

TRANSPORT AND LOGISTICS SECURITY: IMPLEMENTATION OF EU AND US RIGHTS

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Abstract: Ukraine has the highest transit rating in Europe, which determines the importance of transport security issues for Ukraine. In the context of European integration and the creation of a common transport market, the issues of ensuring the implementation of EU law are particularly relevant. The article aims to analyze the processes of implementation of EU law on transport security in Ukraine. The research methodology is based on a qualitative content analysis of the implemented EU legal framework on transport security in Ukraine in 2015-2022. The results indicate that only 52% of the tasks set for the implementation of EU law in the field of transport and transport infrastructure were fully implemented on time. At the same time, 48% of the tasks are being implemented with a delay. The implementation of the law to ensure transport security takes place in the following modes of transport: road, rail, sea, aviation, inland waterway, in general in the transport sector. The greatest degree of regulatory approximation has taken place in road and maritime transport. In general, in the transport sector, the implementation of the law provided for the identification at the strategic level of the main problems in the field of safety in the context of transport means. At the national level, the key tasks and expected indicators of their achievement to improve the level of safety are also identified. The article suggests directions in the context of the implementation of the law to promote a higher level of transport safety. It is determined that the key tasks for solving the problems of transport security in Ukraine are: improvement of the state system of transport security management under international standards and strengthening the institutional capacity of executive authorities; bringing in line the regulatory legal acts in the field of security following EU regulations and directives regarding the requirements for the safe operation of infrastructure and rolling stock.

Keywords: transport security, harmonization of Ukrainian legislation, European integration of the transport sector, EU law in the transport system.

1 Introduction

Ensuring transport safety is one of the urgent tasks of the state transport policy. The situation is aggravated by the lack of a well-established system of transport safety, insufficient effectiveness of the tasks and functions assigned to it, and a decrease in the level of scientific and technical support for these activities. This is facilitated by the complexity and unexplored nature and peculiarities of social relations that arise between different categories of participants in social relations in the process of functioning of various modes of transport. Ensuring transport safety is associated with new challenges and threats. They are caused by the use of new types of weapons and technological features that appear in the process of operation of various modes of transport, the technical component related to the development of transport, and control means used to counter various offenses in transport. The European Union's strategy for the development of the transport sector is focused primarily on the internal needs of European countries. It consists in creating the best conditions for the functioning of the single European market through the formation of a multimodal Trans-European Transport Network (TEN-T). For the benefit of all citizens, the economy, and society, it is necessary to make the European

transport system resource and cost-effective, financially sustainable, and unconditionally safe.

Integration of Ukraine into international transport systems allows for improving the economic, technical, investment, and operational state of the transport industry. And this is a direct way to cooperate with other countries and join the international community of transport and road complex. Given the need for integration into the European and world community, Ukraine is doomed to pay close attention to transport security issues. In addition, it should be noted that Ukraine has the highest transit rating in Europe. Accordingly, it can receive significant profits from the transit and other types of transport services, provided that a reliable transport security system is built. This also determines the importance of transport security issues for Ukraine. The issue of transport security is of particular importance for Ukraine. First of all, it can be connected with the size of the territory and geopolitical location of our country, with the political and socio-economic courses aimed at further strengthening sovereignty.

The article aims to analyze the processes of EU law implementation on transport security in Ukraine.

2 Literature review

Taking into account the need to integrate Ukraine's transport security into the European security system, in particular, the works of Hens et al. (2019), Savych & Shkoda (2020), Papadimitriou et al. (2020), Kraciuk, Kacperska, Łukasiewicz & Pietrzak (2022), Peleckienė et al. (2022), Formela, Weintrit & Neumann (2019), Olszewski et al. (2019), Finger, Montero-Pascual & Serafimova (2019). Separate issues considered in the scientific works of various authors relate to the definition of the main directions of Ukrainian transport security integration into the European security system (Walker & Strathie, 2016; Bolobonov, et al. 2021; Wang 2019; Friman, Lättman & Olsson 2020; Read, Naweed & Salmon 2019; Janušová & Čičmancová 2016). Papadimitriou et al. (2020) note that the literature investigates safety issues for each transport means, i.e. there is no comprehensive research on transport safety issues. There are also limited studies of maritime and rail transport safety. The studies do not fully reflect the state of implementation of EU law on transport security in Ukraine. This has led to the accumulation of a set of problems of regulatory, financial, logistical, social, informational, scientific, and technical nature.

