

ROAD SAFETY AS A FACTOR IN THE PERCEIVED SAFETY OF THE POPULATION OF CITIES AND MUNICIPALITIES IN SLOVAKIA

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Abstract. The article presents the partial results of a research task that examines the significance, content, and methodology of measuring the perceived safety of residents in their place of permanent residence. Road safety is one of the decisive factors influencing the physical safety of the population, which is an integral part of the overall perceived safety. The article presents procedures for determining the significance of measurement, for measuring road safety itself using a perceived qualitative method, as well as for the possibility of using the measurement results to adopt preventive measures to mitigate the risk of traffic accidents. The aim of the article is to arouse the interest of representatives of cities and municipalities, professional and lay public in the need to measure the safety of the population in their place of permanent residence by representatives of municipal and city governments, as well as by the residents themselves. The article applies standard qualitative and quantitative methods of scientific research.

Keywords: security; physical safety of the population; road safety; security risk; security threats; risk management; municipality

1. Introduction

The current development of global and regional security is increasingly forcing representatives of international organizations, national governments, and residents to address this issue.

International organizations and national governments are adapting their security strategies to address emerging security developments, adopting legislative, organizational, personnel, technical, and financial measures to strengthen the security systems of states, with an emphasis on preventing the emergence of crisis phenomena and mitigating their devastating consequences.

The fundamental prerequisite for achieving such an objective is the introduction of a uniform procedure for applying standardised principles, structure and

procedures for the management of security risks and threats according to STN ISO 31000:2019. It is the use of this internationally respected standard that would facilitate and, above all, unify the system for measuring the level of security perceived by the population at all levels of society's governance, from the municipal to the regional to the national level. The application of this standard would also enable wider involvement of the population of cities and municipalities in measuring the level of security in their places of operation in the form of creating a register and a map of security risks and threats of territorial units, which would become the basis for taking preventive measures of crisis management by municipal, municipal and regional governments.

This is especially true for representatives of municipal governments, which, following Paragraph 15a, sections 1 and 2 of Act 49/1994 Coll. on Civil Protection of the Population, are obliged to provide information to the public on the sources of danger and the possible extent of the consequences of an emergency.

The Bratislava University of Economics and Management has been addressing this issue since its foundation. Teaching at all three levels of higher education, research activities combined with publishing activities are proof of this.

This paper presents partial results from a research project and dissertation aimed at developing procedures for measuring civil security in territorial units of the Slovak Republic and abroad.

Since the scope of the research tasks exceeds the capacity of a scientific journal, the authors of the paper focused on the presentation of the results of the research with an emphasis on road safety, which is an integral part of the personal dimension of civil security and thus part of the quality of life of the population.

2. An overview of the importance and current state of measurement of the level of citizen safety

Safety can be defined as an objective state of a social, natural, technical, technological or other system, which by its parameters, in a given environment, ensures its functionality and creates conditions for its further development, and at the same time as a subjective perception of this state by a person, experiencing a sense of peace without fear of possible or actual threats to the person, society and the system of their security environment [1].

Security, as a key factor of human needs, can also be understood through the theory of the hierarchy of human needs by the American psychologist Abraham Harold Maslow. Security is second in the hierarchy of seven human needs, just after physiological needs [2].

However, according to the 1994 UN Human Development Report, human security should be the starting point for national political thinking and practice. This report presented seven so-called dimensions of human security: economic, food, health, environmental, personal, community and political security. Human

security should not be a concern for weapons, but a problem for human life and dignity. The concept of human security is viewed much more broadly, arguing that the reference object should be the individual [3].

According to that report, road safety is expressed in terms of the number and consequences of road accidents and is an integral part of the personal dimension of human safety. Therefore, it requires due attention.

UN General Assembly Resolution 66/290 states that “human security is an approach that helps Member States identify and address the broad and cross-cutting challenges to the survival, livelihoods and dignity of their people”. It calls for “comprehensive, context-specific and prevention-oriented people-centred responses that strengthen the protection and empowerment of all people” [4].

Both the Slovak Republic and the Czech Republic have these roles enshrined in constitutional laws, in laws on state security, on defence, on civil protection of the population, on crisis management and in several other legal provisions that create a sufficient legal framework for achieving and maintaining adequate security for the state and its inhabitants.

To strengthen the protection of human rights and freedoms and the status of all people in their place of action, whether in their place of residence, work, study or recreational activities, it is essential to know the level of perceived security, which people consider to be a crucial dimension of their quality of life.

