

The influence of the powers of executive authorities in the EU transport sector on environmental safety (on the example of some EU countries with the lowest number of transport accidents and incidents)

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Abstract. Transport accidents and incidents are closely related to environmental safety. Ukraine became a candidate for EU membership. In addition, Ukrainian legislation must be reformed to speed up EU membership. One of the pressing problems is also the reduction of transport accidents and incidents in order to maintain environmental safety. To do this, it is necessary to analyze the powers of those executive authorities of the EU countries where the smallest number of transport accidents and incidents are observed in order to make the necessary changes to Ukrainian legislation. The author proposed recommendations.

1 Introduction

Any accident or incident in transport leads to a violation of environmental safety, which is almost impossible to restore to its original level. Legal liability, which provides for sanctions in the form of imprisonment, compensation for material damage, payment of a fine, etc., cannot ensure the restoration or bringing to the initial state of environmental safety, i.e. before a transport accident or incident. To avoid such moments, there are executive authorities with appropriate powers and functions to prevent accidents and incidents in transport. The effectiveness of the powers and functions of any executive body in the EU transport sector is assessed by the number of accidents and incidents that have occurred since the start of its operation. This study analyzed the number of road, air and rail accidents and incidents in the Republic of Latvia, the Republic of Estonia, the Grand Duchy of Luxembourg and the Republic of Lithuania for the period 2013-2021 (figures 1-3) [1-3]. Marine accidents and incidents were not considered, because statistical information is in private access, but it was presented in other articles [4, 5]. The EU countries listed above were selected using a random sampling method. This is due to the fact that there is no single sequence of EU countries in terms of the number of transport accidents and incidents according to statistical data [1-3].

2 Main part

The presence of accidents or incidents in transport is a negative moment and indicates the imperfection of the powers of the relevant executive authority or their

obsolescence, non-compliance with real requirements. The absence of accidents and incidents or their small number in transport can be considered in the following aspects: 1) this type of transport is not popular; 2) the functioning executive authorities in a particular EU country have created a logical, rational scheme, the structure of their subordinate bodies. In this study, we will consider the example of the Republic of Latvia, the Republic of Estonia, the Grand Duchy of Luxembourg and the Republic of Lithuania (Table 1).

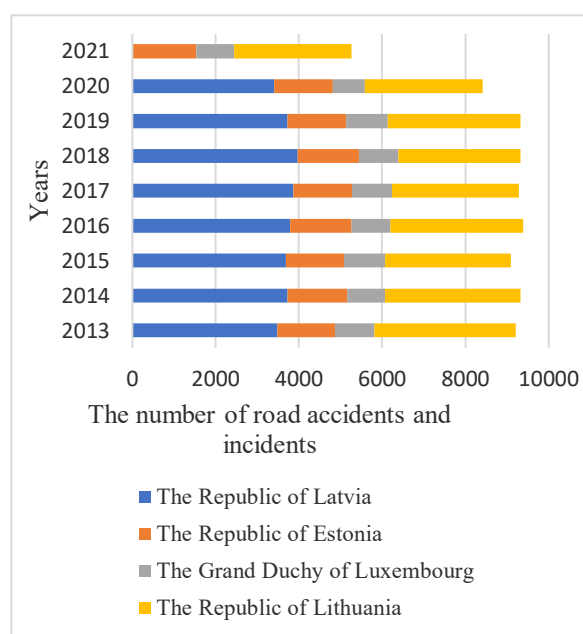


Fig. 1. Road accidents and incidents [1]

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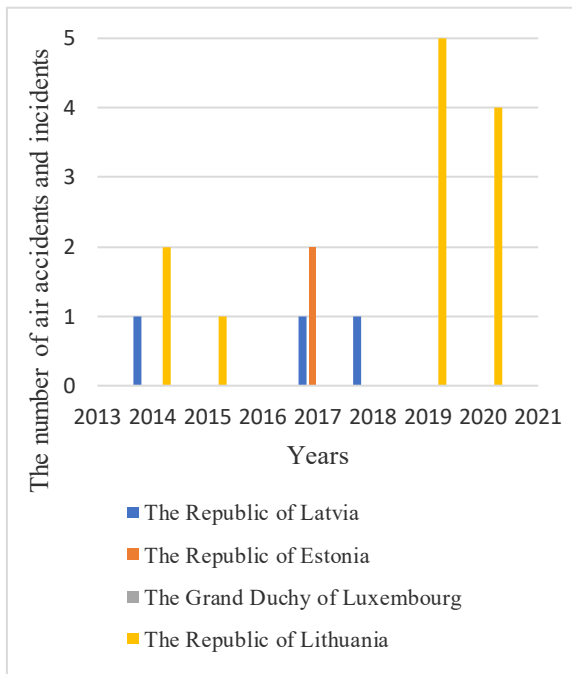