In the research of Hens et al. (2019), the authors prove that all transport programs and projects should be based on the following interrelated principles: transport planning and localization of production and consumption; transition to environmentally efficient transport; improvement of technology and fuel. The authors suggest taking into account the principles of environmentally friendly transport in the criteria of economic efficiency in transport. Hens (2019) also formulated strategies for reorienting the transport industry of Ukraine to resource-saving approaches in the context of improving transport safety and introducing new technologies. Savych & Shkoda (2020) note that in the context of COVID-19, the trends of improving aviation security and compliance with international standards are becoming increasingly important for both airlines and public authorities in the development of relevant public policies. The article by Papadimitriou et al. (2020) synthesizes the key aspects of automation safety in different transport sectors and presents an assessment of their transferability across sectors. Peleckienė et al. (2022) identify that the economic growth of EU countries has been accompanied by an increase in motorization and fatalities in recent decades in terms of vehicle inventory and road traffic accidents. Ukraine's European integration has been characterized by similar trends, in particular an increasing number of motor vehicles and accidents. Ferdman (2021a) notes that the problems of transport safety in Ukraine have become even more acute in recent years, as transport has become one of

the riskiest areas of life, in which, unfortunately, people die regularly. Ensuring transport safety is to guarantee the right of a person to safety in a broad sense (protection of life, health, and constitutional rights of citizens in general). The priority in this area is to prevent real and potential threats of transport accidents and disasters and their consequences. Transport safety is a component of national security and consists in preventing accidents and incidents in transport (Ferdman, 2021b). Ensuring transport safety should be understood as a social process of activities of relevant subjects of social relations to prevent accidents and incidents in transport (Ferdman, 2020). Transport safety is a multilevel phenomenon that is considered through the prism of classification depending on the scope of application. In particular, transport security as a system of security in the geopolitical space is characterized by a poly structure and is provided at the following levels: international, state, regional, sectoral and personal. Transport security is aimed at protection. Protection of passengers, owners, consignees, and carriers of goods as persons who directly consume or create a transport product; owners of vehicles and persons who charter them; the transport complex, including infrastructure and employees; the economic state of the country, including budgets of all levels; the ecological state of the environment (Ivanii, 2020).

3 Methodology

The research methodology is based on a qualitative content analysis of the implemented EU legal framework on transport security in Ukraine in 2015-2022. The content analysis included an assessment of the dynamics of the implemented legal acts in the road, maritime, inland waterway, and railway transport of Ukraine and the transport system of Ukraine in general. The analysis of the state of implementation of EU law in the field of transport security included an assessment of the implementation of tasks by the indicator 0 - 100% implementation and by the criteria: implemented on schedule, overdue, at risk, not estimated (Pulse Ugody, 2022).

