



Ministry of the Interior
Finland

Internal security | Publications of the Ministry of the Interior
2021:24

Programme for police traffic enforcement and traffic safety for 2021–2030

Publications of the Ministry of the Interior 2021:24

Programme for police traffic enforcement and traffic safety for 2021–2030

Ministry of the Interior

Ministry of the Interior, Helsinki 2021

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Ministry of the Interior

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ISBN pdf 978-952-324-547-1

ISSN pdf 2490-077X

Layout: Government Administration Department, Publications

Helsinki 2021

Programme for police traffic enforcement and traffic safety for 2021–2030

Publications of the Ministry of the Interior 2021:24	Subjekt	Internal security
Publisher	Ministry of the Interior	

Group Author	Ministry of the Interior		
Language	English	Pages	74

Abstract

The tasks of the police include ensuring for their part that the transport system operates as intended. The societal impact objectives of the traffic enforcement and safety work carried out by the police are: 1) reducing the number of traffic deaths and serious injuries as well as combating the grey economy in commercial transport, and 2) preventing, detecting and investigating traffic offences and offences uncovered in traffic and submitting them to consideration of charges as well as maintaining traffic safety.

The general objectives of the traffic enforcement and safety work carried out by the police are: 1) preventive, cooperative and fact-based traffic enforcement and safety work that supports the other goals of the police; 2) ensuring competence; 3) deploying technology efficiently; and 4) active and effective communication by the police.

The traffic enforcement and safety work of the police will aim to improve traffic safety and reduce societal harms. An effort will be made to achieve these objectives through impacts on the following areas, in particular: 1) driving health and alertness, 2) alcohol, drugs and medicines, 3) young people, 4) driving habits and driving speeds, 5) use of safety belts, child safety equipment and protective equipment, 6) distraction (technical devices, mobile devices, other activities), 7) pedestrians, cyclists and pedestrian crossings, 8) commercial transport, traffic crime and the grey economy in road traffic.

Keywords	internal security, traffic safety, traffic enforcement, offences, grey economy		
ISBN PDF	978-952-324-547-1	ISSN PDF	2490-077X
Reference no.	SMDno-2019-1943	Project no.	SM031:00/2019

URN address	http://urn.fi/URN:ISBN:978-952-324-547-1		
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Poliisin liikennevalvonnan ja liikenneturvallisuuden ohjelma vuosille 2021–2030

Sisäministeriön julkaisuja 2021:24		Teema	Sisäinen turvallisuus
Julkaisija	Sisäministeriö		
Yhteisötekijä	Sisäministeriö		
Kieli	englanti	Sivumäärä	74
Tiivistelmä	<p>Poliisin tehtävänä on osaltaan varmistaa, että liikennejärjestelmä toimii suunnitellulla tavalla. Poliisin liikennevalvonnan ja -turvallisuustyön yhteiskunnallisena vaikuttavuustavoitteena on: 1) liikennekuolemien, vakavien loukkaantumisten ja ammattiliikenteen harmaan talouden vähentäminen ja 2) liikennerikosten ja liikenteessä ilmenevien rikosten ennalta estäminen, paljastaminen, selvittäminen ja syyteharkintaan saattaminen sekä liikenneturvallisuuden ylläpitäminen.</p> <p>Poliisin liikennevalvonnan ja -turvallisuustyön yleisinä tavoitteina on: 1) liikennevalvonta ja -turvallisuustyö on ennalta estävää, yhteistyöhakuista ja tietojohdoista sekä muita poliisin tavoitteita tukevaa, 2) osaaminen varmistetaan, 3) tekniikkaa hyödynnetään tehokkaasti ja 4) poliisi viestii aktiivisesti ja vaikuttavalla tavalla.</p> <p>Poliisin liikennevalvonnalla ja -turvallisuustyöllä vaikutetaan siten, että liikenneturvallisuus paranee ja yhteiskunnalliset haitat vähenevät. Tähän pyritään vaikuttamalla erityisesti seuraaviin asioihin: 1) ajoterveys ja vireystila, 2) alkoholi, huumeaineet ja lääkkeet, 3) nuoret, 4) ajotavat ja ajonopeudet, 5) turvavöiden, lasten turvalaitteiden ja suojarusteiden käyttäminen, 6) tarkkaamattomuus (tekniset laitteet, mobiililaitteet, muu toiminta), 7) jalankulku, pyöräily ja suojatie, 8) ammattiliikenne, kuljetusrikollisuus ja tieliikenteen harmaa talous.</p>		
Asiasanat	sisäinen turvallisuus, liikenneturvallisuus, liikennevalvonta, rikokset, harmaa talous		
ISBN PDF	978-952-324-547-1	ISSN PDF	2490-077X
Asianumero	SMDno-2019-1943	Hankenumero	SM031:00/2019
Julkaisun osoite	http://urn.fi/URN:ISBN:978-952-324-547-1		