Many factors influence the level of safety. In addition to the geographical and climatic conditions of the territory, it is the actors who, on the one hand, create and maintain the desired level of security and, on the other hand, it is the actors who are the source of security risks and threats as a result of wars and constant changes in trends, not only economic, but also socio-demographic, political and legal, environmental, as well as due to natural disasters and climate change. These changes create an objective need to search for new methodological tools for assessing security using quantitative, but increasingly also qualitative methods of measuring its level [5].

The tools for assessing the level of safety and security in the population include various systems for measuring it at both international and national levels.

However, their common feature is that most of them are based on publicly available objective statistical data. For example: the research study *Public Security Index Central America: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama* [6] presents the results of measuring the level of security from statistical data on crime, traffic fatalities, domestic violence, security expenditures, and the number and distribution of police forces within those countries as a whole, and details in the regions of each country, but does not examine the perceived level of security by the population.

In terms of measuring and comparing global physical and economic security using indices, the research study “*Global Terrorism Index 2015*” is well known [7].

“*Global Peace Index*” [8], “*Positive Peace Report*” [9] and “Peace and Corruption” [10]. by the World Institute for Economics and Peace.

A minimum of systems for measuring the level of security of the population are oriented towards measuring the perceived security of their place of residence, school, work or recreation.

The first known case of measuring the level of security of the population at the place of residence is associated with the results of research presented in 1998 by the Centre for International Statistics at the Canadian Council for Social Development. This Centre, in collaboration with the Insurance Committee of Canada, developed a model to measure the *Personal Security Index* [11]. While the term personal security is understood only as economic, physical and health security, which are expressed by subjective, or perceived by the human individual, and objective, or statistical indicators. In Table 1 we give an example of objective and subjective indicators of physical or personal security.

Table 1

Physical security		Indicators	
		Objective	Subjective
Physical and mental well-being		Proportion of adult population with at least one health problem	Proportion of persons who do not perceive themselves to be in good health
		Rate of non-intentional deaths among adults	Proportion who report living under stressful conditions
		Incidence of cancer	Proportion who believe they would get adequate care in case of illness
Personal safety	Violent crime	Violent crime (number of founded incidents)	Individual perception of level of violent crime in their communities (i.e. how safe do you feel (or would you feel) walking alone in your area after dark?)
		Number of homicides/ murders (all criminal incidents resulting in death)	
	Property crime	Property crime (number of founded incidents)	Individual perception of level of property crime in their communities (i.e. during the last five years, do you think your neighborhood has a higher amount of property crime, about the same or a lower amount of crime?)
		Number of residential, commercial, auto break-ins; Number of motor vehicle thefts	

Unfortunately, unlike the personal dimension of the UN report, this personal dimension of security does not include, among others, road safety as expressed by traffic accidents resulting in death or serious injury.

The European Union sees the economic and physical security of the population as indicators of the quality of life. The physical dimension of the security of the

population includes only crime, violence and vandalism. It does not include road safety as a quality-of-life indicator, and in this it is also at odds with the 1994 UN Human Development Report, where road safety is an integral part of the physical or personal safety dimension of the population.

However, the EU pays particular attention to objectively assessed road safety. From several indicators, we select the number of deaths per million inhabitants by country for 2023 compared to 2013 [12] Fig.1.

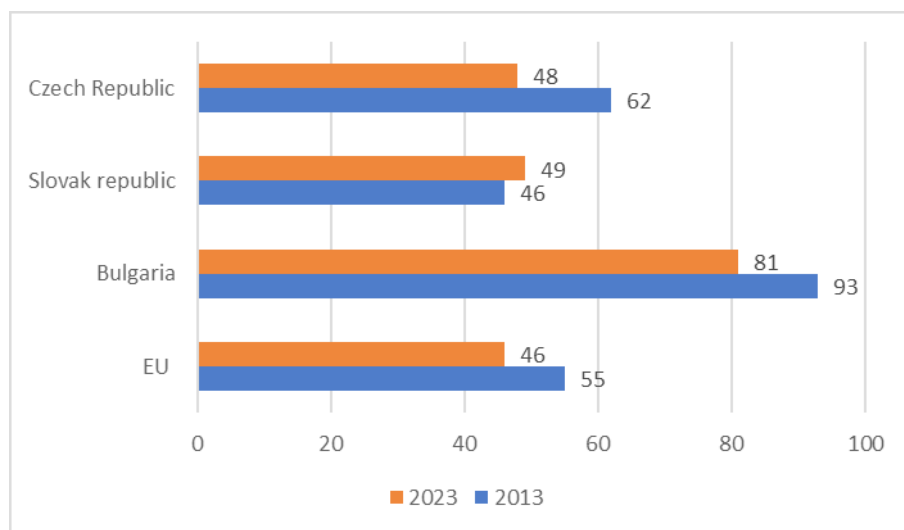


Figure 1. Number of fatalities per million inhabitants by selected countries, 2023 compared to 2013