Fig. 2. Air accidents and incidents [2]

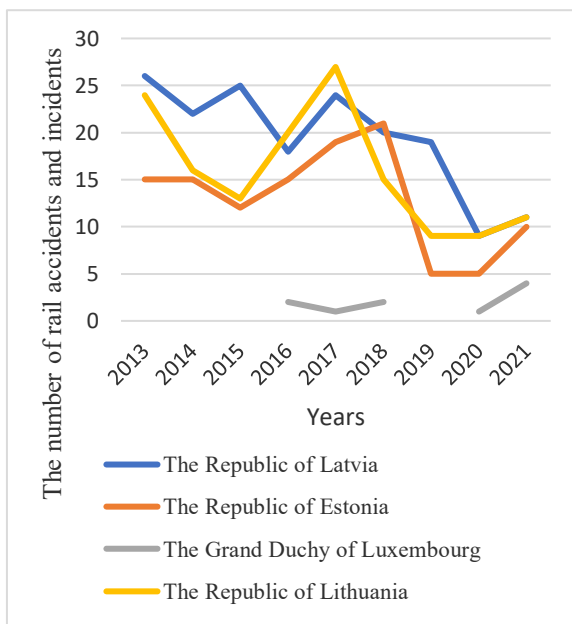


Fig. 3. Rail accidents and incidents [3]

In the Republic of Latvia, there is no specific executive authority responsible for assessing the impact of transport accidents and incidents on environmental safety. However, from the analysis of Latvian legislation regarding the powers of ministries, subordinate structures, institutions, etc. It follows that there are several such bodies: the Transport Accident and Incident Investigation Bureau, the State Environmental Service and the State Office for Environmental Supervision. We will analyze and highlight the disadvantages and advantages of their functioning, an assessment of the impact on environmental safety of the number of transport accidents and incidents.

Table 1. Powers of executive authorities in the EU transport sector and environmental safety

The EU country	Authority name	Subordination
The Republic of Latvia	The Transport Accident and Incident Investigation Bureau	The Ministry of Transport
	The State Environmental Service	The Ministry of Environmental Protection and Regional Development
	The State Office for Environmental Supervision	
The Republic of Estonia	The Environmental Board	The Ministry of Climate
	The Transport Board	
The Grand Duchy of Luxembourg	The Department of Mobility and Transport	The Ministry of Mobility and Public Works
	The Environment Agency	The Ministry of the Environment, Climate and Sustainable Development
The Republic of Lithuania	The Lithuanian Transport Safety Administration	The Ministry of Transport and Communications
	Public Enterprise «Transport Competence Agency»	
	The Environmental Protection Agency	The Ministry of the Environment of the Republic of Lithuania
	The Environmental Protection Department under the Ministry of Environment	

«The Transport Accident and Incident Investigation Bureau (hereinafter - Bureau) is an institution of direct administration under supervision of the Minister for Transport. The purpose of the operation of the Bureau is to implement the State administration function in the field of investigation of civil aviation accidents and incidents, in the field of investigation of serious railway accidents and other railway accidents, as well as in the field of investigation of marine casualties and incidents. Operation of the Bureau shall not cause legal effects for third persons, if it is not laid down otherwise in laws and regulations» (paragraphs 1, 2 of By-laws of the Transport Accident and Incident Investigation Bureau approved Cabinet Regulation № 973 adopted 20.12.2005) (hereinafter - Regulation № 973) [6]. The tasks and functions assigned at the legislative level to the Bureau point directly to the investigation of accidents and incidents on any type of transport, the reasons that led to their occurrence (paragraphs 3, 4 of Regulation № 973) [6]. Such the authority is not authorized to deal with the consequences of these transport accidents and incidents. In the author's opinion, the clearly limited area of activity is a positive aspect, on the other hand, the consequences of transport accidents and incidents from a material point of view, including the environmental aspect, are not considered.