Polisens program för trafikövervakning och trafiksäkerhet 2021–2030

Inrikesministeriets publikationer 2021:24		Tema	Inre säkerhet
Utgivare	Inrikesministeriet		
Utarbetad av	Inrikesministeriet		
Språk	engelska	Sidantal	74
Referat	<p>Polisen har till uppgift att för sin del säkerställa att trafiksystemet fungerar på planerat sätt. Det samhälleliga effektmålet för polisens trafikövervakning och trafiksäkerhetsarbete är att 1) minska antalet döda och allvarligt skadade i trafiken samt grå ekonomi som förekommer i yrkestrafik och 2) förebygga, avslöja och utreda trafikbrott och brott som förekommer i trafiken och föra sådana brott till åtalsprövning samt att upprätthålla trafiksäkerheten.</p> <p>Allmänna mål för polisens trafikövervakning och trafiksäkerhetsarbete är att 1) trafikövervakningen och trafiksäkerhetsarbetet sker på ett förebyggande, samarbetsinriktat och informationsstyrt sätt och stöder polisens övriga mål, 2) kompetensen säkerställs, 3) tekniken utnyttjas effektivt och 4) polisen informerar aktivt och effektivt.</p> <p>Polisens trafikövervakning och trafiksäkerhetsarbete bidrar till att trafiksäkerheten förbättras och de samhälleliga skadeverkningarna minskar. Detta eftersträvas genom att påverka i synnerhet följande frågor: 1) körhälsa och alerthet, 2) alkohol, narkotika och läkemedel, 3) unga personer, 4) körsätt och körhastigheter, 5) användning av bilbälten, skyddsanordningar för barn och skyddsutrustning, 6) ouppmärksamhet (tekniska anordningar, mobila enheter, annan verksamhet), 7) gång, cykling och övergångsställen, 8) yrkestrafik, transportbrottslighet och grå ekonomi inom vägtransporter.</p>		
Nyckelord	inre säkerhet, trafiksäkerhet, trafikövervakning, brott, grå ekonomi		
ISBN PDF	978-952-324-547-1	ISSN PDF	2490-077X
Ärendenr.	SMDno-2019-1943	Projektnr.	SM031:00/2019
URN address	http://urn.fi/URN:ISBN:978-952-324-547-1		

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TO THE READER

The Ministry of the Interior has prepared an Programme for police traffic enforcement and traffic safety for 2021–2030. The Programme contains measures for effective traffic enforcement and traffic safety work of the police which will promote a strong feeling of security and ensure the safety of humans, the environment and property. The Programme emphasises the importance of impact, cooperation, skills, communication, fact-based management and preventive actions. The objectives of the Programme will be implemented by the National Police Board as the organisation in charge of police operations.

The key to policing is an ability to prevent as many offences and accidents as possible. To improve traffic safety, collaboration between a number of stakeholders is required. The Programme does not comment on the organisation of or resource allocations to the traffic enforcement and safety work carried out by the police, even if stepping up traffic enforcement would be a cost-effective way of improving traffic safety. This question is related to the overall allocation of resources to the police.

The Programme describes the operating environment of road traffic, the current state of traffic safety, and factors that affect safety. Systematic and goal-oriented work is essential for improving traffic safety. Extensive international research evidence shows that the challenges of traffic safety and measures taken to improve it are fairly similar in different countries. The Ministry of Transport and Communications is currently preparing a National traffic safety strategy. The Programme for the police will be updated based on the conclusions of this strategy if necessary.

The preparation of the Programme was supported by a steering group chaired by Stefan Gerkman, Police Director at the Ministry of the Interior. The Vice Chair of the steering group was Maria Hoikkala, Assistant Police Commissioner at the National Police Board (until 15 October 2020) and Hannu Kautto, Assistant Police Commissioner (from 15 October 2020). Jari Pajunen, Chief Superintendent at the Ministry of the Interior, served as the group's Secretary. The members of the steering group were Elina Immonen, Director of Unit at the Ministry of Transport and Communications;

Marko Sillanpää, Director of Road Transport at the Finnish Transport and Communications Agency; Auli Forsberg, Traffic Safety Specialist at the Finnish Transport Infrastructure Agency; Kalle Parkkari, Road Safety Director at the Finnish Crash Data Institute; Anna-Liisa Tarvainen, Managing Director at the Finnish Road Safety Council (until 17 June 2020) and Pasi Anteroinen, Managing Director at the Finnish Road Safety Council (from 17 June 2020). The members of the secretariat responsible for preparing the programme were Jari Pajunen, Chief Superintendent at the Ministry of the Interior; Heikki Kallio, Chief Superintendent at the National Police Board; Jouni Takala, Superintendent in Häme Police Department; and Ilkka Kantola, Chief Inspector in Western Uusimaa Police Department.