The graph mentioned above shows a positive trend in the number of fatal traffic accidents. Compared to 2013, there is a significant decrease in the number of road fatalities. Of the countries surveyed, neither Bulgaria nor the Czech Republic reaches the EU average. The Slovak Republic in 2013 was significantly better than the EU average, but in 2023 it also already exceeds the EU average by two cases per million of the country's population. These data reflect the objective level of population safety within the EU countries. Undoubtedly, this is data that is of particular interest to the competent institutions and their staff at the national level, and it is also of interest to the professional public. However, these data are not of interest to the inhabitants of towns and cities, because they do not feel threatened by these events.

The Slovak Road Administration, as an independent budgetary organisation of the Ministry of Transport and Construction of the Slovak Republic, is the

national coordinator for improving road safety. In order to achieve its objective, it analyses and statistically evaluates the risk rates of road accidents, especially those resulting in death and serious injury to road users [13]. In addition to the statistical development of accident rates on Class I roads (Fig.2), it establishes and maintains accident location summaries, maintains map summaries, surveys and action plans.

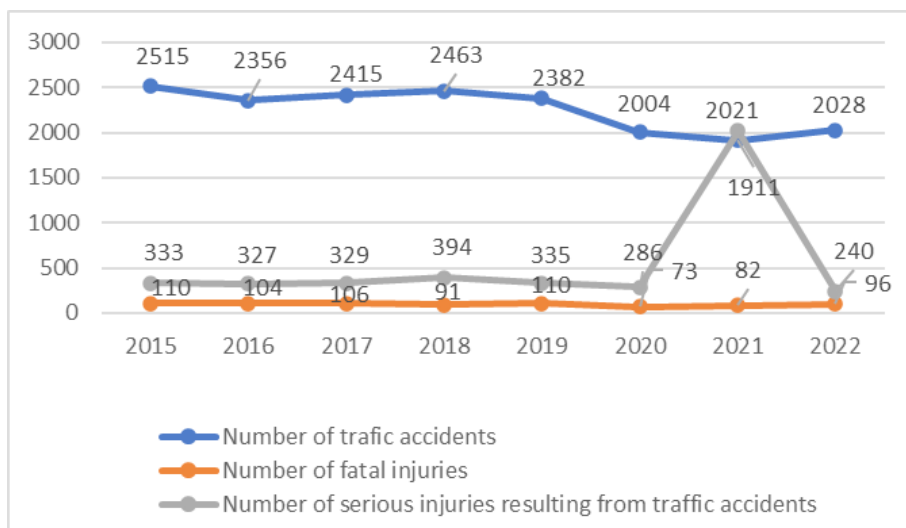


Figure 2. Development of the number of traffic accidents, fatalities, and seriously injured persons in Slovakia 2015 – 2022

The inhabitants of towns and villages where accident sites are located have a different perspective. For the evaluation of the level of safety, as a part of the quality of life of the inhabitants of towns and villages, by the representatives of municipal governments should not only be statistical data, for example, on traffic accidents, violence and crime, or on the deployment of the police, fire brigades, security cameras, the number and availability of medical facilities, but above all it should be the level of safety perceived by the inhabitants, because this dimension has an impact on their satisfaction or dissatisfaction in the place of their operation.

Currently, there is no legal possibility where they can express their perceived level of security and its different dimensions, including road safety.

This gap in the management system of security risks and threats to the perceived security of the inhabitants of cities and municipalities is precisely what the international research project of the Bratislava University of Economics and Management, Slovakia, and the “Jiří z Poděbrad” Institute in the Czech Republic is addressing.

The theoretical basis of the research project will be the publication outputs of BUEM lecturers and researchers led by Kováč, M and Hudáková, M. In several articles [14] and monographs [15], they present several principles and procedures for the use of internationally recognized standardized procedures in measuring the level of perceived safety of inhabitants of towns and villages.