«The State Environmental Service (hereinafter - the service) is a direct administrative institution under the supervision of the Minister of Environmental Protection and Regional Development. The purpose of the service's activity is to ensure that the regulatory acts in the field of environmental protection, radiation safety and nuclear safety and the use of natural resources are followed, as well as to promote the sustainable use of natural resources and energy» (paragraphs 1, 2 of By-laws of the State Environmental Service approved Cabinet Regulation № 962 adopted 23.11.2004) (hereinafter - Regulation № 962) [7]. The functions, tasks and powers assigned to this body are not related to transport accidents and incidents, as well as environmental safety. It can be concluded that the name of the body and the functions, tasks and powers provided for it do not correspond to each other. It seems that it is necessary either to change the name of this body or to rethink and prescribe other functions, tasks and powers, including taking into account transport accidents and incidents, their consequences for environmental safety.

The legal status of the State Office for Environmental Supervision (hereinafter - the office) is regulated by the By-laws of the State Office for Environmental Supervision approved Cabinet Regulation № 4 adopted 06.01.2004) (hereinafter - Regulation № 4) [8]. It is also subordinate to the Ministry of Environmental Protection and Regional Development (paragraph 1 of Regulation № 4) [8]. From the analysis of the paragraph 2 of Regulation № 4, it follows that the functions, tasks and powers of the office, provided for in accordance with the Law «On Environmental Protection», the Law «On Environmental Impact Assessment», the Law «On Pollution», the Law «On Specially Protected Nature Territories» and other regulatory acts on environmental protection, prevention of industrial accidents and risk reduction, chemical substances and chemical use of products (preparations), water management, as well as the functions and tasks determined by waste and packaging management, are not related to the consequences of transport accidents and incidents for environmental safety [8]. The norms, provisions of Regulation № 4, based on its analysis, are general in content, without specifics of the scope of activity of this body. In our opinion, it seems that the last two bodies subordinate to the Ministry of Environmental Protection and Regional Development should be reorganized by merging into one new body.

The influence of the powers of executive authorities in the transport sector of the Republic of Latvia on environmental safety after transport accidents and incidents can be schematically observed in Figure 4. Green arrows here and further indicate powers directly related to the direction of research, while red arrows do not.

Thus, we can conclude that the small number or absence of transport accidents and incidents, as well as their impact on environmental safety in this EU country, are not associated with detailed powers of the relevant executive authorities, but with the understanding of the Latvian citizens about the need to protect the environment. As the research showed, the system of

executive authorities is not effective, because functions, tasks and powers require adjustment.

There are constant changes in national legislation regarding executive authorities in the transport sector, affecting their powers on environmental safety, in the Republic of Estonia. According to article 61 of the Act of the Republic Government of December 31, 1995 (hereinafter – Act 1995), the area under research is included in the scope of the Ministry of Climate, which the Environmental Board and the Transport Board are respectively subordinate [9]. From the analysis of article 61 of Act 1995, article 6 of the Statute of the Ministry of Climate, it can be concluded that this ministry has a very wide scope of activities that are not interconnected (for example, the environment, transport and construction) [9, 10]. It seems that it cannot effectively manage all areas within its competence. In the author's opinion, the construction sector should be transferred to another ministry, which will be able to manage it more effectively and is associated with it.

The legal status of the Environmental Board is regulated by the Statute of the Environmental Board, issued by the Ministry of Climate of September 30, 2020 № 47 (hereinafter – Statute № 47) [11]. This body is a government agency operating under the Ministry of the Climate's jurisdiction, which exercises executive state power and state supervision and applies state coercion on the basis, scope and procedure prescribed by law. It represents the state in the performance of its tasks (paragraph 1 of Statute № 47) [11]. The powers, tasks assigned to the Environmental Board (paragraph 7 of Statute № 47) and the powers, tasks of the departments of this body (paragraph 12 of Statute № 47) confirm compliance with the name of this body and are included in the scope of the research [11].

