

## Analysis of Theoretical Aspects of Ensuring Road Safety

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**Abstract:** *This article analyzes the theoretical aspects of ensuring road safety and emphasizes that road safety plays a significant role in ensuring the overall safety of society, reducing road accidents, and protecting public health. In addition, the main theoretical approaches to ensuring road safety, including legal, social, technical, and administrative mechanisms, are presented. Also, some opinions on international experience and the current road safety system of Uzbekistan are presented, and some recommendations for improving road safety are given.*

**Keywords:** *Road safety, traffic rules, transport safety, legal mechanisms, road accidents, road accidents, road traffic, transport system, safety measures, road infrastructure, social security.*

Today, ensuring road safety is one of the pressing issues for every state, and its effective provision plays an important role in increasing the overall safety of society, reducing the number of road accidents, and protecting public health. This issue depends not only on legal order and technical norms, but also on the consciousness of each member of society, effective management of state bodies, and advanced technologies. Therefore, road safety is considered as a complex issue that includes not only safety aspects, but also social, economic, and environmental aspects. Worldwide statistics on road traffic fatalities are maintained by the World Health Organization and published every 3-5 years in a special report entitled "Global Status Report on Road Safety".<sup>1</sup> This report provides information on the average annual mortality rate per 100,000 population.<sup>1</sup> According to the data, about 1.3 million people die on the roads and about 50 million are injured annually. For people aged 5-29, road traffic accidents are the main threat to life. Every fourth death worldwide occurs among pedestrians and cyclists<sup>2</sup>.

According to the Global Status Report on Road Safety, the following countries have higher deaths per 100,000 people: Guinea (37.4 people), Libya (34.0 people), Haiti (31.3 people), Zimbabwe (29.9 people), and Kenya (28.2 people). In this report, Uzbekistan ranked 122nd out of 192 countries, with the number of deaths in road traffic accidents at 9.3 per 100,000 people<sup>3</sup>.

It is known that today ensuring road safety, especially the implementation of measures aimed at preventing road accidents and minimizing their consequences, has become one of the urgent tasks. In recent years, a number of organizational and legal measures have been implemented in the Republic to ensure road safety. In particular, the Concept for Ensuring Road Safety in Uzbekistan and the National Program "Safe and Smooth Road" for 2022-2026 have been adopted and implemented<sup>4</sup>. The main goal of the ongoing reforms in the field of road safety is, first of all, to strengthen the legal guarantees of reliable protection of the life and health of road users. In this regard, the development of new and modern mechanisms for ensuring road safety, the development and implementation of the most effective methods for studying and eliminating existing problems through the implementation of

<sup>1</sup> <https://nonews.co/directory/lists/countries/mortality-road-traffic>

<sup>2</sup> <https://news.un.org/ru/story/2023/05/1441072#:~:text=>

<sup>3</sup> <https://worldpopulationreview.com/country-rankings/road-deaths-by-country>

<sup>4</sup> <https://lex.uz/docs/-6106551>

scientific research in these areas of activity are of great importance. Despite this, the consequences of road accidents and the damage caused by them are increasing in our country.

If we look at official statistics on road traffic accidents in Uzbekistan in recent years, we can see that significant attention is being paid to this problem. In particular, in 2024, 9,364 road accidents were registered in our republic, which is 475 or 4.8% less than in 2023 (9,839)<sup>5</sup>. For comparison, in 2022 there were 9,902 road accidents, and in 2021 - 10,001. This indicates a gradual decrease in the number of road accidents over the past four years, that is, a steady decline in the dynamics. In-depth analysis of the structure of road traffic accidents shows that 3,045 or 32.5 percent of the accidents recorded in 2024 occurred with the participation of vehicles engaged in the carriage of goods and passengers. This shows the importance and level of danger of passenger and freight vehicles in road safety.

Analysis of road traffic accidents involving this category of vehicles shows that the largest share (52.3%) falls on Damas minibuses used by the general public. In 2024, 1,592 accidents involving cars of this model occurred. This indicator is explained by the popularity of Damas vehicles, especially in densely populated areas, their high traffic intensity. However, this situation requires serious attention to how well they meet traffic safety requirements. The following places are occupied by accidents involving trucks - 558 (18.3%), buses - 137 (4.5%), minibuses - 29 (0.95%) cases<sup>6</sup>. In addition, in 2020-2024, about 600 traffic accidents occurred due to drunk drivers, and in 2024 alone, 405 traffic accidents were registered by persons deprived of the right to drive a vehicle. The number of victims in these accidents decreased from 9,209 to 8,901 people (3.3% less) last year. The number of deaths as a result of road accidents also decreased by 2,203 people (79 people or 3.5%). In 2023, there were 1,794 accidents involving children. In them, 1,568 children were injured and 263 children died. Also, during 2024, 1,280 traffic accidents occurred in the capital alone, of which 91 resulted in death and 1,189 with injuries<sup>7</sup>. 720 of these accidents were caused by pedestrians, and 98 by speeding. For information, in 2023, 95 people died as a result of road accidents in Tashkent, 10 of whom were children. In addition, 1248 people (235 children) were injured in these accidents, in particular, 10 became permanently disabled. In 2022, 1,200 road accidents occurred in the capital, in which 136 people died, including 17 minors.