3. Objectives and research methodology

The main objective of the research is to develop and verify the applicability of an alternative methodology for measuring the level of safety of the population in the territorial units of cities and municipalities as a fundamental prerequisite for the first phase of crisis management in public administration according to the Conceptual Reform of Crisis Management and Civil Protection for the period 2025 – 2030, [16]. It is desirable to actively involve local governments and residents of cities and municipalities in the process.

The partial objectives of the research will be:

- Mapping and describing the current state of measurement of the level of security at the supranational and national levels of the Slovak Republic and the Czech Republic.

- To identify and compare the interest of the population of selected municipalities of the Slovak Republic and the Czech Republic in the current state of awareness of the level of security and on security risks and threats in their place of operation.

- Describing the content of the individual dimensions of personal security of the population according to the UN Report on Human Security and setting the priorities of the population in terms of assessing the quality of their own life in their place of residence.

- Proposing principles, structure and procedures for the management of security risks and threats in the territorial units of cities and municipalities according to STN ISO 31 0000:2019. Risk management. Principles and guidance.

- Expert validation of the proposed methodology for assessing risks and security threats in practice as a basis for measuring the level of security using the Delphi method by selected experts in risk and crisis management in public administration and representatives of selected municipalities of the Slovak Republic and the Czech Republic.

- Proposal of the content and form of security risks and threats registers and maps of the level of security, security risks and threats of the city/municipality as a basis for improving the information and quality of life of the inhabitants.

In addition to the standard methods of scientific investigation, shift-quantitative and qualitative methods of risk management, as outlined in STN ISO 31000:2019, Mathematical-statistical methods, and the expert analytical method Delphi will be applied to verify the investigation's results.

The research samples of the research will be representatives of municipalities, residents and experts on public safety, crisis management and civil protection of the population.

The central hypothesis of the research will be to test the assumption that representatives of municipal governments as well as residents are interested in participating in the measurement and disclosure of the level of security in the place of residence.

Other hypotheses will be to test the assumptions that:

- Residents' level of safety and security in their place of residence influences their decision-making about their future.

- Road safety is an essential part of the personal dimension of security.

- Both residents and local government officials are interested in participating in the measurement of the level of safety of the population, as well as in the assessment of security risks and threats in their place of residence and in the creation of registers and maps of risks and threats.

- Municipal government representatives consider the security risk and threat register as a crucial basis for the preparation and implementation of preventive measures of the municipality's crisis management, also with preparation for the potential use of the Concentrated Social Security Centre [17].

- Municipal government representatives welcome the possibility of using security risk and threat maps as an option to inform the population in the municipality's information systems.

- Municipal representatives support the collection and evaluation of input for security risk and threat management on an annual basis.

- Municipal representatives support the establishment of joint offices for crisis management and civil protection.

- Municipal representatives agree with the institutionalisation of the obligation to implement security risk and threat management in their respective territorial units.

The attitudes of the population and representatives of municipal governments towards the need to involve the population in measuring the perceived level of security in their area of operation will be the subject of investigation.

The subjects of the research will be local government representatives and inhabitants of parity selected towns and municipalities in the Slovak Republic and the Czech Republic.

The primary sources of research will be the results of survey questionnaires with residents and experts in crisis management and civil protection, guided interviews with municipal representatives, as well as the personal experience, skills and competences of individual members of the research team.

Secondary sources will be legal regulations of the Slovak Republic and the Czech Republic, strategic documents on security of the Slovak Republic and the Czech Republic, scientific monographs, textbooks, scientific journals, proceedings

of scientific conferences, official statistical data from the websites of the Statistical Office of the Slovak Republic and state and local government authorities.

The outputs of the research project will be:

- 2 articles to the non-indexed scientific journal of the University of Science and Technology;
- 2 articles to a scientific journal registered in Web of Science or SCOPUS databases;
- 2 papers in proceedings of international scientific conferences at home and abroad;
- Teaching texts for the courses Risk Management in Public Administration and Crisis Management in Public Administration.

The research will be conducted in accordance with the scheduled tasks from September 2026 to August 2029.

4. Results of the research in the Slovak Republic

In the Slovak Republic, during the preparatory phase of the research, the accuracy and clarity of the questions formulated for the questionnaire survey with residents and the structured interviews with representatives of municipal governments in the Nové Zámky District of the Nitra Self-Governing Region were verified.