The Transport Board, whose main legal act is the Statute of the Transport Board, adopted on December 3, 2020 № 82 (hereinafter – Statute № 82), is a government institution under the jurisdiction of the Ministry of Climate. In performing its tasks, this body represents the state (paragraph 1 of Statute № 82) [12]. Its scope of activity is planning the mobility of people and water, air and land vehicles and ensuring a safe and environmentally sustainable infrastructure (paragraph 3 of Statute № 82) [12]. It complements the scope of the Environmental Board and, accordingly, covers the field of research in this article. In the author's opinion, the current regulations governing the legal status of the Ministry of Climate, the Environmental Board and the Transport Board establish at the legislative level the necessary powers and competencies of these bodies to reduce the number of transport accidents and incidents so as not to violate environmental safety. However, it is still difficult to assess the practical implementation of these powers, it is not possible, since changes in the Ministry of Climate and the Transport Board were carried out in this summer. The Environmental Board is vested with its current powers from January 01, 2021. It seems that at the legislative level constant changes of these bodies do not provide an opportunity to assess the effectiveness of the adopted legal norms, which sufficiently cover the outlined scope of the study. This opportunity appears after some time, when

relevant statistics are published. On the other hand, the current structure of executive authorities responsible for transport accidents and incidents, and their impact on environmental safety (see Figure 5) indicates a rational, logically constructed scheme without the possibility of transferring the area of responsibility from one authority to another.

The legislative framework of the Grand Duchy of Luxembourg about the executive bodies in this direction is regulated by two legal acts: 1) Grand-ducal decree of July 1, 2023 approving the internal regulations of the Government (hereinafter – Decree 2023) [13]; 2) Law of March 29, 2016 reorganizing the Environmental Administration (hereinafter – Law 2016) [14].

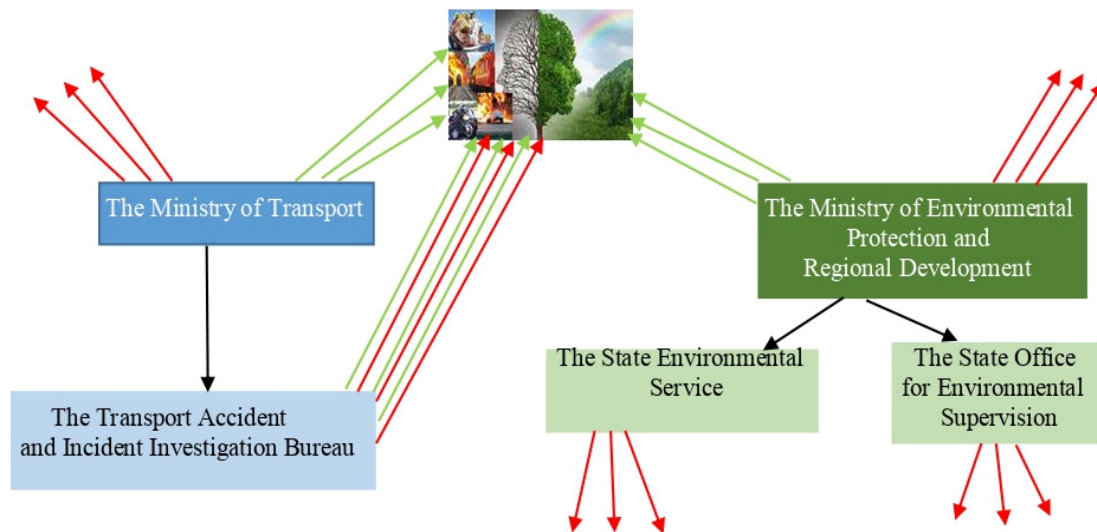


Fig. 4. Scheme of influence of powers of executive authorities in the transport sector of the Republic of Latvia on environmental safety after transport accidents and incidents