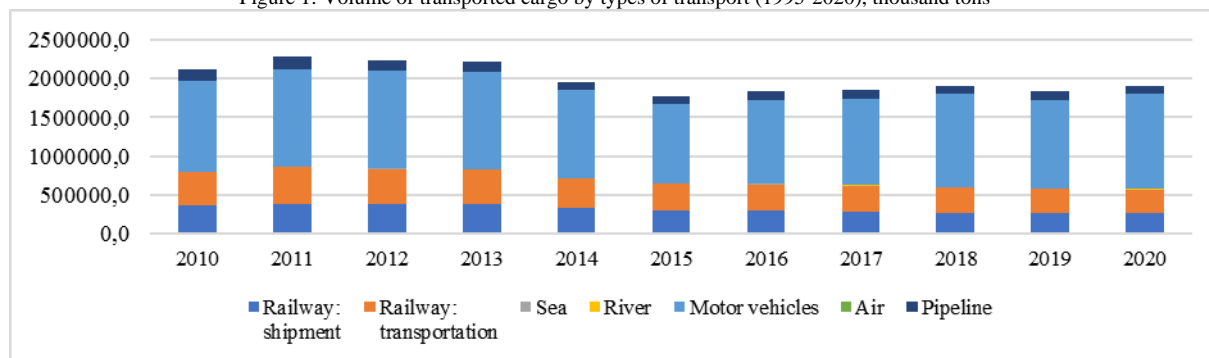
4 Results

According to the Communication of the European Commission "EU and Neighboring Regions: a renewed approach to transport cooperation" of 2011, the main directions of EU-Ukraine cooperation are defined. In particular, in the area of transport development, it is planned to liberalize transport, in the long term - to include Ukraine in the "Blue Belt" of free shipping in Europe and within the European borders, which means gradual approximation to the European common market. Within the framework of cooperation in Ukraine, it is also envisaged to create an effective sustainable transport system (Ministry of Infrastructure of Ukraine, 2022). Accordingly, the creation of a common transport market involves strengthening the level of transport security.

In 2013 Regulation (EU) 1315/2013 of the European Parliament and of the Council of 11 December 2013 on the Union Guidelines for the development of the Trans-European Transport Network was adopted. In Luxembourg on 09.10.2013 the joint declaration "Future cooperation in the field of transport in the framework of the Eastern Partnership" was adopted, which approved the maps of the transport regional network of the Eastern Partnership (hereinafter - the EaP), which demonstrates the connection of the EaP countries among themselves and with the EU Member States. Since January 2014, the updated TEN-T guidelines have been approved, which define that the "core" network will be developed based on the identified 9 multimodal corridors.

Among the main priorities of cooperation within the framework of the EaP are the development of integrated transport corridors, the elimination of bottlenecks in the transport network to optimize the connection with the TEN-T network, and the preparation of infrastructure projects for transport development. The above priorities of cooperation between Ukraine and the EU provide for the implementation of EU law on transport security in Ukraine. As shown in Figures 1-2, the volume of freight transported in Ukraine in 2010-2020 decreased by 9%, and passengers - by 85%, in particular, due to the growth in the number of motor vehicles. This means an increase in the level of human factors in ensuring transport safety, and, accordingly, the need to revise its legislative regulation.

Figure 1: Volume of transported cargo by types of transport (1995-2020), thousand tons



Source: State Statistics Committee of Ukraine (2022a).

In 2015, Ukraine started the process of approximation of legislation in the transport sector to the EU legal framework, in particular in the field of transport security. In Ukraine, the Ministry of Infrastructure of Ukraine and the Verkhovna Rada Committee on Transport and Infrastructure is responsible for the implementation of the tasks of approximation of Ukrainian legislation to EU law in the field of transport, transport infrastructure, postal, and courier services. Overall, in 2015-2022 in this area, in particular, the implementation of legislation on ensuring transport security in the following means of transport: road, rail, sea, aviation, inland waterway, in general in the transport sector. The overall progress in the implementation of all tasks in this direction for the period 01.11.2014 - 31.10.2024 was 52% (Figure 3).

Table 1 demonstrates the legal acts on ensuring the

implementation of the EU law on transport security in Ukraine in general in the transport sector. Legislative changes implemented in 2015 concern ensuring the European level of safety in the transportation of dangerous goods by road, rail and river transport.