The survey sample of residents consisted of 110 respondents from the municipality of Tvrdosovce, which represented 2.46% of the total number of 4,460 permanently resident residents of working and post-working age. The structure of respondents by age is presented in the graph in Fig. 3.

The reason why we selected the population of Tvrdosovce municipality in the selection of the survey sample was the well-developed social and technical infrastructure, ethnically mixed municipality, I, class road communication, which passes through the municipality. Another critical factor in the selection process was the willingness of the municipal government representatives and the interest of the village inhabitants in participating in a meaningful survey. In our selection process, we considered the length of residence in the municipality and the location of residence, ensuring that respondents were evenly distributed throughout the municipality to gather a range of perspectives on perceived safety.

The questionnaire contained 27 closed questions in addition to an initial explanation of the purpose and importance of the statistical questionnaire for the residents themselves. Respondents were given the opportunity to select the answer from a choice of four possible responses that most closely matched their assessment of the level of safety.

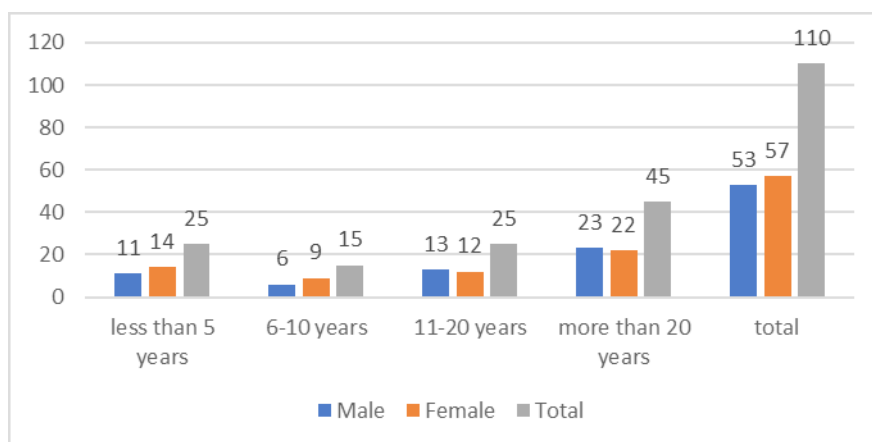


Figure 3. Survey sample respondents of residents of the village of Trvošovce

The questionnaire was distributed in paper form to obtain the most reliable results regarding the respondents' understanding of the questions.

The first part of the questionnaire was devoted to ascertaining the respondents' views on the priorities of the different dimensions of public safety. Almost 70% of respondents indicated that the highest priority was the dimension of personal (physical) safety and security, which, in addition to crime and violence, also included road safety as expressed by the number of traffic accidents resulting in death or serious injury, as well as the quality and maintenance of roads.

The second part of the questionnaire aimed to gauge residents' interest in participating in the measurement of risk levels and in the publication of the measurement results. Over 63% of respondents expressed an interest in participating in the identification, analysis and assessment of safety risks and threats where they live.

The third part focused on assessing the current level of security for the population in selected dimensions, including political security, social security, economic security, personal (physical) security, and environmental security.

The level of road safety was assessed as part of personal safety. The survey results showed a consensus in a rather negative assessment of risks and threats arising from traffic accidents (77.3%) and violent crime (87.3%) (Fig. 4).