A need for an Programme for the traffic surveillance and safety work of the police was identified as the previous traffic safety strategy of the police (for the period 2007 to 2010) dates back to 2006. The problems associated with traffic have changed little since the previous traffic safety strategy for the police was completed. The significance of driving health has been emphasised in recent years, and knowledge of this theme has been accumulated as a result of high-quality work of the road accident investigation teams in Finland. In its performance audit of traffic enforcement by the police in 2019, the National Audit Office also recommended that the Ministry of the Interior strengthen the strategic management and performance guidance of traffic enforcement and road safety as well as assess the requisite development measures of traffic enforcement and the impact of these activities. The purpose of the present Programme is to strengthen this strategic management.

Katriina Laitinen, Acting Director General

Stefan Gerkman, Police Director

June 2021

1 Introduction

This Programme for police traffic enforcement and traffic safety contributes to implementing the Ministry of the Interior's joint strategy (Ministry of the Interior 2019). The joint strategy of the Ministry of the Interior and its administrative branch has four objectives: 1) maintaining a strong general sense of security, 2) keeping people, the environment and property safe, 3) countering threats to national security, and 4) ensuring that immigration is well-managed and socially sustainable. The first two objectives are closely related to traffic. The key to policing is an ability to prevent as many offences and accidents as possible.

Skilled and committed staff who thrive in their work are the asset to enable the joint strategy. In many respects, traffic enforcement and safety measures require special skills. Developing these skills and making full use of the personnel's competence are some of the success factors for attaining the objectives of the Ministry of the Interior's joint strategy in the traffic surveillance and traffic safety work carried out by the police.

Traffic safety is part of internal security

The vision of the Ministry of the Interior is:

"We all have the right to feel safe – Finland is the safest country in the world."

The Internal Security Strategy helps maintain a strong general sense of security and safety (Ministry of the Interior 2017). The Ministry of the Interior's administrative branch ensures high-quality services are provided, so that the authorities are visible and easily accessible in citizens' daily lives. The authorities communicate openly and provide fact-based information on security issues, which helps people feel a sense of security.

In the Government Report on Internal Security (Government 2021), internal security refers to those aspects of society that ensure that everyone can enjoy the rights and freedoms guaranteed by the rule of law without fear or insecurity caused by crime, disorder, accidents or national or international events. Traffic plays an important role in the lives of citizens and society. Citizens must be able to enjoy the safety guaranteed by the legal system without fear and insecurity caused by crime, incidents or accidents, also in traffic.

The duty of the police is to secure the rule of law, maintain public order and safety, protect national security, prevent, detect and investigate offences, and submit cases

to prosecutors for consideration of charges. The police work in cooperation with other public authorities and with communities and residents in order to maintain safety and security as well as engage in international collaboration as part of their tasks. In the area of public order and security, traffic enforcement is a key police task. In addition, the police ensure that road traffic is safe and runs smoothly.

Traffic enforcement also includes supervision of compliance with other provisions besides those contained in the Road Traffic Act. Among other things, such provisions are included the Vehicles Act, the Driving Licence Act, the Alcohol Interlock Device Act, the Criminal Code, the Car Tax Act, the Act on the Prohibition of Devices that Hamper Traffic Enforcement, the Act on Transport Services and the Act on the Transport of Dangerous Goods. In addition to national legislation, directly applicable legislation of the European Union must be taken into consideration, particularly in enforcement targeting heavy traffic. EU legislation includes the so-called Driving times regulation and the Tachograph regulation.

The Programme addresses changes in traffic and traffic safety and their impacts

The basic tasks of the police include surveillance and emergency response missions, traffic enforcement, crime prevention, and issuing permits and licences. Monitoring and maintaining traffic safety are a basic part of the surveillance, emergency response and traffic enforcement activities. While traffic enforcement is a key method by which the police can influence traffic safety and traffic offences, it is not the only one. Extensive and targeted measures are needed to improve road safety and combat traffic crime. Traffic enforcement is not necessarily the most effective way of influencing certain high-risk behaviours, and such restrictive measure as seizure of the vehicle or an alcohol interlock device may have a higher impact (Høye 2020). In Finland, too, more than a third of those found guilty of drink driving reoffend. We can consequently presume that violations observed in traffic are caused by reasons related to managing alcohol and drug use and substance abuse problems, for example. Traffic is not a separate area of life, and difficulties in life management, health problems or personality traits are reflected in driving behaviour and actions on the road.