Taking the above into account, on February 10, 2025, the Tashkent City Council of People's Deputies adopted Resolutions of the President of the Republic of Uzbekistan No. PP-190 of April 4, 2022, "On Measures to Reliably Ensure Human Safety and Radically Reduce Mortality on Highways" and No. PP-316 of July 12, 2022, "On Approving the National Program "Safe and Smooth Road" for Implementation in 2022-2026," as well as No. VII-5-20-14-0-K/25 "On the Work Carried Out in the City of Tashkent in the Second Half of 2024." The decree notes that this information indicates the need to pay serious attention to the problem.

In order to improve road infrastructure in the city of Tashkent, improve activities in the field of road safety, prevent road accidents, and organize the prevention of traffic violations, the Road Safety Department of the Main Department of Internal Affairs of the city of Tashkent shall:

- Preparation of critical information on the implementation of the national program "Safe and Smooth Road" in 2024 and submission for discussion to the Special Commission for Ensuring Road Safety of the city of Tashkent;

<sup>5</sup> <https://www.uzdaily.uz/uz/ozbekistonda-2024-yilda-ythlarda-2203-kishi-halok-boldi-va-8901-kishi-jarohat-oldi/>

<sup>6</sup> <https://kun.uz/05385924?ysclid=m9jxprqe1921259800>

<sup>7</sup> <https://uzreport.news/society/2024-yilda-toshkent-shahrida-91-kishi-yth-oqibatida-halok-bolgani-malum-boldi>

- Development and submission for approval to the Republican Special Commission for Road Safety of a "Roadmap" for 2025, including targeted measures providing for specific mechanisms for the implementation of the measures defined in the Program;
- Form a list of streets and intersections that do not meet the requirements of road and transport infrastructure, and submit proposals to responsible organizations to eliminate the shortcomings;
- conducting a thorough analysis of traffic and pedestrian flows on the streets of the city of Tashkent, road traffic accidents involving pedestrians, identifying foci of accidents, and taking additional measures to drastically reduce fatalities;
- purchase of 10 (ten) portable (mobile) photo-radar devices in order to prevent traffic accidents related to speed;
- equipping the technical control units under the Road Safety Department of the Main Department of Internal Affairs of the city of Tashkent with modern diagnostic equipment;
- installation of railings based on the analysis of road accidents caused by pedestrians crossing the roadway at an undesignated location;
- In order to prevent road traffic accidents involving minors, the organization of convex pedestrian crossings in 12 locations on the streets and roads of the capital during 2025;
- equipping the technical control units under the road safety department with 48 modern diagnostic devices.<sup>8</sup>.

The priority goal of the ongoing reforms in the field of road safety is to strengthen legal guarantees for the protection of the life and health of road users. Achieving this goal requires the implementation of fundamental reforms in the sphere, the introduction of modern technologies and innovative approaches, a comprehensive scientific analysis of existing problems in the sphere, and the development of effective mechanisms for their elimination. In particular, scientific research conducted in the field of road safety makes it possible to deeply study existing problems, identify the causes of their occurrence, and develop targeted and targeted solutions to them. In this case, the formation of an analytical approach, analysis based on digital databases, as well as a systematic scientific approach, taking into account international experience and standards, is of particular importance. At the same time, the development of a complex of scientifically based political and legal measures is an important factor in ensuring road safety.

For effective work in the field of road safety, it is important, first of all, to correctly understand the essence of this concept and clearly define its differences from other types of safety from a legal, social, and organizational point of view. Road safety is a complex system encompassing multifaceted and interconnected processes, in which ensuring effective interaction between government bodies, law enforcement agencies, public organizations, and citizens plays an important role.

If a scientifically based theoretical and practical understanding of the content of road safety, its main conditions, and specific features is not formed, the possibility of clearly distinguishing this area from other types of safety - for example, environmental, labor, information, or economic security - will be limited. This, in turn, negatively affects the processes of correct identification of industry problems, determining the direction of targeted reforms, and developing an effective management strategy.

Therefore, reviewing the theoretical foundations of road safety, clearly defining its category, functions, and principles, as well as strengthening its legal and regulatory framework, is one of the priority tasks in the scientific and practical development of the industry.

<sup>8</sup> <https://e-qaror.gov.uz/doc/2255743>

The term "road traffic safety" manifests itself, first of all, as a systemic state expressing the degree of protection of persons participating in road traffic from road traffic accidents (RTA) and their consequences through legal, physical, and organizational measures. This concept includes not only ensuring the safety of people, but also the safety of vehicles, road infrastructure, cargo, and other material assets. Road safety is one of the important factors in ensuring law and order in society, improving the quality of life of the population, and forming a sustainable transport system.