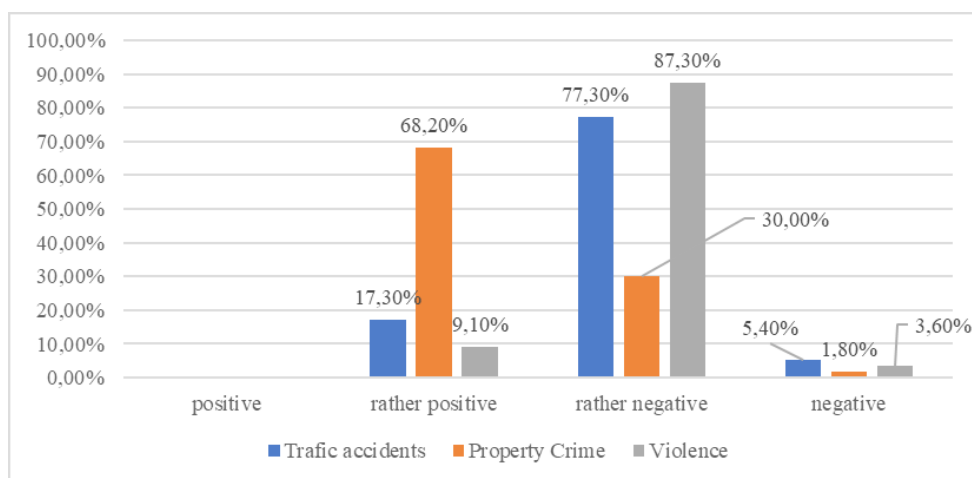


Figure 4. Assessment of the level of the personal dimension of the safety of the residents of the village of Tvrdšovce

A relatively small dispersion is also observed in the rather positive assessment of property crime (68.2%).

From the graph in the figure, we can observe a relatively small dispersion of answers between rather positive and rather negative evaluations, with a predominance of rather negative evaluations for traffic accidents and violent crime. Rather, a positive evaluation prevails over a negative evaluation.

The design part of the research will propose a process for developing a Village/City Security Risk and Threat Register and Map.

The register will include all the steps of standardized risk management, as outlined in STN ISO 31000:2019. It will include:

- name of the municipality and a brief description of the geographical, demographic and climatic conditions, description of the social and technical infrastructure;
- the public safety dimension;
- identification of the risk in that dimension, indicating the type of risk or threat, a description of the possible cause of occurrence and an indication of the possible consequences in the event of a crisis;
- analysing the risk, estimating the probability of occurrence, assessing the possible consequences and indicating the level of risk;
- assessing the risk according to severity, e.g. small, medium or large risk;
- categorising the risk according to the acceptability or unacceptability of the risk;
- risk management, indicating proposals for risk management measures, estimated costs, responsibility for preparing a plan for implementing risk

management measures, and finally indicating the system and responsibility for risk monitoring.

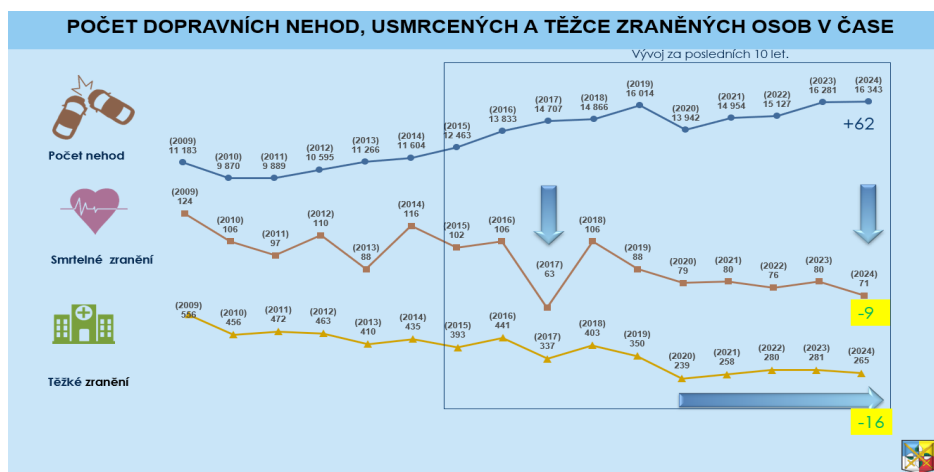
The map of security risks and threats will be proposed in a digitised form with a colour-coded indication of the municipality's high- and medium-risk areas.

Both documents should be updated annually, or after each crisis situation in the municipality/city, and published.

5. Results of the preliminary investigation in the Czech Republic

Traffic safety solutions in small and medium-sized municipalities in the Czech Republic can be particularly interesting. This is especially true for the Central Bohemian Region, which surrounds the capital city of Prague and is the largest region in the country. Traffic safety remains a complex and pressing problem here. All motorways leading to Prague pass through the Central Bohemian Region. The suburban areas of Prague that are already part of the region are served by a dense network of local bus transport, and thousands of private vehicles travel through the region to Prague every day. The same applies to rail transport – the railway network surrounding Prague is particularly dense in the Central Bohemian Region. In its “Conceptual Plan for the Optimization of Road Transport in the Central Bohemian Region,” the Regional Authority states: *“The Central Bohemian road network is the densest and most heavily burdened in the entire Czech Republic. Despite efforts to make the most efficient use of all available resources, the issue of underfunding remains. As a result, the main risks associated with project implementation are primarily due to a lack of financial resources.”* [18] Thus, threats to traffic safety in the Central Bohemian Region stem not only from traffic density, but also from risks associated with aging infrastructure.

