alternative fuels. Over the years, stricter rules will be imposed on these measures to achieve this initiative's ultimate goal [27].

The initiative is also supported by the International Maritime Organization (IMO), which adopted the *'Initial IMO Strategy on Reduction of Ghg Emissions From Ships'* in 2018. This strategy aims to reduce greenhouse gas emissions by 50% by 2050 compared to 2008. In this strategy, the IMO highlighted using alternative fuels for ships, such as ammonia and hydrogen, but all alternative fuels have advantages and disadvantages. Using these fuels does not negatively impact the environment, but there are controversies about the social and safety aspects. In addition, significant capital investments are required to install new engines powered by these fuels. Furthermore, the amount of alternative fuels on the market is currently limited and, therefore, cannot contribute to decarbonising maritime transport in the long term [27].

5 NATIONAL RECOVERY PLAN OF THE REPUBLIC OF CROATIA AFTER THE COVID-19 PANDEMIC

As a member of the European Union, the Republic of Croatia created its recovery plan for social and economic needs, highlighting reforms and planned investments from 2021 to 2026 to maximise available financial resources.

The Republic of Croatia's National Recovery and Resilience Plan (NRRP) was created to follow national strategic development documents and European priorities aimed at digital and green transition. The defined measures and activities in the plan will contribute to increasing the number of jobs and the productivity and competitiveness of the Croatian economy. Under the EU guidelines related to the areas and amount of disbursement of financial resources, the National Recovery and Resilience Plan (NRRP) includes five components and one initiative:

- economy,
- public procurement, judiciary and state property,
- education, science and research,
- labour market and social protection,
- healthcare and
- an initiative related to the renovation of buildings.

In July 2021, the EU accepted the National Recovery and Resilience Plan (NRRP) and, after implementing decisions, began disbursements so that work on recovery from the pandemic could start as soon as possible. With its National Recovery and Resilience Plan, Croatia secured almost EUR 9.9 billion from European financial resources, of which EUR 6.3 billion were non-refundable funds and EUR 3.6 billion were loans. Based on the National Recovery Plan, EUR 818 million in pre-financing was paid to the Republic of Croatia in September 2021, and EUR 700 million each in June and December 2022. In November 2023, Croatia received the third payment of non-refundable funds of EUR 700 million, and based on the modified recovery plan, EUR 585.1 million of REPowerEU pre-financing was paid in January 2024 [28].

The National Recovery and Resilience Plan 2021 - 2026 covers many plans related to maritime transport. One plan is to develop a competitive, energy-sustainable and efficient transport system. To achieve this plan, reforms that have already begun during the adoption of the National Recovery and Resilience Plan are necessary; they aim to develop sustainable and efficient maritime transport that will increase navigation safety, improve the connectivity of the islands and improve the port infrastructure to reduce negative impacts on the environment. National Recovery and Resilience Plan, as part of the maritime reform, envisages adopting a new

Maritime Domain and Sea Ports Act [29] to reorganise the structure of the port system in ports open to public transport, rationalising management costs, prescribing criteria for sustainable waste management and management of communal berths. In addition to this law, as part of the maritime reform, adopting the *Act on Liner Shipping and Seasonal Coastal Maritime Transport* [30] is planned to perform public coastal maritime transport activities more efficiently. Within the National Recovery and Resilience Plan, the implementation of this reform was scheduled for the period from the first quarter of 2021 to the fourth quarter of 2022. Accordingly, the *Act on Liner Shipping and Seasonal Coastal Maritime Transport* was adopted in February 2022, while the *Maritime Domain and Sea Ports Act* was adopted in July 2023. The holder of the implementation of the maritime reform is the Ministry of the Sea, Transport and Infrastructure to help stakeholders in the port system, shippers and the general population with an estimated cost of 54.365.369,04 euros [31].

Furthermore, the National Recovery Plan envisages the modernisation of ports open to public transport to replace and upgrade outdated, insufficient and environmentally unacceptable port infrastructures. Accordingly, the aim is to increase the quality of public maritime transport, especially for the island population, increase passenger safety, increase mobility and improve the general quality of life. In addition, they are followed by green and digital guidelines. Thus, by introducing innovations in transport technology and increasing the number of vessels that use energy sources that are environmentally acceptable and by encouraging the construction of vessels on alternative fuels, we want to support the European Green Deal in the sense of reducing harmful greenhouse gas emissions by 50% by 2050.