Elvik et al. found in their study of traffic enforcement in Norway that significantly increasing traffic enforcement is a cost-effective way of improving road safety (Elvik et al. 2012). Rather than focusing on high-risk individuals, traffic enforcement and traffic safety measures should target all road users. Most road users strive for safe mobility in compliance with the rules of the road and they, too, should be influenced to support this behaviour. So-called ordinary road uses have the greatest share of all road accidents even if high-risk behaviours, including driving health problems, mental health

disorders or self-destructive behaviour, driving while intoxicated, speeding and not wearing a seat belt are often key risk factors in fatal road accidents, and several of such factors typically coincide.

Traffic safety and offences can also be influenced by means of communication, crime prevention as well as permit and licence activities. The police can additionally make an impact on traffic safety through administrative decisions and coercive measures, including those related to a driver's right to drive and driving health as well as vehicles, such as preventing their use. The police also encounter holders of a right to drive on different missions: while investigating drug offences and performing tasks that involve substance abuse or suicidal persons, they may have reason to suspect that a person no longer meets the health requirements for holding a driving licence, or is unable to drive safely due to their state of health.

Improving road safety and combating crime in commercial transport require collaboration. Information gathered in the course of traffic enforcement is communicated to other authorities, including the Finnish Transport and Communications Agency for the purpose of supervising holders of commercial transport licences, the occupational safety and health authorities at the Regional State Administrative Agencies for business supervision, or the Tax Administration for tax control. Licence conditions frequently contain the requirement of irreproachability.

Traffic crime mainly remains hidden and cannot be uncovered without police enforcement. The aims of policing are improving traffic safety and detecting and preventing traffic crime. Other offences are also detected as part of traffic enforcement. Enforcement additionally improves the smooth flow of traffic and reduces the negative effects of traffic on the environment.

The police safeguard a well-functioning traffic system and help mitigate negative societal impacts of traffic

The traffic system consists of transport infrastructure, passenger and goods transport services and traffic control systems, including traffic lights and traffic signs. The traffic environment, traffic regulations, vehicles and road users are all elements of traffic that have an impact on its safety. The task of the police is to monitor compliance with the rules and, for their part, to also ensure that the transport system operates as planned. For example, speed limits on roads and streets have an impact on safety, noise and transport emissions. If road users do not observe traffic regulations, the transport system will not operate as intended. The police are tasked to ensure that road users operate as planned in the transport system.

In its performance audit of traffic enforcement by the police in 2019, the National Audit Office found that enforcement has both direct and indirect impacts on central government finances (National Audit Office 2019). Road accidents cause considerable human and economic losses. The cost of personal injuries sustained in road traffic amount to approx. EUR 1.3 billion annually. Traffic enforcement helps prevent and detect traffic crime, the economic significance of which is great. The estimated scale of the grey economy in transport alone is around EUR 500 million a year. Enforcement measures focusing on heavy traffic are relevant to not only safety issues but also the perspective of combating the grey economy.

2 Structure of the Programme for police traffic enforcement and traffic safety

This Programme is intended to guide the work of the police. The Ministry of Transport and Communications is currently preparing a National road safety strategy, and this Programme will contribute to supporting its implementation. The Programme for the police will be updated as necessary once the national strategy has been completed. The Programme will implement both national and international strategic policies on traffic safety, which are described in Chapter 3. In general, these upper-level policy priorities are based on extensive research evidence on the causes and underlying factors of traffic accidents. Other issues that influenced the policies contained in the Programme are described in Chapter 4. The preparation of the Programme also drew on information about traffic safety and a general situational picture of traffic, which are described in Chapter 5. The causes and key risk factors of traffic accidents are described in Chapter 6. The actual policy priorities of the Programme for police traffic enforcement and traffic safety are presented in Chapter 7. The implementation of the Programme, reporting and indicators for measuring the achievement of its objectives are described in Chapter 8.

3 Key strategic traffic safety policies

3.1 National policies

In 2016, the Government adopted a Resolution on improving road safety (Ministry of Transport and Communications 2016), which continued a series of previous resolutions adopted in 1993, 1997, 2001, 2006 and 2012. The Resolution aims to make sure that road safety improves with respect to drivers, vehicle and roads and identifies traffic surveillance as one of the measures that promote road safety. Impaired driving ability is listed as one of the underlying risks that cause accidents. Active communication is needed about the risks of intoxicant use or fitness to drive impaired for other reasons.

The goal set by the Government was to halve the number of deaths on road by 2020 compared to the 2010 level. In 2020, the maximum number of road fatalities should be 136. While road safety has improved since 2010, this target has not been achieved.

The long-term vision of traffic safety in Finland adopted by the Government in its resolution of 2001 is:

"The design of the road transport system should ensure that no one has to die or be seriously injured in traffic."

The vision stresses the responsibility of all road users and is strongly underpinned by the idea that human error should not lead to fatalities or serious injuries.