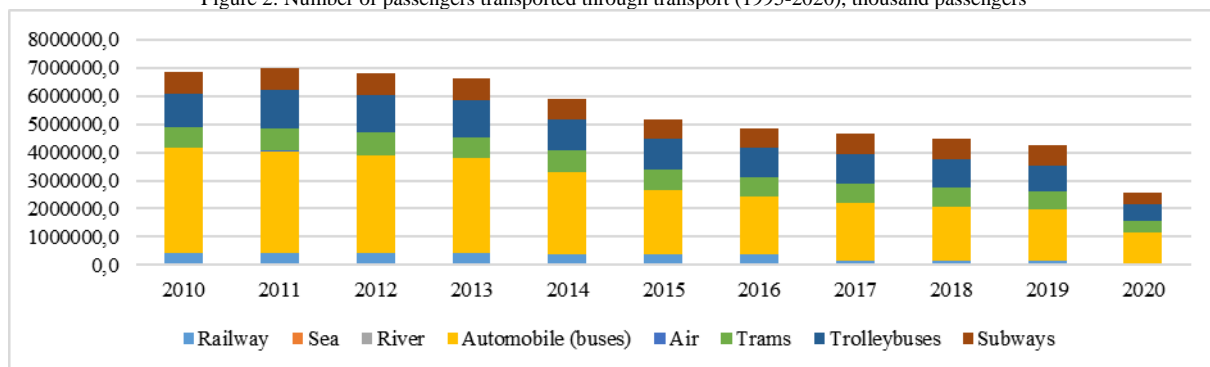
In 2015, the regulatory framework for ensuring the European level of safety in the transportation of dangerous goods by road, rail, and river transport was also developed. This regulatory framework concerned:

- 1) development, and approval by the Ministry of Justice of the rules for the transportation of dangerous goods by inland waterways of Ukraine;
- 2) development, issuance, and registration with the Ministry of Justice of a regulatory act on amendments to the Rules of Safety and Procedure for Elimination of Consequences

- of Accidents with Dangerous Goods during their Transportation by Rail;
- 3) approval of the procedure for inspection of tanks for the transportation of dangerous goods;
- 4) development and approval of a regulatory legal act on amendments to the Rules for the carriage of liquid bulk cargoes;
- 5) approval of the regulatory legal act on amendments to the Rules for the Transportation of Dangerous Goods;

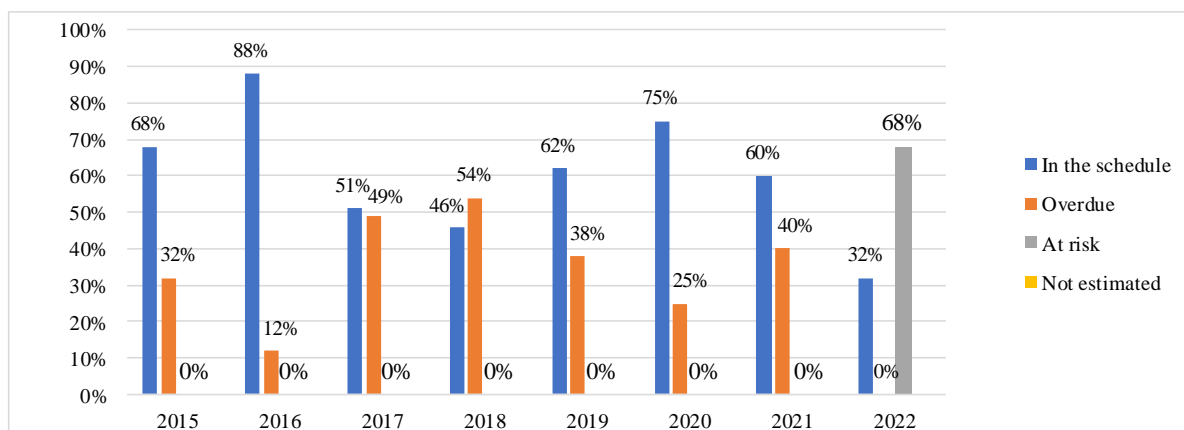
- 6) development and registration of a regulatory legal act on amendments to regulatory legal acts in the field of special training of employees of entities involved in the transportation of dangerous goods by rail and river transport regarding the establishment of requirements for authorized persons on safety and other participants in the transport process.

Figure 2: Number of passengers transported through transport (1995-2020), thousand passengers



Source: State Statistics Committee of Ukraine (2022b).