The projects included in the National Recovery and Resilience Plan from 2021 to 2026, which aim to modernise the port infrastructure, are as follows:

- New passenger terminal in the City Port Basin Split - the project envisages reconstructing the existing port facilities and constructing a new International Passenger Terminal building. The Port Authority Split and the new *Schengen* border crossing will be placed there. The project aims to improve the flow of passengers and vehicles and thereby shorten the waiting time, which would positively impact environmental protection and the fight against climate change, and create prerequisites for increasing security in the Port of Split, expanding the capacity and improving the safety and quality of the Port of Split's domestic and international passenger transport. The value of the project was estimated at 6.798.352,64 euros [31].
- Extension of the port of Bol - Brač - the project anticipates two phases of work. The first phase includes the construction of primary and secondary breakwaters with a plateau and associated berths, the construction of jetties from pontoon modular units, the removal of part of the existing jetty, the reconstruction of the existing coast and the increase of the depth of the sea in the water area. The second phase of the works includes the improvement and extension of the main breakwater of the port of Bol, the arrangement and upgrading of the petrol station pier and the arrangement of the coastal line from the pier, the reconstruction of the existing coastal wall from the beach to the central pier and the arrangement of the coastal line from the main breakwater to the new promenade. The works include the construction of the entire external water supply and hydrant network, rainwater drainage, external lighting, electrical installation, and relocation of fuel installations and fuel devices. The value of both phases of the works was estimated at a total of 11.044.836,75 euros [31].

Both projects comply with the regulations of the European Parliament on establishing a framework for sustainable investments. It is thus ensured that the projects contribute to the environmental goals, which are the following: mitigation of climate change, adaptation to climate change, sustainable use and protection of water and marine resources, transition to a circular economy, prevention and control of pollution, protection and restoration of biodiversity and ecosystems [31].

In addition to these investments, there are also planned investments in nautical tourism, focusing on waste disposal in ports, investment in salinizers, water purification devices, and the like, as well as investments in green and digital transition [31].

In the Republic of Croatia, the CEF (Connecting Europe Facility) program finances numerous projects in maritime transport and seaports as transport hubs, with 35 projects contracted so far. The Republic of Croatia has EUR 225.4 million of non-refundable funds from this program, and the total eligible project costs amount to EUR 291.4 million. Reconstruction, extension, arrangement, improvement and construction of new

infrastructural facilities are financed as projects. Among the projects, the following can be highlighted: infrastructure improvement project in the Port of Rijeka, development of a multimodal platform in the Port of Rijeka and connection to the Adriatic Gate Container Terminal, sustainable LNG business for ports and shipping, deepening of the southern connection at the Brajdica container terminal, design of a new multi-purpose terminal at Prague Pier in Rijeka and others [32].

6 CONCLUSIONS

The emergence of the COVID-19 pandemic in 2019 affected the entire world and caused one of the biggest global crises in recent times. It created many disruptions affecting almost all aspects of human life, from health to social and economic issues. Implementing movement restrictions and other restrictions to prevent the spread of the disease caused adverse consequences for maritime transport and transport in seaports. In 2020, when the pandemic in Europe peaked, Europe's main ports had already noticed the smallest amount of handled cargo. However, the quantities of handled goods increased over time; by 2022, when the pandemic ended, the results of the handled amount of goods in 2019 were not reached. The reason for this is new crises related to the Russian-Ukrainian war, inflation and disruptions in the market due to the reappearance of COVID-19 in China.

As hubs of logistics and supply chains, Seaports resisted the negative impacts and continuously supplied the market in changed circumstances. However, the consequences of the pandemic were reflected in the total amount of cargo handled in 2019 and the years after the pandemic. The European Union has contributed to the faster recovery of maritime transport and transport in seaports through its recovery and resilience plans, which aim to mitigate the consequences of the pandemic and, help the European economy and indirectly achieve goals related to decarbonisation and climate neutrality. The recovery plans are based on two financial instruments: the *Multiannual Financial Framework* and *NextGeneration EU*. Together, they form one of the most extensive financial assistance packages the European Union has provided its members. In addition to faster recovery from the pandemic, these instruments aim to build resistance to possible crises in the future., The member states had to submit their national recovery plans to the European Commission to exercise the right to financial assistance. In the recovery plans mentioned above, the member states had to highlight their plans for recovery from the pandemic and plans related to a sustainable, digital, and green future. In this way, the EU tries to provide aid in an even way because the pandemic did not affect every member state similarly.

The Republic of Croatia, as a member of the EU, also adopted its National Recovery and Resilience Plan (NRRP), which outlined its plans. From the acceptance of the recovery plan until today, Croatia has received three grant payments and two pre-financing payments, one of which was paid based on the modified recovery plan. With this, the Republic of Croatia shows that it is ready to invest in recovery from the pandemic and follow EU guidelines on the way to a green and digital transition. In the context of seaports, it is planned to invest in a more significant number of ports in the Republic of Croatia. In addition to the NRRP, investments are also made through the CEF program, which emphasises the importance of transport connections within the Republic of Croatia and cooperation between countries, that is, at the international level. Investments in the area of the port of Rijeka, which is one of the most economically important seaports in the Republic of Croatia, are particularly highlighted in this program.

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