Prime Minister Marin's Government Programme notes that improvement of traffic safety will again be included in the development of the transport system and services (Government 2019). The aim is to respond to the zero scenario of the European Union (zero traffic fatalities by 2050). In line with the Government Programme, a national traffic safety strategy will be drafted under the leadership of the Ministry of Transport and Communications during the current government term by the end of 2021. This strategy will cover the period 2022–2026. It will be drafted in broad-based cooperation, as reducing traffic fatalities and injuries requires action in several administrative branches.

The Target programme for the prevention of home and leisure accidents for 2021–2030 (Korpilahti et al. 2020) also refers to traffic safety in the context of children, young people, working age citizens and older people. The Target programme identifies key issues for improving road safety and helping prevent home and leisure accidents. They include versatile ways of promoting safe driving speeds, identification of and timely intervention in risk-level alcohol and drug use, driving health and alertness, and promoting the use of safety equipment. Improving the safety of walking and cycling has also been set as a goal.

The National Mental Health Strategy and Programme for Suicide Prevention 2020–2030 (Vorma et al. 2020) contains a measure on preventing suicides in traffic. The programme is based on holistic consideration of mental health in society, including its various sectors and levels. The programme proposes that the risk of suicide should be addressed in road safety work and environmental planning of transport infrastructure.

The National programme for the promotion of walking and cycling (Ministry of Transport and Communications 2018a) seeks to improve the conditions for walking and cycling in Finnish municipalities as well as to support the reduction of greenhouse gas emissions from transport and improvement of public health in Finland. The Programme sets the target of a 30% increase in the number of journeys completed by walking and cycling by 2030. The same target is contained in the National Energy and Climate Strategy.

The Moped and Motorcycle Strategy 2025 (Ministry of Transport and Communications 2018b) emphasises the importance of traffic education; its measures include influencing driving behaviour and promoting the use of protective equipment.

The Substance Abuse and Addiction Strategy (Kotovirta et al. 2021) notes that when preparing programmes and strategies, government level collaboration will be engaged in, the availability of the requisite expertise in substance abuse and addiction matters will be ensured, and interfaces of these efforts with substance abuse and addiction work will be secured. Education and information will be provided on how medicines as well as the combined effects of medicines, alcohol and drugs affect driving ability. The strategy also notes that the preparation of a traffic safety strategy will be supported to promote sober driving among young people.

The Government Report on Internal Security (Government 2021) notes that Finland's internal security is primarily based on preventing problems and incidents. An effort is made to prevent as many accidents, disasters, offences and other incidents as possible. According to this Government Report, the preconditions for a high level of security are:

- equitable and high-quality services
- good relations between population groups and trust
- emphasis on prevention, fact-based management, extensive cooperation
- sufficient resources and personnel competence
- diverse use of new technologies
- up-to-date legislation.

3.2 International policies

International traffic safety work is informed by World Health Organization (WHO) and European Union (EU) policies.

In 2017, WHO published 12 global road safety performance targets (World Health Organization 2017). They are voluntary targets set for countries, most of which aim for 2030. The idea of the targets is to promote the implementation of effective and evidence-based road safety measures and the monitoring of their impacts. The twelve targets include establishing national road safety action plans by 2020, increasing the use of safety equipment and reducing drink driving and speeding.

At EU level, traffic safety work between 2020 and 2030 will be guided by the Council conclusions on road safety endorsing the Valletta Declaration (Council of Europe 2017), the Third Mobility Package (European Commission 2018; Sustainable Mobility for Europe: safe, connected, and clean) and the EU Road Safety Policy Framework 2021–2030 published by the Commission (European Commission 2019).

The EU has confirmed its long-term target of reducing road deaths to almost zero by 2050 (European Commission 2011; Vision Zero target). When the EU transport ministers adopted the Valletta Declaration on road safety in March 2017, they also set the target of halving the number of serious injuries in the EU by 2030 from the baseline of 2020.

The Third Mobility Package prepared in the EU contains a number of legislative proposals and measures. Among other things, the Communication on the Mobility Packages notes that significant contributing factors to road accidents are speed, driving

under the influence of alcohol or drugs, and the failure to wear seatbelts or helmets. In addition to these and alongside a growing phenomenon of distraction by mobile devices, new trends are emerging in a complex environment, calling for a flexible and dynamic approach. Special attention should be given to vulnerable road users, especially cyclists and pedestrians. The expected growth in these forms of sustainable mobility such as cycling underlines the urgency of specific measures to improve protection for these road users.

On 19 June 2019, the European Commission adopted the EU Road Safety Policy Framework for 2021–2030. The Commission decided to base its Road Safety Policy Framework for 2021–2030 on a Safe System approach. The objective of this approach is a more forgiving road traffic system. The "Safe System" accepts that people make mistakes and argues for a layered combination of measures to prevent people from dying from these mistakes by taking the physics of human vulnerability into account. Better vehicle construction, improved road infrastructure, and lower speeds all have the capacity to reduce the impact of crashes. Taken together, they should form layers of protection that ensure that, if one element fails, another one will compensate to prevent the worst outcome. For the Safe System approach to work, experience shows that all actors need to play their part. Public authorities in all sectors relevant for road safety objectives, including transport and infrastructure, environment, education, the police, public health, justice and tourism need to work together closely at all levels. In addition, all stakeholders have crucial roles to play.