Figure 3: Progress in the implementation of EU law on transport security in Ukraine in 2015-2022



Source: compiled by the author based on the data from Pulse Ugody (2022).

In 2016, cooperation within the framework of the Eastern Partnership Transport Panel was partially established to develop the EaP regional transport network connected to the TEN-T

network. Within the framework of cooperation, joint activities and projects with the EU Party were identified and elaborated, but their implementation is overdue (Tab. 1).

Tab. 1: Implementation of EU law on transport security in Ukraine

cars	Legislative amendments	
015	Amendments to the legislation of Ukraine to ensure the European level of safety in the transportation of dangerous goods by road, rail, and river transport – 60%	Development of a regulatory framework to ensure the European level of safety in the transportation of dangerous goods by road, rail, and river transport – 100%
016	Cooperation within the framework of the Eastern Partnership Transport Panel for the development of the EaP regional transport network combined with the TEN-T network – 70%	–
017	–	–
018	Development and approval of the national transport strategy – 100%	–

Source: compiled by the author based on the data from Pulse Ugody (2022).

In 2018, the National Transport Strategy was developed and approved (Verkhovna Rada of Ukraine, 2022). The draft action plan for the implementation of the strategy was developed and approved by the CMU in cooperation with EU experts, for which the Ministry of Infrastructure is responsible. The National Transport Strategy of Ukraine for the period up to 2030 is a

systemic program document that defines goals and objectives for the development of the transport sector and takes into account integration with the European transport system (Order of the Cabinet of Ministers of Ukraine of 30.05.2018 No. 430-r). Among its priorities are safe for society, environmentally friendly, and energy efficient transport. Measures are envisaged

to improve public administration of transport safety under international standards and strengthen the institutional capacity of executive authorities that directly or indirectly regulate the transport services market and measures of state supervision (control) over transport safety. Transport is becoming more energy efficient and "green", safe for passengers, customers, and the environment. Speeds and efficiency of vehicles are increasing. The level of transport safety is increasing. The level of road safety is being improved, the level of safety of air transportation is being improved, the level of safety of rail transportation is being improved, the level of safety of shipping is being improved, the level of environmental safety in transport is being improved, etc.

However, at the moment, the program is declarative, and the situation of both legislation in the field of transport security in particular and security in Ukraine as a whole, in comparison with the developed countries of the world, is unsatisfactory. After all, today the country has no law on transport security, or transport security strategy, which are extremely necessary. Their adoption would indicate the emergence of transport security as an independent legal institution.

In 2017-2018, the State Program for Improving Road Safety in

Ukraine was developed. The Cabinet of Ministers of Ukraine approved the National Transport Strategy of Ukraine for the period up to 2030. Its goal is to develop safe, environmentally friendly, and energy-efficient transport. In addition, the Strategy for improving road safety for the period up to 2020 was approved. Its goal is to reduce the level of accidents and the severity of the consequences of road accidents in Ukraine, as well as to create safe and comfortable conditions for vehicles, pedestrians, and other road users on the road network.

The following legislative amendments in the field of transport security were implemented in the road transport sector (Table 2).

In 2015, the installation and use of speed-limiting devices on vehicles in the field of international freight transportation were ensured.

In 2016, the Strategy and Program for Improving Road Safety were developed.

Tab. 2: Implementation of EU law on transport security in Ukraine in the transport sector

Year	Legislative amendments			
2015	Ensuring the installation and use of speed-limiting devices on vehicles in the field of international freight transportation – 50%			
2016	Development of the Strategy and Program for improving the level of road safety – 100%			
2017	Development of a regulatory framework for the system of checking the technical condition of wheeled vehicles for roadworthiness – 20%	Development of a regulatory framework to ensure the issuance of a single standard driver's license that meets European requirements and increase its protection against counterfeiting – 80%	Bringing the minimum age requirements for admission to driving certain categories of vehicles in line with the EU legislation – 70%	Improvement of the legal framework for the introduction of European requirements for physical and mental suitability to drive vehicles – 40%

