

## STATISTICAL ANALYSIS OF ROAD TRANSPORT INCIDENTS OCCURRING ON ROADS ACROSS THE COUNTRIES OF THE WORLD

**Shukurov Nuritdin Rakhimovich**

Candidate of Technical Sciences, Associate Professor Academy of the Ministry of  
Internal Affairs of the Republic of Uzbekistan

**Annotation.** Road safety is one of the urgent problems of today, due to the increasing number of vehicles and the increasing number of traffic accidents and their resulting deaths. approach is necessary. The article provides information on the activities carried out by the United Nations organization to reduce the consequences of road traffic accidents, as well as a statistical analysis and ranking of road traffic accidents in the countries of the world.

**Keywords:** traffic accident, road transport, road safety, pedestrians, driver-training system, driving a vehicle, level of motorization, accidents.

### Introduction

It is known that road transport is an important component of modern infrastructure, and its sustainable development is important for the rapid growth and integration of the country's economy, and for improving the well-being of the population. At the same time, the constant growth of the number of motor vehicles worldwide leads to an increase in problems related to ensuring the safety of road users.

According to the World Health Organization, 1.35 million people die in road traffic accidents every year. This means an average of 3700 people per day, and 24 people per second. It is the 8th leading cause of death among the world's population of all ages and is the leading cause of death for people aged 5 to 29 years. Also, from 20 million to 50 million people get various injuries as a result of traffic accidents [1].

More than 50% of those killed in traffic accidents are pedestrians, cyclists and motorcyclists. In low- and middle-income countries, the mortality rate for this group of people is up to 70%.

The World Health Organization holds Global Road Safety Week every year. As noted at this year's meeting, which began on May 15, 2023, Africa has a high rate of road traffic deaths. A third of such cases on the African continent end in tragedy.

**THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY****VOLUME-4, ISSUE-3**

According to this organization, in 2023, the leaders in terms of the number of deaths per 100,000 people as a result of traffic accidents are Liberia (35.90), the Democratic Republic of Congo (33, 70) and the Central African Republic (33.60) [2].

The main reasons for such high rates, according to experts, are the insufficient financing of the relevant infrastructures in these countries, the lack of necessary and demanding roads for the ever-increasing number of vehicles, timely and it is explained by the lack of quality medical care, as well as the low level of legal literacy of the population.

Also, Hong Kong (1.30), Micronesia (1.90), Norway (2.0), Switzerland (2, 20) and reported in Sweden (2.20) [2] (Table 1).

Table 1

**In 2023, the number of deaths caused by road traffic accidents in the countries of the world\***

S.N.	Countries	Number of deaths (per 100,000 people)
1.	Liberia	35.90
2.	Democratic Republic of the Congo	33.70
3.	Central African Republic	33.60
4.	Tanzania	32.90
5.	Thailand	32.70
6.	Rwanda	32.10
7.	Mozambique	31.60
8.	Togo	31.10
9.	Malawi	31
10.	Burkina Faso	30
.		
43.	Kazakhstan	24.20
.		
55.	Kyrgyzstan	22
.		
69.	Tajikistan	18.80
.		
79.	Turkmenistan	17.40
.		
100.	Ukraine	13.70
.		

114.	Russia	11.60
115.	Uzbekistan	11.50
.		
174.	Sweden	2.20
175.	Switzerland	2.20
176.	Norway	2.0
177.	Micronesia	1.90
178.	Hong Kong	1.30

\* The table is abbreviated.

Every year on the third Sunday of November, the World Day of Remembrance of the victims of road traffic accidents is celebrated, its status is confirmed by the resolution of the General Assembly of the United Nations. On this day, the issues of remembering those killed in traffic accidents, road safety and preventing death in traffic accidents will be discussed. In 2023, this day fell on November 19.

"Traffic accidents are a kind of gentle and quiet epidemic on wheels. Our meeting at this conference is a vital opportunity to make progress and take concrete actions," said the Secretary-General in his speech before the representatives of 193 UN member states gathered in the United Nations (UN) General Assembly hall in New York [3].

It's important to note that many of the gains made during the COVID-19 era (including a 17 percent drop between 2019 and 2020) have not been lost. Compared to 2019, the number of deaths in 2022 decreased by 10 percent. However, this indicator has developed very unevenly among the EU member states. The largest decrease was recorded in Lithuania and Poland (more than 30%), while Denmark also recorded a decrease of 23%. On the contrary, in the last three years, the number of people killed on roads has remained stable or increased in countries such as Ireland, Spain, France, Italy, Holland and Sweden [4].

In the European Union in 2022, there will be an average of 46 deaths per million inhabitants as a result of traffic accidents. 52% of traffic accidents across the European Union occurred on rural roads, 39% in cities and 9% on highways. Three out of four (78%) of those killed on the roads are men. 45% of those killed on the roads were car passengers (drivers and passengers), 18% were pedestrians, 19% were two-wheelers (motorcycles and mopeds) and 9% were cyclists [5].