The Commission's Road Safety Policy Framework is based on research findings. Based on advice from leading experts and after extensive stakeholder consultation, a set of themes was put forward to tackle the biggest road safety challenges, namely: 1) infrastructure safety, 2) vehicle safety, 3) safe road use including speed, alcohol and drugs, distraction and the use of protective equipment, and 4) emergency response. Safe road use (speed, driving without alcohol and drugs, undistracted driving, safety belt and child restraint use, helmet use) is one of the three key pillars for the prevention and mitigation of fatalities and serious injuries in collisions in the Commission's EU Road Safety Policy Framework. Police action can influence safe road user behaviour.

The preliminary eight key performance indicators of the EU, together with the performance indicators for fatalities and serious injuries, lay the foundation for monitoring progress in the EU's joint road safety work in the Member States, in regions and at local level. The first five indicators can be influenced by police action. The key performance indicators are:

- Speed (Percentage of vehicles travelling within the speed limit)

- Safety belt (Percentage of vehicle occupants using the safety belt or child restraint system correctly)
- Protective equipment (Percentage of riders of powered two wheelers and bicycles wearing a protective helmet)
- Alcohol (Percentage of drivers driving within the legal limit for blood alcohol content (BAC))
- Distraction (Percentage of drivers NOT using a handheld mobile device)
- Vehicle safety (Percentage of new passenger cars with a EuroNCAP safety rating equal or above a predefined threshold)
- Infrastructure (Percentage of distance driven over roads with a safety rating above an agreed threshold)
- Post-crash care (Time elapsed in minutes and seconds between the emergency call following a collision resulting in personal injury and the arrival at the scene of the collision of the emergency services)

4 Other issues with relevance to the Programme

4.1 Sense of security

Various surveys on safety and the sense of security are regularly conducted in Finland. Traffic concerns everyone, and people are often also worried about its phenomena. In a survey on the atmosphere in road traffic conducted by the Finnish Road Safety Council and Kantar, around 28% of the respondents found that the atmosphere had deteriorated, while 14% felt it had improved in the past six months (Finnish Road Safety Council and Kantar 2012–2016). As the most hazardous factors were perceived disregard for others, drivers' poor attitudes, and violations of traffic regulations. The survey indicates that drivers' worst fears are related to drink drivers (58%) and dangerous overtaking (54%). Many other things in traffic also inspire fear in the respondents. What annoys them the most is dangerous overtaking, driving too close behind another vehicle, and cutting in too quickly after overtaking.

According to the Police Barometer published in June 2020 (Vuorensyrjä and Rauta 2020), citizens trust the Finnish police and regard the police as a legitimate user of public authority. Traffic enforcement was found highly or fairly important by 89% of the respondents. Many other phenomena were considered more important, however. Respondents felt that the police manage traffic enforcement well. The Barometer also asked the respondents about their concerns over different criminal phenomena. Drink driving caused the greatest level of concern of the listed criminal phenomena, with 80% of the respondents in total saying they were extremely or fairly concerned over it.

Laurikainen and Nikkanen examined citizens' sense of security (Laurikainen and Nikkanen 2020). According to their findings, almost all respondents felt that their personal level of safety and security was good, and most considered Finland a safe country. The hazards of daily life that caused the greatest levels of concern were traffic accidents, home and leisure accidents, cybercrime and fires. Traffic accidents were of great concern for 11% of respondents and of some concern for 64%. The age group with the greatest proportion of respondents who were worried about traffic accidents was those aged 35 to 54 (81%), whereas this proportion was clearly the lowest among respondents aged over 75 (60%). Traffic accidents (78%) were mentioned the most often as a threat affecting persons close to the respondents.

4.2 Cost of traffic accidents

The unit prices of road accidents were updated in 2020. These costs describe the financial consequences of accidents. They consist of financial costs in real terms and loss of individual well-being. The following unit values are applied to personal injuries (Finnish Transport Infrastructure Agency 2020b):

- Death EUR 2,564,500
- Serious injury EUR 1,269,100
- Minor injury EUR 76,500

The following unit values are applied to different accident types:

- Fatal accident on average EUR 3,019,100
- Accident leading to serious injuries on average EUR 1,401,900
- Accident leading to minor injuries on average EUR 102,800
- Accident leading to personal injuries on average EUR 412,500

Peltola, Airaksinen and Sintonen investigated serious personal injuries sustained in road accidents and, based on this data, areas on which traffic safety work should focus. They found that more than one half of the costs are incurred from fatalities and almost one third from serious injuries. Nearly one fifth of accidents resulting in minor injuries are not recorded in the statistics. (Peltola, Airaksinen and Sintonen 2018).