Source: compiled by the author based on the data from Pulse Ugody (2022)

In 2017, the regulatory framework for the system of checking the technical condition of wheeled vehicles for their suitability for the operation was developed. In 2017, the regulatory framework was also developed to ensure the issuance of a unified standard driver's license that meets European requirements and increase the level of its protection against counterfeiting. In 2017, the requirements for the minimum age for admission to driving certain categories of vehicles were partially brought in line with the provisions of EU legislation. In road transport, the regulatory framework for the introduction of European requirements for

physical and mental aptitude to drive vehicles was also improved.

In inland waterway transport, legislative changes in the field of transport security were introduced in 2017-2018. In 2017, the European level of safety in the transportation of dangerous goods by river transport for national transportation was fully ensured. In 2018, the legislation of Ukraine establishing technical requirements for vessels on inland waterways was completely amended (Tab. 3).

Tab. 3: Implementation of EU law on transport security of Ukraine in maritime transport

Years	Legislative amendments		
2017	Amendments to the legislation of Ukraine on strengthening the security of ships and port facilities, as well as conducting appropriate training of personnel – 0%		
2018	Amendments to the legislation of Ukraine regarding the obligations of the shipowner to maintain the safety management system of the shipping company and ships, as well as responsibility for administrative offenses in this area and training of personnel for the control of shipping companies by the flag state – 100%		
2019	Amendments to the legislation on general rules and standards for organizations for inspection and survey of ships and audit of the national classification society on the implementation of such activities – 80%	Amendments to the legislation of Ukraine on the requirements and procedures for safe loading and unloading of bulk carriers – 70%	Amendments to the legislation of Ukraine and implementation of organizational measures for the functioning of the national system for the exchange of information on maritime transport (SafeSeaNet) – 0%
2020	Creation of an information system for monitoring the surface situation and movement of ships, including the introduction of appropriate amendments to the legislation of Ukraine – 100%		

Source: compiled by the author based on the data from Pulse Ugody (2022)

In 2022, the railway sector fully implemented a railway safety management system, for which the Ministry of Infrastructure of Ukraine is responsible. In particular, methodological

recommendations for the implementation of safety management systems in railway transport have been developed and approved.

5 Discussion

The level of transport safety, energy consumption, and environmental impact in Ukraine do not meet modern requirements. In recent decades, the world has seen a rapid increase in the number of vehicles and traffic intensity, which leads to an increase in the number of transport accidents and their negative consequences.

During the period from 2011 to 2016, 26.7 thousand people died in road accidents in Ukraine, 43.7 percent of them were pedestrians and cyclists. According to the World Bank estimates, annual losses as a result of road accidents in Ukraine amount to about 4-5 billion US dollars. Thus, in 2016, almost 3.4 thousand people died on Ukrainian roads, and 33.6 thousand were injured.

90-95 percent of pollutant emissions into the air of cities, in crowded places, are caused by road transport. The EU transport policy has set the task to halve the use of cars on traditional fuels in cities by 2030 and to completely abandon them by 2050.

Fulfillment of obligations under the conventions of the International Maritime Organization, the Convention on the protection of biological diversity, ratified by the Law of Ukraine No. 257/94-BP dated November 29, 1994, and the United Nations Convention to combat desertification in countries suffering from serious drought and/or desertification, particularly in Africa, to which Ukraine acceded under the Law of Ukraine No. 61-IV dated July 4, 2002. No. 61-IV is compulsory. It requires the use of technologies that minimize the impact on wildlife and land, contributes to the conservation of marine biodiversity, and take into account the need for environmental protection, conservation of land, water bodies, and biodiversity during the development of transport infrastructure.