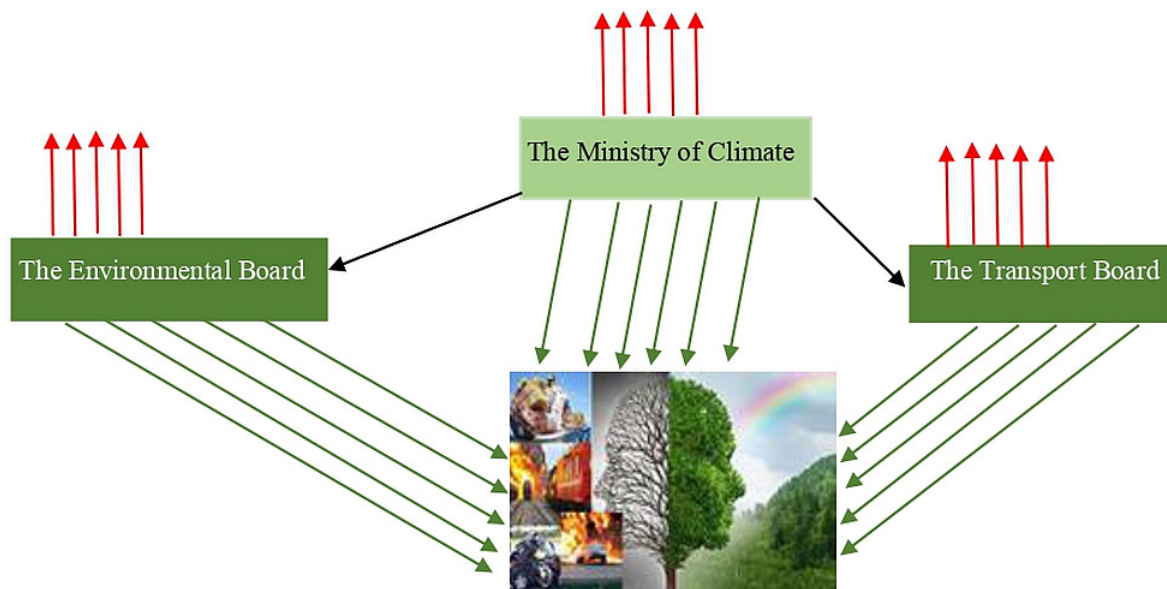


Fig. 5. Scheme of influence of powers of executive authorities in the transport sector of the Republic of Estonia on environmental safety after transport accidents and incidents

It should be noted that this country has the lowest number of transport accidents and incidents compared to other EU countries studied in this article (Figures 1-3). From the analysis of the legislative framework of the Grand Duchy of Luxembourg, it follows that the regulatory act related to the creation, structure, powers, and functions of ministries is constantly updated, i.e. a new regulatory act is adopted. Such actions are regular: every 2-3 years or more often. In our opinion, such a

policy is not a positive feature, since it is not possible to track the effectiveness of ministries. However, on the other hand, there is a positive aspect - a single legal act regulating the legal nature of all ministries in the EU country at the same time. The legal status of the ministry in such a legal act is regulated in general terms, in the author's opinion. It seems that classical practice is more effective, expedient, logical. Each executive body has its own regulatory act that enshrines its legal nature.

There are several departments under the Ministry of Mobility and Public Works: the Department of Mobility and Transport, the Public Works Department. The Department of Mobility and Transport is of interest for this study. Its activities are aimed at ensuring safety in all types of transport: rail, road, avia and sea (paragraph 18 Appendix B – Constitution of Ministries of Decree 2023) [13]. It can be concluded that this department initially directs all its actions to the absence of transport accidents and incidents. However, statistics (Figures 1, 3) indicate the presence of accidents and incidents that the body is not yet able to completely eliminate or ensure complete absence. Therefore, the legislative framework of this EU country regulating the legal status of this department is not perfect and requires, in our opinion, more detail.

The Ministry of the Environment, Climate and Sustainable Development has the following administrations: the Environment Agency, the Nature Conservation Agency, the Water management agency, as well as the economic interest grouping MyEnergy, Natural parks (paragraph 11 Appendix B – Constitution of Ministries of Decree 2023) [13]. Based on their name, it can be argued that it is connected with the direction of research in this article - the Environment Agency. Law 2016 regulates the legal nature of this agency. From the analysis of article 2 of the Law 2016, it should be stated

that the responsibilities assigned to this body are related to environmental protection [14]. For example, «the implementation of action to prevent and repair environmental damage, where applicable, in collaboration with other national and international bodies competent in the matter» (paragraph 10 article 2 of the Law 2016) [14]. At the same time, the responsibilities do not indicate the assessment of damage from various actions, events, including transport accidents and incidents for environmental safety. At the same time, this law stipulates that «the determination, inventory, description, evaluation and monitoring of the evolution of the state of the environment and the impact of human activities on the environment» (paragraph 3 article 2 of the Law 2016) [14]. In the author's view, this item requires rethinking, revision, because it does not meet modern requirements. It seems that it is necessary to make the following amendments to the analyzed law: 1) change the environment to environmental safety; 2) human activity.... – a very narrow influence for the modern world and developments in science applied in practice.

Taking into account the norms of the current Luxembourg legislation, it is possible to schematically present the executive authorities responsible for the impact of the consequences of transport accidents and incidents on environmental safety (Figure 6).