According to a chart published by the Police of the Czech Republic, the development of road accidents on roads in the Central Bohemian Region is as follows:



First curve – Number of accidents

Second curve – Number of fatal injuries

Third curve – Number of serious injuries resulting from traffic accidents

Figure 5. Number of traffic accidents, fatalities and serious injuries in the years 2000 – 2024 [19]

As shown in Chart 1 above, except the years affected by anti-pandemic measures related to the Sars-Cov2 outbreak, the number of traffic accidents in the Central Bohemian Region continues to rise. These risks must be addressed not only by state and regional institutions - which have authority over the police and road infrastructure management - but also by municipal governments. Integrating traffic safety solutions into local public administration activities is essential in this region. Although municipalities do not possess all the necessary powers and tools to independently address the problems associated with traffic accidents and the risks posed to their citizens, they can make significant contributions by cooperating with national authorities that have the relevant competencies.

On the other hand, a positive trend is evident in the decreasing number of fatal and serious injuries resulting from traffic accidents. Nevertheless, the overall number of accidents and their consequences remains a serious risk for all municipalities in the Central Bohemian Region – particularly those located near major regional roadways.

An example of a local traffic safety solution in the Central Bohemian Region is the municipality of Cerhenice. The village is located approximately 50 kilometres from Prague, in the Kolín District. Currently, Cerhenice has around 1,900 inhabitants. Several regionally significant roads pass through the village, and a first-class road connecting Prague and Kolín is located nearby. In addition, a motorway

linking Prague and Hradec Králové runs in the vicinity, meaning that access routes to these key regional transport arteries lead directly through the municipality. For this reason, ensuring traffic safety is one of the main responsibilities of the local government and a priority of municipal policy.

In the year 2006, traffic lights were installed in Cerhenice to slow down fast-moving vehicles entering the village. These signal-controlled measures proved to be effective, particularly on a psychological level. This type of intervention – requiring speeding vehicles to reduce their speed at the entrances to municipalities – is practically suitable for any village, as it effectively curbs fast and dangerous driving within built-up areas. As a result, it helps eliminate the most severe risks associated with fatal or serious injuries.

Another measure was the installation of a traffic light-controlled intersection in the centre of the village, at the junction of roads coming from three directions. This intervention reduced the number of risky traffic situations, especially considering that sidewalks run alongside the roads, used by pedestrians coming from the local train station, the school, or the municipal office. Although this technical improvement was viewed by some as unnecessary - particularly given the size of the village and the volume of local traffic – the municipality considers traffic safety a top priority, regardless of assumptions or opinions suggesting that certain measures may seem excessive.

In addition to installing traffic lights and signal-controlled intersections, traffic safety in the municipality of Cerhenice has also been improved through the systematic construction of sidewalks alongside the main roads. This has resulted in a clear separation of pedestrian and vehicle traffic and has effectively eliminated the risks associated with pedestrians walking directly on the road. This, in turn, has increased the sense of safety among local residents, who can now use the sidewalks without fear of collisions with vehicles during their daily movements within the village. The construction of sidewalks is ongoing and continues as the municipality's financial resources allow.

As already reported last year by the company Citya, 75% of the population in the Czech Republic faces issues related to transport accessibility. [20] Ensuring adequate transport services is also one of the challenges related to traffic safety in municipalities across the country. It should be noted, however, that this is not an issue in Cerhenice. The village is served by a railway line that connects the capital city of Prague with the Central Bohemian town of Kolín. Residents can reach Prague in about one hour via regular trains running from early morning until late at night. They can also get to nearby Kolín - for errands, medical appointments, or shopping - in just ten minutes. Good transport accessibility can thus be considered a key factor in the overall perception of traffic safety among residents.

As a point of interest, it is worth mentioning that the test circuit of the Railway Research Institute is located within the cadastral area of Cerhenice. This facility is

used for testing new locomotives and other rail vehicles that arrive here from all over Europe via the main railway line. However, this transport infrastructure does not pose a safety risk to residents, as it is located outside the main part of the village and the track does not pass through residential areas.