4.3 Significance of the grey economy in the transport sector

The estimated scale of the grey economy in the transport sector alone is around EUR 500 million a year (National Audit Office 2019). In 2019, the Finnish Tax Administration's Grey Economy Information Unit examined authorities' views of the current state of the grey economy (Tax Administration 2019). In this survey, the transport sector was mentioned as a high-risk industry. A government proposal for amending the Goods Transport Act (Parliament 2011) lists some of the manifestations of the grey

economy in the road transport sector. In road transport, the grey economy means non-payment of VAT, wages below those prescribed in the collective agreement, wrong type of motor insurance, trading with no receipts and unlicensed services. A company gains a competitive advantage by avoiding statutory taxes and charges as well as other obligations. The respondents believed that wide-ranging measures are needed in the fight against the grey economy. The road transport sector, and especially the transport of goods, is considered a high-risk industry in terms of the grey economy.

According to the Tax Administration's Grey Economy Information Unit, some of the manifestations of the grey economy listed above in the goods transport sector would require significant work in each case and probably also cooperation between authorities to uncover the activities and to intervene in them. (Tax Administration, Grey Economy Information Unit 2012)

In 2012, the Tax Administration's Grey Economy Information Unit investigated holders of a goods transport licence. It found that around one half of the holders of goods transport licences that operated as limited liability companies were solvent (2010) based on their debt-equity ratio and net debt level. Around 20% of goods transport licence holders operating as limited liability companies were highly indebted in relation to their turnover and/or equity. Information on indebtedness is relevant when assessing a company's liquidity. In April 2012, 15% of all holders of goods transport licences had a tax debt, and 78% of all tax debts were owed by active companies. (Tax Administration, Grey Economy Information Unit 2012)

The parliamentary Audit Committee assessed Finland's increasingly international grey economy in 2010 (Parliament 2010). The report found that, according to a survey addressed to its member companies by the Finnish Transport and Logistics Association (SKAL) in 2009, 69% of the respondents considered that the grey economy had at least moderately distorting effects on competition. Almost one third of the respondents felt that these effects are significant or very significant. As by far the most significant of the other adverse effects of the grey economy they regarded unhealthy pricing of services in the sector, distortion of competition, and forcing the sector to adopt unhealthy practices. The use of undeclared labour was considered the most important form of the grey economy. As the second most common manifestation was regarded illegal activities of foreign carriers in the Finnish market. Others include selling unlicensed transport services delivered with vehicles registered for private transport, bankruptcy fraud and the exploitation of single-use companies as well as unrecorded sales of goods transport services subject to a licence.

According to the Audit Committee's report, the Tax Administration carried out a total of 1,287 tax audits in the transport sector between 2003 and 2009. The majority of

these targeted the road transport of goods, activities that serve transport, and taxi services. The audits uncovered undeclared wages as well as hidden income and dividends amounting to about EUR 42.3 million.

The report notes that part of the grey economy in the transport sector is fully domestic, comprising hidden income and undeclared wages. Due to the nature of this sector, however, it has a large international dimension. This means that Finnish operators have to compete with both cabotage traffic in Finland and foreign operators engaged in international traffic who rely on either low taxation in their home countries or gaps in supervision.

In 2019, Remes addressed a survey on the grey economy to 88 companies in the transport and warehousing sector and the officials of 15 employee organisations among others (Remes 2019). The survey found that compared to other industries, the problems and impacts of the grey economy have come up especially from the perspective of companies in the transport sector. Respondents had come across grey economy phenomena in their business activities quite often in the past three years. Sales without a receipt (or without offering a receipt) had been encountered by 28% of the respondents, whereas 33% had come across undeclared payment of wages. Bankruptcy fraud had been observed by one out of four respondents, and the use of undeclared labour by around one out of five. While other forms of the grey economy were also observed, these five manifestations were the most important. Unlike companies, the phenomena most typically observed by officials in transport sector employee organisations were underpayment of wages, breaches of employment conditions, undeclared payment of wages and the use of buffer companies and intermediaries.

We can consequently estimate that, in addition to the grey economy phenomena discussed in this chapter, violations of driving times and rest periods, overloads, neglecting the technical condition of vehicles and manipulation of tachographs and the SCR systems¹ on trucks not only have negative impacts on road safety and the environment but also distort competition. Those who comply with the rules end up in a different competitive position than those who do not.

¹ SCR technology refers to Selective Catalytic Reduction of exhaust gases. The additive AdBlue makes it possible to meet the requirements of Euro IV, Euro V and Euro VI emission standards in the aftertreatment of exhaust gases.