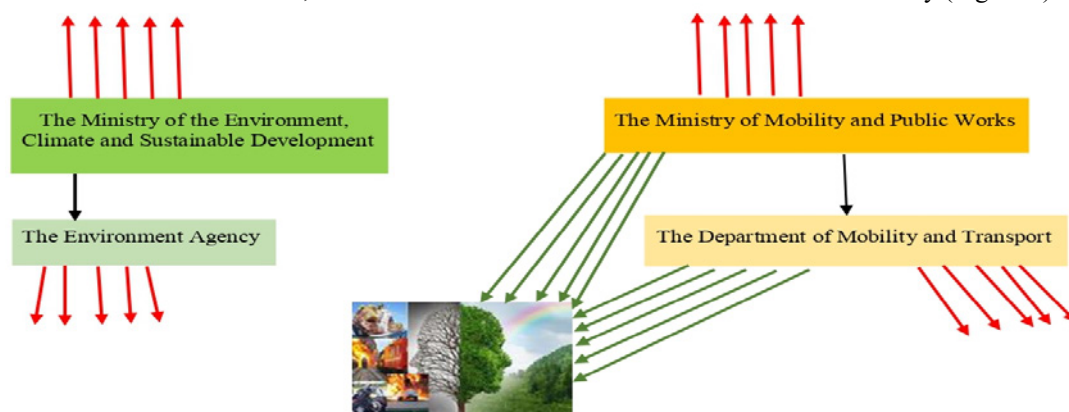


Fig. 6. Scheme of influence of powers of executive authorities in the transport sector of the Grand Duchy of Luxembourg on environmental safety after transport accidents and incidents

Despite the small number of transport accidents and incidents, the executive authorities authorized for assessing the state of environmental safety from transport accidents and incidents are not directly indicated in the legislative framework of the Grand Duchy of Luxembourg. In the author's opinion, it indicates that, on the one hand, perhaps the executive authorities of this EU country believe that the harm, damage transport accidents and incidents to environmental safety is small, and, on the other hand, the absence of a body responsible for this area allows not to assess the damage and impact on environmental safety, i.e. ignore the moment. It is known that it is not possible to fully assess the harm caused to the environment and led to a deterioration in environmental safety.

The Republic of Lithuania also belongs to those EU countries where there are a small number of accidents and incidents in transport (Fig. 1, 2, 3). However, even they harm the environment and reduce the level of

environmental safety. Accordingly, the question arises about the full powers of executive authorities responsible for assessing the impact on environmental safety from transport accidents and incidents. Based on the analysis of Lithuanian legislation, several executive authorities can be identified, which should be authorized for this area of research.

This is the Ministry of Transport and Communications. Its legal status is settled by the regulations of the Ministry of Transport and Communications approved by Decree of the Government of the Republic of Lithuania № 1480 from 13.10.2010 (hereinafter – Decree № 1480) [15]. Based on the analysis of this regulatory legal act, it can be argued that this body is endowed with powers and functions in the field of traffic safety (subparagraph 8.3 paragraph 8 of Decree № 1480) [15]. In the author's opinion, the powers and functions of this body cover the entire sphere of traffic

safety. And if everything is spelled out in sufficient detail at the legislative level, then statistics show the presence of transport accidents and incidents. The powers and functions of this ministry do not enshrine the assessment of the impact of transport accidents and incidents on environmental safety.

The Ministry of Transport and Communications has several subordinate executive authorities and institutions. Based on their name and taking into account the direction of research, in the author's opinion, the following should be considered.