In the long term, the Czech Transport Research Centre recommends the following measures to ensure road safety in municipalities [21]:

- Zone 30 – reducing speed in risk areas to 30 km/h.
- Residential zone – Cerhenice uses this traffic designation to calm traffic.
- Pedestrian zone – more suitable for larger towns and municipalities.
- Shared zone.
- Gateway to the village – in Cerhenice, this is effectively implemented through speed-reducing traffic lights.
- Road narrowing – this is also used in the village to channel traffic into a single lane with greater attention to pedestrians.
- Transverse elements and raised surfaces – these types of traffic-calming measures are also implemented in the municipality.
- Traffic islands – useful especially in places where they do not pose a risk for public transport buses.
- Median strip – this measure is more applicable to larger towns and cities.
- Sidewalk extensions – as already mentioned, this measure has been introduced in Cerhenice.
- Greenery – Cerhenice is an environmentally conscious village where greenery is treated with care and there is an ongoing effort to plant it in new areas, including transport infrastructure zones.

As already stated, all of the measures introduced in Cerhenice have been beneficial to local residents. In 2023, the municipality also conducted a survey among citizens regarding traffic safety, with the following results:

Table 2. Traffic Safety Satisfaction Survey in Cerhenice (2023), conducted by the Municipality of Cerhenice

	Agree	Disagree	Not sure
Cerhenice has good transport accessibility	83%	10%	7%
The number of sidewalks in the village is sufficient	71%	23%	6%
Traffic safety around schools is adequate	75%	12%	13%
I feel safe walking in the village	68%	27%	5%
Overall satisfaction with traffic safety in the village	72%	18%	10%

As the survey results show, the feedback from residents was generally positive, though there is still room for improvement. In general, it is always necessary to seek a reasonable balance between the interests of pedestrians and those of motorists. I believe that no group should be significantly favored over the other; instead, local

policy should primarily focus on the issue of safety. In this respect, priority should naturally be given to those who are more vulnerable and have fewer means of protection - namely pedestrians. However, this should never result in a significant restriction of the interests and needs of drivers.

At the same time, it is fair to say that not everything rests solely on municipalities and towns – pedestrians themselves can also contribute to reducing risks through responsible behaviour. In the Czech Republic, for example, pedestrians are legally required to be clearly visible when walking outside built-up areas.

As a study by the Czech Ministry of Transport points out: *“A driver typically sees an unlit pedestrian wearing black or dark blue clothing at only 18 meters. This means that if the driver is traveling at around 70 km/h, they have less than one second to react and avoid a collision. The situation improves somewhat with yellow clothing, which is visible from 37 meters away, and even more so with white, which can be seen from 55 meters. However, even this distance is not sufficient to safely avoid a pedestrian at night.*

At 75 km/h, a driver needs at least 1.5 seconds to recognize the danger and respond appropriately – during that time, the vehicle travels 31 meters. By the time the driver begins evasive action, more than 150 meters may have already passed since the pedestrian was first spotted. Completing the manoeuvre then requires additional time and distance. In total, a driver needs approximately 200 metres to perform what is, in principle, a simple and common manoeuvre – and a pedestrian is only visible from such a distance if they are wearing reflective elements.” [22].

From all of the above, we can conclude that ensuring traffic safety in small municipalities of the Central Bohemian Region in the Czech Republic depends on a combination of factors. On one hand, it requires a responsible approach and effective work from local governments; on the other, it relies on the cautious and responsible behaviour of all road users.

Conclusion

The above results show that both in the Slovak Republic and in the Czech Republic the issue of road safety is not only dealt with by the competent state and local authorities, but that this dimension of the safety of territorial units is also of interest to the population. The population is sensitive to the level of safety in their place of residence. Often, a low level of security becomes a decisive factor in the decision to change one's place of work, which can bring economic and psychological harm to the population and municipal authorities.

The presented international research project will bring new perspectives on the importance of greater involvement of the population in the identification, analysis and assessment of security risks and threats. It will also offer the opportunity to participate, together with municipal governments, in the preparation

and implementation of preventive measures that can prevent or mitigate the consequences of potential crisis situations. These measures can also contribute to improving road safety, thereby enhancing the quality of life in the areas where people reside.

The project team of experienced scientific and pedagogical staff of the University of Management Economics in Bratislava on the Slovak side and the “Jiří z Poděbrad” Institute in cooperation with representatives of municipalities and inhabitants of selected towns and municipalities of the Slovak and Czech Republic can thus contribute to an alternative solution to the crisis management reform in the Slovak Republic for the years 2025-2030.

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