A road traffic accident is a real event that occurs during the movement of a vehicle, causing harm to human life or health, as well as damage to material assets, and in many cases occurs due to violations of the law, lack of control, shortcomings in road infrastructure, or factors related to the human factor. From this point of view, road safety is not only a set of preventive measures, but also a sphere of social and legal activity that requires systematic analysis, planning, and management. For the effective organization of this area, a systematic and comprehensive approach to road safety is necessary, which should cover its regulatory, organizational, institutional, socio-psychological, and technical-technological aspects. In particular, based on the results of scientific research in this area, improving the theoretical foundations of road safety, identifying its main features, functions, and subjects is considered one of the important tasks.

At the same time, in national jurisprudence, the concept of "road traffic safety," its essence and characteristics have always been of interest. However, despite numerous scientific studies conducted in this area, a comprehensive and universally recognized definition of this concept has not yet been formed. There are different approaches among lawyers, in which legal, organizational, and social aspects are interpreted differently. Along with legal definitions, theoretical views on road safety have also been formed, which leads to certain uncertainties in approaches to identifying and solving existing problems. Therefore, the development of a unified scientific definition of road safety, the definition of its main structural elements and defining criteria will serve to eliminate theoretical and practical problems in this area. This, in turn, is an important factor in increasing the effectiveness of state policy, strengthening legal mechanisms, and creating a safe road transport environment.

The fact that different legal definitions of the concept of "road traffic safety" are given is explained by constant changes in its content. This is the natural state of any phenomenon. The content of road safety is also determined by the specific historical conditions of the state's development, its significance, and the state of legislative regulation. Therefore, the essence of this term, formed at the end of the 20th century as a result of political and socio-economic changes in the 90s, fundamentally differs from the content of the concept of the former Soviet period<sup>9</sup>.

At the same time, the lack of a clear scientific and theoretical definition of this term, the discrepancies between various scientific views and methodological approaches prevailing in the field, and the lack of a unified "special research methodology" in the study of road safety also indicate this. This strengthens the expansion of existing scientific debates and discussions, as well as the conceptual diversity in the field.

Definitions and well-founded opinions given by researchers belonging to different scientific schools often differ from each other. This difference is often explained by changes in the analytical models, normative criteria, and scientific methodological approaches used by them. As a result, researchers may not fully understand each other's opinions in their interactions and may not adequately accept the evidence. This hinders the formation of clear and universally recognized foundations for the scientific systematization of road safety.

<sup>9</sup> Майоров В. П. Государственно-правовое обеспечение безопасности дорожного движения в Российской Федерации: теоретико-прикладные проблемы. - Челябинск, 2007. – С. 8.



Therefore, one of the important conditions for the sustainable and effective development of the industry is the revision of the essence and content of the concept of "road safety," the strengthening of its scientific and legal foundations, and the development of general theoretical and methodological foundations used in research.

In conclusion, it can be said that the issue of ensuring road safety in modern society is considered not only as a legal or technical problem, but also as a multifaceted socio-economic problem requiring a systematic and comprehensive approach. This sphere is inextricably linked with a number of factors, such as socio-legal consciousness, management efficiency, the state of transport infrastructure, the legislative framework, and innovative technologies. The above studies indicate that the relatively stable decrease in the number of road accidents in our country in recent years is the result of concepts, programs, and regulatory legal acts adopted by the state. In particular, the comprehensive measures being implemented within the framework of the national program "Safe and Smooth Road" serve to increase the safety of road users. However, the results of the analysis show that there are still pressing problems in this area. In particular, accidents involving children, dangerous situations involving freight and passenger vehicles, and incidents involving driving under the influence of alcohol belong to the high-risk group. At the same time, the absence of a single scientific and theoretical definition of the concept of "road traffic safety," the promotion of different approaches by various scientific schools and lawyers, weakens the legal and methodological accuracy of this concept.

This situation reduces the effectiveness of research on road safety, undermines the commonality of the analytical model and evaluation criteria, and also hinders the consistent integration of sectoral approaches in state policy. Therefore, strengthening the theoretical foundations of road safety, developing unified conceptual approaches, and standardizing the scientific and theoretical apparatus is a prerequisite for the consistent and sustainable development of the industry.

Based on the above analysis and studies, we can present the following recommendations:

*firstly*, the development of a unified and universally recognized theoretical definition that combines legal, social, and technical approaches to ensuring road safety;

*secondly*, the collection and scientific analysis of traffic-related data on a single digital platform, as well as the development of convenient analytical software tools for planning work;

*thirdly*, studying international experience, including through in-depth analysis of road safety systems and practices of such advanced countries as Sweden, Finland, Germany, South Korea, and Japan, as well as improving the national road safety system based on this experience;

*fourth*, further strengthening attention to the safety of children and pedestrians by improving the road infrastructure around schools, pedestrian walkways, and smart traffic light systems;

*fifth*, consistent continuation of work to improve the culture of observance of traffic rules by citizens and conducting regular awareness-raising work to ensure their conscious participation.

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