A total of 42,759 people died as a result of traffic accidents in the United States. This is 12 per 100,000 people [6].

In Japan, 2,610 people became victims of traffic accidents. This indicator decreased by 26 compared to 2021. In general, in the last 6 years, the number of

people dying from road traffic accidents has been decreasing year by year in Japan [7].

A total of 117,048 traffic accidents occurred in Russia in 2023, and 12,668 people died as a result. 146,415 people received various degrees of physical injuries [8].

A total of 9,902 traffic accidents occurred in Uzbekistan in 2022, and the number of people killed in them was 2,356. This makes 5.8 traffic accidents related to death per 100,000 population. The number of injured is 9606 [9].

Road deaths in the European Union in 2022 increased by 3% compared to the previous year, which is explained by the recovery of vehicle traffic on the roads after the pandemic [10] (Figure 1).

The main "contributors" to the increase in the number of traffic accidents in the European Union in 2023 were France, Germany and Italy, which have the most developed road network and the largest number of cars.

The World Road Safety Report is an important publication designed to regularly report to the UN General Assembly on global progress in the field of road safety. The 2023 report is the fifth in this series, detailing the extent of road traffic accidents worldwide and progress in developing laws, strategies and actions to reduce them.

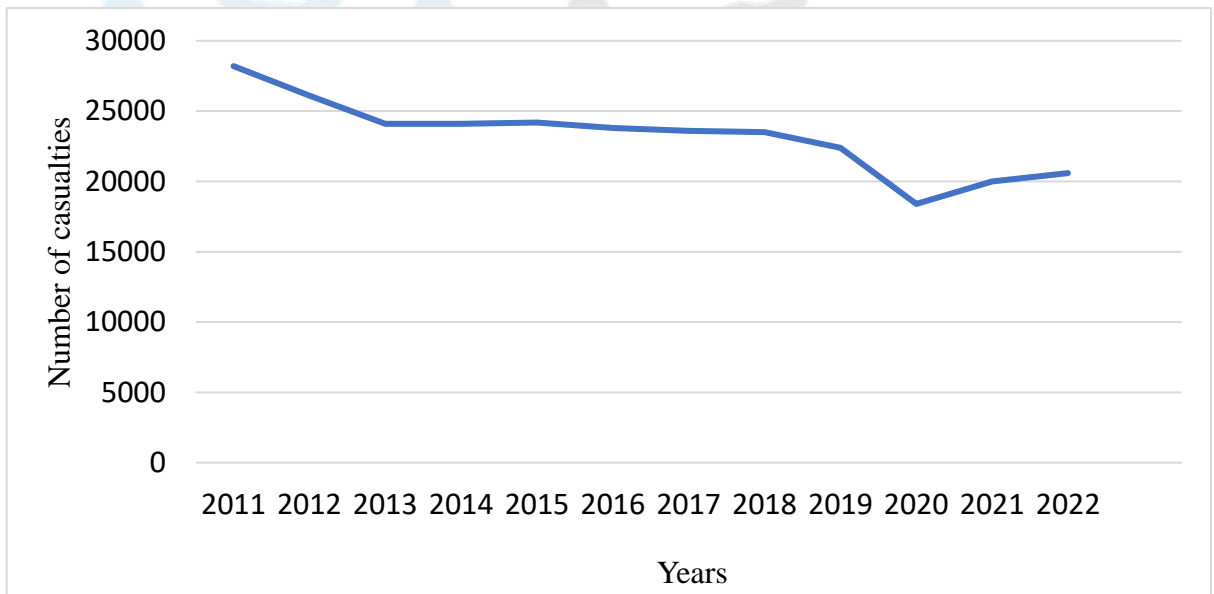


Figure 1. Number of road traffic fatalities in the European Union from 2011 to 2022

According to the World Health Organization, it is not enough to make drivers responsible for reducing road deaths to zero. In this process, it is important for pedestrians to know and follow traffic rules, as well as for vehicles to be equipped with safety systems and roads to be designed safely.

The acceleration of the processes of urbanization and globalization of the economy, the increase in the number of megacities leads to the development of population mobility and logistics processes. Solving these problems is provided by the increase in the population's need for cars and the increase in the number of commercial transport fleets, which, in turn, leads to an increase in the number of traffic accidents, the severity of their consequences, in general it leads to a decrease in the safety of the transport system.

The UN General Assembly aims to reduce the number of deaths and injuries in road traffic accidents by 50% by 2030. Experts believe that this can be achieved by switching to roads and road networks aimed at human safety.