I look at the Lithuanian Transport Safety Administration from a legal standpoint. Its legal status is settled by the regulations of the Lithuanian Transport Safety Administration approved by Order of Minister of Transport and Communications of the Republic of Lithuania № 3-574 from 30.11.2017 (hereinafter – Order 3-574) [16]. The purpose of this administration is to implement the policy of road, railway and water transport. The objectives of this body's activities in implementing the road, railway and water transport policy are the following: to ensure a high level of railway traffic safety; to ensure a high level of road transport safety; to increase the interoperability of the railway system; to increase the interaction of the road transport system; to ensure a high level of water transport safety; to promote competition in the provision of water, railway and road transport services, improve the quality of railway, road and water transport services provided to users (points 2, 12 of Order 3-574) [16]. To achieve the above, the Lithuanian Transport Safety Administration is endowed appropriate functions at the legislative level (point 13 of Order 3-574), which are written in sufficient detail to ensure safety in rail, road, avia and sea transport, in the author's opinion. However, it seems that in point 13 of Order 3-574 only the functions of this body are prescribed, which do not provide for the assessment of changes in environmental safety from transport accidents and incidents. Subparagraph 13.2.10 paragraph 13 of Order 3-574 states that compiles and analyzes reports submitted by business entities on the activities of companies and accidents or events during loading, filling or transporting dangerous goods by road, and, if necessary, organizes the performance of examinations of such accidents or events that have caused serious consequences; manages the accounting of safety specialists for the transportation of dangerous goods by road transport [16]. Moreover, it is connected exclusively with road transport, which is an erroneous point of view of the legislator, in the author's opinion. Operation of any type of transport can lead to a transport accident and incident, even if you do not transport dangerous cargo. It seems that subparagraph 13.2.10 paragraph 13 of Order 3-574 requires rethinking and editing, that is, it is necessary to change for all types of transport within the competence of this body. In our opinion, this legal act regulating the legal status of the Lithuanian Transport Safety Administration contains sufficiently detailed powers and functions. However, comparing the content of this legal act and the name of the analyzed body, it is necessary to link transport safety with environmental safety. These types of safety are very closely related in modern conditions.

Public Enterprise «Transport Competence Agency» can also be considered as an executive authority, but specific. It was created by the state and belongs to the latter. The body implementing the rights and obligations of this agency's owner is the Ministry of Transport and Communications. This public enterprise operates in accordance with the Statute [17]. From the analysis of the provisions of this Statute, it follows that the functions and powers assigned to the enterprise are characteristic of the executive authority. For example, supervision, accreditation and licensing of business entities in the avia sector, licensing of specialists and supervision of their activities... It seems that the functions and powers assigned to the agency are very similar to the powers and functions of the Lithuanian Transport Safety Administration. In the author's opinion, it may lead to the inability to identify among these two bodies the body that is responsible for a particular area, which will lead to the inability to bring to legal responsibility in case of exceeding their powers, functions, or vice versa, i.e. inaction. It seems that it is necessary to reorganize the two bodies, i.e. merger, amalgamation, for example, in order to get rid of the dual powers, functions and sometimes double control, monitoring, etc., exercised by these bodies. On the other hand, the presence of exactly two bodies and their effective functioning is confirmed by statistical information (Figures 1-3), which, if they occur, affect, first of all, environmental safety for the worse. Another option may be to revise the legal acts regulating their legal status. As a result, to conduct a comparative analysis of the norms and highlight the same powers, functions that are assigned exclusively to one body. However, perhaps after some time it will be possible to observe an increase in transport accidents and incidents that will worsen, respectively, environmental safety. Public Enterprise «Transport Competence Agency» can also be considered as an executive authority, but specific. It was created by the state and belongs to the latter. The body implementing the rights and obligations of this agency's owner is the Ministry of Transport and Communications. This public enterprise operates in accordance with the Statute [17]. From the analysis of the provisions of this Statute, it follows that the functions and powers assigned to the enterprise are characteristic of the executive authority. For example, supervision, accreditation and licensing of business entities in the avia sector, licensing of specialists and supervision of their activities... It seems that the functions and powers assigned to the agency are very similar to the powers and functions of the Lithuanian Transport Safety Administration. In the author's opinion, it may lead to the inability to identify among these two bodies the body that is responsible for a particular area, which will lead to the inability to bring to legal responsibility in case of exceeding their powers, functions, or vice versa, i.e. inaction. It seems that it is necessary to reorganize the two bodies, i.e. merger, amalgamation, for example, in order to get rid of the dual powers, functions and sometimes double control, monitoring, etc., exercised by these bodies. On the other hand, the presence of exactly two bodies and their effective functioning is confirmed by statistical information (Figures 1-3), which, if they occur, affect, first of all, environmental safety for the worse. Another option may be to revise the legal acts regulating their legal status. As a result, to

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The second executive authority is the Ministry of the Environment of the Republic of Lithuania. Its legal status is regulated by the Regulations of the Ministry of the Environment of the Republic of Lithuania, approved by Decree of the Government of the Republic of Lithuania № 1138 from 22.09.1998 (hereinafter - Decree 1138) [18]. This ministry carries out the state management functions assigned to it by laws and other legal acts in the areas of environmental protection, forestry, use of natural resources, territorial planning, construction, housing and geology and implements state policy in these areas (paragraph 1 of Decree 1138) [18]. From the analysis of the tasks and functions assigned to this executive authority, it follows that they are partially related to the direction of the study (for example, «participates in the assessment of the environmental impact of the planned economic activity according to its competence») (subparagraph 6.12 paragraph 6 of Decree 1138) [18].