In the field of transport security in Ukraine there are general problems that need to be solved, in particular, the most important ones:

- high level of mortality and injuries as a result of road accidents;
- a significant part of vehicles operated by Ukrainian carriers are outdated, inefficient, and have a significant negative impact on the environment;
- the imperfection of the legal mechanism and regulatory framework and state supervision (control) in the field of transport safety;
- the imperfection of the transport safety management system and the lack of a single coordinating body for road safety management, which is the reason for the lack of an integrated system of state management of road safety;
- insufficiently clear division of functions and powers, as well as low level of coordination of actions and institutional capacity of state authorities and local self-government bodies to plan and implement actions in the field of road safety;
- imperfect systems for monitoring road accidents, their statistics, and risk management;
- ineffective approach to solving the problem of high accident rates and the severity of its consequences and creating a scientific basis for road safety activities;
- lack of specific measurable targets to improve road safety and a coordinated action plan in this area;
- unsatisfactory technical condition of a significant number of vehicles and the lack of a system for monitoring the safety of vehicles during their operation;
- low level of introduction and practical application of the latest technologies and technical means of traffic organization, automated means of traffic control and regulation;
- insufficient funding for measures aimed at preventing and reducing the level of accidents, reducing the number of road accidents with serious consequences;
- ineffective system of notification of road accidents and emergency assistance to victims of road accidents

(unsatisfactory state of premedical care in the first hour after the accident);

- low level of driver training and lack of effective control over the activities of driving schools;
- low level of public education in the field of road safety, personal responsibility, and compliance with traffic rules;
- low level of control in the field of transport safety, in particular in terms of environmental protection, avoidance of responsibility for violation of the legislation of Ukraine on environmental protection, and low culture of the population regarding environmental protection measures;
- lack of incentives for the use of alternative energy sources at transport infrastructure facilities.
- The key tasks for solving the problems of transport security in Ukraine should be considered as follows
- improvement of the state transport safety management system following international standards and strengthening the institutional capacity of executive authorities that directly or indirectly regulate the transport services market and measures of state supervision (control) over transport safety;
- adjustment of regulatory legal acts in the field of security under EU regulations and directives regarding the requirements for the safe operation of infrastructure and rolling stock.

Improving the level of transport safety involves ensuring the implementation of EU legislation in the field of transportation of dangerous goods, including taking into account the principles of multimodality.

Improving road safety involves the implementation of a road safety improvement program. Increasing the level of air transportation safety requires:

- 1) regulation at the legislative level of the issue of control over the ornithological situation at Ukrainian airports, taking into account ICAO standards and recommended practices;
- 2) implementation of ICAO standards and recommended practices and the World Customs Organization's SAFE Framework of standards to secure and facilitate global trade.

Improving the level of safety of railway transportation requires:

- 1) introduction of state safety certification procedures for railway enterprises;
- 2) establishment of a body for investigation of transport accidents on railway transport.

To improve the level of shipping safety it is advisable to:

- 1) reform the system of state supervision (control) over the safety of navigation of smaller/small vessels;
- 2) create a national segment of the system of information exchange on the movement of vessels and the activities of economic entities in the field of maritime navigation;
- 3) introduce joint procedures with the EU for ensuring the safety of navigation, monitoring of maritime traffic, maritime assistance, maritime communication, response to pollution from ships, and the creation of a national segment of the SafeSeaNet information exchange system on ship traffic and accidents;
- 4) legislatively separate the functions of ensuring the safety of navigation, state supervision, and provision of administrative support by the services of seaport captains.

6 Conclusion

Only 52% of the tasks set for the implementation of EU law in the field of transport and transport infrastructure were fully implemented on time. At the same time, 48% of the tasks are being implemented with a delay. The implementation of the law to ensure transport security takes place in the following means of transport: road, rail, sea, aviation, inland waterway, in general in

the transport sector. The most significant regulatory approximation took place in road and maritime means of transport. In general, in the transport sector, the implementation of the law provided for the identification at the strategic level of the main problems in the field of security in the context of transport means. At the national level, key tasks and expected indicators of their achievement to improve the level of safety have also been identified. The article suggests directions in the context of the implementation of the law to promote a higher level of transport safety.

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Primary Paper Section: A

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