Improving road safety around the world is a priority, and it is solved not only at the level of general strategies, but also in operational management tools. A systematic approach is needed to reduce traffic accidents and the level of injuries caused by them, as well as to increase the stability of the entire transport system. For these purposes, various methods and models are used, involving technical and intellectual resources, in order to improve the quality of transport system management [11].

In order to create an effective traffic management system on roads, it is necessary to have a tool that allows you to identify the most important factors using modern data, analyze various scenarios of the development of events, make timely corrective decisions, and then evaluate their effectiveness.

A management strategy based on a systematic approach is effective in terms of ensuring road safety, because due to the combination of technical and organizational measures, it allows to predict and prevent many accidents, as well as to reduce the severity of their consequences [12].

Identifying and analyzing the factors that significantly affect the probability and severity of the consequences of traffic accidents, as well as influencing them by determining the general forms and causes of accidents, predicting the probability of their occurrence and possible consequences assessment and thereby significantly increase the level of traffic safety.

### **Discussion of results**

When analyzing traffic accidents, a number of road and infrastructure features should be taken into account. Because these features are literally one of the factors that cause accidents.

According to the National Highway Traffic Safety Administration (NHTSA) of the US Department of Transportation, the same type of traffic accidents that occur on the basis of the same algorithm and appear to be repeated in different places, i.e. There is a collection of l-traffic accident scenarios. Analyzing these identified fatal

scenarios can help reduce road deaths. European and American institutes use the system of assessing the level of accidents in the analysis of traffic accidents. They do not always blame the drivers, but try to assess the road conditions in such a way that they are interested in what made the drivers to break the rules.

If a five-lane highway narrows to two on a short section of the road and there are exits from local roads nearby, these sections are potentially dangerous and cause accidents. From the point of view of traffic rules, it is not important which driver is to blame for traffic accidents, but the danger lies in the road configuration itself. Rebuilding and equipping the problem area is the best way to prevent accidents than fines. Another important factor affecting road safety is the mentality of drivers. The existing stereotypes of behavior on the road turn into the same type of accident patterns that affect the level of traffic accidents under certain conditions. Bold driving of the vehicle and roughness on the roads have a negative effect on the traffic situation, especially in winter, sudden maneuvers often lead to loss of control of the vehicle.

The experts of "Za rulem" magazine analyzed the conditions of Russia and identified three types of dangerous traffic accidents that lead to the death of drivers and injuries to passengers. According to their data, about 95% of those killed in traffic accidents in Moscow were victims of three main scenarios of the development of traffic accidents. These include head-on collisions, pedestrian collisions, and head-on collisions (including collisions with improperly parked vehicles). Almost 92% of civilian injuries are caused by this type of incidents. Despite the variety of causes of traffic accidents, other types of traffic accidents account for only 5% of the total death rate [13].

The statistical analysis of traffic accidents on the roads shows that 90-93 percent of traffic accidents are caused by the human factor and the characteristics of his behavior [14]. Therefore, the most urgent and effective solution to the prevention of traffic accidents should be focused on the human factor. The most important of these is the process of high-quality training of drivers.

Car control requires the driver to make the right decisions in a rapidly changing environment. With a constant lack of time, the driver cannot analyze in detail all possible courses of action and evaluate their consequences, as well as consult with someone about the correctness of the chosen decision.

Therefore, the improvement of the driver training system, that is, the training methods and methods, will significantly contribute to the increase of road safety.

The process of training drivers is carried out by forming a set of knowledge, skills, habits and qualities that reliably guarantee practical driving of a vehicle.

We may be particularly interested in some issues of the driver training system in countries with a high level of car ownership. For example, the requirements for teachers are among them. In Belgium, Denmark, Italy, the Netherlands, Norway, France, Germany and Switzerland, persons who have not undergone special training but hold a driving license for the vehicle category they are teaching can give driving lessons. . In the UK, driving instructors must have a special certificate, and in Austria and Switzerland, a higher technical education, a bachelor's degree from a higher vocational school or equivalent education [15].

### **Conclusion**

One of the features of driver training in Germany is that driver candidates are required to drive at night and on expressways (Autobahn). In addition, they will acquire the necessary practical skills by driving a car in places where traffic accidents are the most frequent. Candidates are allowed to use a temporary license valid for a period of two years to confirm the acquired skills of safe driving without serious violations of traffic rules.

In foreign countries such as Australia, Canada, USA, New Zealand and UK, it is done through an efficient tiered system of issuing driver's licenses to the candidates in order to increase the reliability of the drivers. That is, at the end of such a step-by-step training system for drivers, depending on the qualifications of the candidates, initial, limited and fully valid driver's licenses are issued. It is noted that such driver training technologies used abroad have reduced the number of accidents by 30-35 percent.

By studying and analyzing the best practices of the developed world, i.e., foreign countries with a high degree of automobileization, on learning and mastering traffic rules during the training of vehicle drivers. It is possible to prevent the growth of traffic accidents.