The Ministry of the Environment of the Republic of Lithuania has subordinate bodies. Based on their name, the scientific interest for this article is the Environmental Protection Agency and the Environmental Protection Department under the Ministry of Environment. The purpose of the Environmental Protection Agency is to implement measures to protect the ambient air from pollution, to maintain lower levels of air pollution in zones and agglomerations and to improve the quality of the ambient air as much as possible, to implement measures to preserve and improve the condition of surface water bodies, to collect, evaluate and (or) otherwise manage and provide information on the state of the environment, flows of chemicals and preparations (mixtures), pollution and pollution prevention measures, implement environmental regulation of economic activities, implement the management policy of chemicals and preparations (mixtures), ensure the rational use of natural resources and adequate, legal protection for them (paragraph 2 of the Regulations of the Environmental Protection Agency approved by Order

of Minister of the Environment of the Republic of Lithuania № D1-385 from 14.07.2004) (hereinafter - Order D1-385) [19]. The purpose of the Environmental Protection Department under the Ministry of Environment is to carry out state control of environmental protection in order to ensure legality and law and order in the field of environmental protection and use of natural resources (paragraph 2 of the Regulations of the Environmental Protection Department under the Ministry of Environment approved by Order of Minister of the Environment of the Republic of Lithuania № D1-277 from 06.04.2018) (hereinafter - Order D1-277) [20]. At first glance, there is a difference. From the analysis of these legal acts regarding the functions prescribed in paragraph 10 of each regulations, it should be stated that they are very similar [19, 20]. However, they are assigned to each authority in a different interpretation with the same meaning. In the author's opinion, the functioning of two different executive authorities subordinate to the Ministry of the Environment of the Republic of Lithuania is logical and correct, but it is necessary to more correctly indicate the specifics of their functions according to their purpose and name. Then the identification of the functions of these bodies will disappear completely. The presence of such a problem leads to double functions in one direction. This is not possible for EU countries. None of the Regulations link transport accidents and incidents to environmental safety. All functions are described in general phrases, without specification, which, in the author's opinion, allows these executive authorities to exceed their powers in order to prevent harm to environmental safety. These legal acts do not contain a legal norm indicating the implementation by one of the executive authorities of an assessment of the impact of transport accidents and incidents on environmental safety. It is not possible to determine and force to compensate for the damage caused to environmental safety, in the author's opinion. This point of view is due to the fact that it is impossible to know all the consequences of an event. The latter is possible after an examination, which may also be advisory in nature.

Schematically, the activities of the executive authorities of the Republic of Lithuania, indicated above, can be represented as follows (Figure 7).



Fig. 7. Scheme of influence of powers of executive authorities in the transport sector of the Republic of Lithuania on environmental safety after transport accidents and incidents

In the Republic of Lithuania the considered executive authorities are empowered exclusively in a specific area without reference to two related components: environmental safety and transport accidents and incidents. It is not possible to assess the activities of these bodies in the studied direction, but, on the other hand, it indicates that at the national legislative level their powers reduce the number of transport accidents and incidents and, as a result, a negative impact on environmental safety.

3 Conclusions

The analysis showed that none of the EU countries that were considered has standard national legislation regarding the direction of the study. The proposal that you can take as a model the EU country from those considered, where the least comments, transport accidents and incidents, is not possible, in the author's opinion. This opinion is due to the fact that each of the considered EU countries has its own specifics, features characteristic only of it. If you make changes to Ukrainian legislation, then you need to copy everything in the legislative aspect of this country, as well as change the mentality of the Ukrainian people. It is a difficult and long process. The only option, in our opinion, is to choose the most optimal model of executive authorities with powers, functions regarding the direction of the study and make appropriate changes, taking into account the norms of Ukrainian legislation, including the powers of executive authorities in Ukraine. After some time it will be necessary to assess the effectiveness of their activities from the point of view of the European level.

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