### **References**

1. Aymakhanovich K. S., Rakhimovich S. N. ACTIONS AIMED AT REDUCING TRAFFIC ACCIDENTS //International Scientific and Practical Conference of Students and Young Scientists" Sustainable Development: Problems, Analysis, Prospects" (Poland). – 2023. – C. 50-53.
2. Smertnost' na dorogakh po stranam v 2023 godu. – URL.: [https://translated.turbopages.org/proxy\\_u/en-ru.ru.4c66836c-65867bc4-e75cffd5-74722d776562/https/worldpopulationreview.com/country-rankings/road-deaths-by-country](https://translated.turbopages.org/proxy_u/en-ru.ru.4c66836c-65867bc4-e75cffd5-74722d776562/https/worldpopulationreview.com/country-rankings/road-deaths-by-country) (date of application: 23.02.2024).
3. Kazhdye 24 sekundy kto-to pogibayet v DTP. – URL.: <https://news.un.org/ru/story/2022/06/1427022> (date of application: 23.02.2024).
4. Vsemirnyy den' pamyati zhertv DTP: kakiye aktsii proyduť v 2023 godu?

## THE MULTIDISCIPLINARY JOURNAL OF SCIENCE AND TECHNOLOGY

### VOLUME-4, ISSUE-3

- URL.: [https://www.autonews.ru/news/655717709a794751d3324\\_a86?from=copy](https://www.autonews.ru/news/655717709a794751d3324_a86?from=copy) (date of application: 24.02.2024).
5. Bezopasnost' dorozhnogo dvizheniya v YES: smert' ne dopandemicheskogo urovnya, otsutstviye progressa ostayetsya slishkom medlennym – URL: <https://ru.eureporter.co/politics/safety/2023/02/23/road-safety-in-the-eu-fatalities-below-pre-pandemic-levels-but-progress-remains-too-slow/> (date of application: 12.02.2024).
6. V SSHA stremitel'no snizhayetsya kolichestvo dorozhnykh avariyy. – URL: [https://yandex.ru/turbo/carsweek.ru/s/news/News\\_in\\_the\\_world/1266743/](https://yandex.ru/turbo/carsweek.ru/s/news/News_in_the_world/1266743/) (date of application: 23.02.2024).
7. V Yaponii smertnost' ne dorogaya i kontrakt prodlevayetsya kak minimum. – URL: <https://tass.ru/proisshestviya/16739859> (date of application: 23.02.2024).
8. Statistika DTP po Rossii. – URL: <https://rusdtp.ru/stat-dtp/> (murojaat sanasi: 23.12.2023).
9. Rakhimovich, S. N., & Fayzilvakhobovich, S. M. (2021). ROAD TRANSPORT MAIN POLLUTANT ENVIRONMENT. International scientific review, (LXXXI), 5-7.
10. Yakupova, G. A. Povysheniye bezopasnosti dorozhnogo dvizheniya na osnove sistemnogo podkhoda s primeneniyem sovremennykh metodov i modeley [Tekst]: avtoref. dis. ... kand. tekh. nauk : 22.05.10 / Yakupova Gul'nara Anvarovna. – Kazan', 2021. – 19 s.
11. Rakhimovich S. N., Aymakhanovich K. S. Country's Leader in Road Safety //American Journal of Engineering, Mechanics and Architecture (2993-2637). – 2024. – T. 2. – №. 1. – C. 27-29.
12. C.A. Kalauov, N.R. Shukurov. The Swedish experience of driver training // Ж.: Spanish Journal of Innovation and Integrity (SJII). Volume: 20, №2 (2023). – P.14-18.
13. Shablon smerti po tri stsenariya samyy strashnyy avariyy na dorogaks. – URL.: [https://aif.ru/auto/gibdd/smert\\_po\\_shablonu\\_tri\\_scenariya\\_samyh\\_strashnyh\\_aviarii\\_na\\_dorogah](https://aif.ru/auto/gibdd/smert_po_shablonu_tri_scenariya_samyh_strashnyh_aviarii_na_dorogah) (date of application: 24.02.2024).
14. Rakhimovich S. N. Ways to Reduce Harmful Emissions from Vehicles //Pioneer: Journal of Advanced Research and Scientific Progress. –2023. –T. 2. –№. 5. – C. 25-27.
15. Rakhimovich S. N. REDUCING THE CONSEQUENCES OF TRAFFIC INCIDENTS IS TODAY'S CHALLENGE //International Journal of Management and Economics Fundamental. – 2024. – T. 4. – №. 01. – C. 48-51.
16. Podgotovka voditeley za rulem. [https://studopedia.su/14\\_43620\\_tema-podgotovka-voditeley-za-rubezhom.html](https://studopedia.su/14_43620_tema-podgotovka-voditeley-za-rubezhom.html) (date of application: 24.02.2024).