4.4 Impact of police activities

Impact

According to Sitra, impact refers to a far-reaching, long-term societal change. (Sitra 2020). The term impact might also refer to actions taken to promote development and progress; in other words, actions that benefit society. An impact is typically made as the result of different actors and their efforts. Change may be quantifiable and measurable, as well as qualitative and phenomenological.

The impact of police activities can be divided into impacts on customers and citizens, social or regional adequacy and coverage, correct targeting and essential indirect impacts (Hänti 2015).

In connection with the preparation of this Programme, Huotari produced a study on the impact of traffic enforcement and traffic safety work (Huotari 2020). In his study, Huotari creates a conceptual structure for the impact of the traffic enforcement and traffic safety work carried out by the police. The study compiles relevant discussions in research literature and observations concerning the impact of various police measures, tactics and solutions on road safety. However, the focus of the study is on policing rather than traffic safety work as a whole. The study was produced to serve the needs of fact and evidence-based strategic management aiming for effectiveness in the traffic enforcement and traffic safety work of the police.

According to Huotari, when assessing publicly funded activities, attention should generally be paid to their economy, efficiency and cost-effectiveness. Fact-based management, an evidence-based approach and the requirement of effectiveness have thus emerged strongly in recent decades in efforts to develop policing. The impact mechanism of road user behaviour may be associated with enforcement and an effective system of penalties. The risk of being caught, severe and unavoidable penalties imposed as a consequence, and stepping up monitoring carried out with technical devices are a key element of the criminal law system related to traffic violations. In the light of the deterrence theory, police work aiming to improve traffic safety is the most effective when the police succeed in creating and maintaining the idea among those they supervise that if you violate the rules of the road, you will get caught and receive a severe penalty. Education can help raise awareness of the risk of being caught and the penalties for traffic violations, their grounds and their justifications.

According to Huotari, another impact mechanism may be associated with meaningfulness and perceived legitimacy. This compliance theory brings to the fore at least two perspectives which receive little attention or are ignored in the deterrence theory: law-

abiding persons perceive the system of norms as legitimate and, for their part, strive or are willing to support this system and strengthen it further as well as to express both group identification and experience of participation through their actions. Experiences of these encounters have a significant impact on how citizens perceive the legitimacy of policing and how prepared they are to cooperate with the police in the future. The impact of police activities is largely based on cooperation with the citizens as well as citizens' help and support for police work.

Huotari argues that a key element of the impact of the traffic enforcement and safety work carried out by the police is what an individual patrol does and does not do on the road and in the streets, and which violations of the Transport Act they intervene in and how. Traffic enforcement is the most likely situation in which citizens interact with the police. Citizens' and their acquaintances' personal encounters and interactions with the police as well as all news about the police build a person's identity as a citizen and a member of their reference group as well as their relationship with the authorities.

According to Huotari, spreading information and actively communicating about traffic enforcement and the penalties build the citizens' idea of the risk of getting caught and the system of penalties. Communicating about traffic enforcement and campaigns related to it play a large role in enforcement. The communication both serves educational purposes and reminds citizens of the traffic enforcement carried out by the police and the risk of getting caught. The impact of the traffic enforcement and security work the police carry out within the framework of the law enforcement system is smaller than it could be in theory, among other things because in all stages of the system, decisions on which violations are intervened in and how rely on individual discretion based on the circumstances. Should this discretion lead to any contradictions, the impacts of its different stages work in different directions, and the system as a whole is not as effective as it could be in principle. Rather than the system working mechanically, discretion is used in all stages of the process.

From the perspective of the impact of traffic enforcement, police activities are also associated with impacts which work in different directions. Huotari argues that there are inherent contradictions in traffic enforcement and other policing. Traffic enforcement, which is the most likely situation in which citizens interact with the police and are put in the position of a suspect, has eroded the relationship between citizens and the police since the first cars appeared on the roads. If interventions are experienced as unfair, this may cause citizens to adopt a more negative view of police operations in general, undermine the legitimacy of the police, reduce citizens' willingness to cooperate and thus impair the possibilities of the police to succeed in other tasks in which they rely on citizen's assistance, cooperation and active support. High impact in the

traffic safety task of the police can thus affect negatively the impact in other sectors of policing.

In their report, Adminaite et al. emphasise the role of traffic enforcement in preventing fatalities and injuries (Adminaite et al. 2016). The purpose of the traffic regulations is to guide drivers' actions. While many citizens comply with these regulations willingly, others would not comply with them without the fear of being caught and the resulting penalty. The role of supervision in implementing or enforcing the law is based on road users' experience that breaking the rules will probably result in being caught and facing a penalty. The purpose of enforcement strategies is to increase the likelihood of being caught in the eyes of drivers. When they experience the risk of getting caught as sufficiently high, drivers make an effort to avoid violating the rules.

The report claims that the impact of enforcement increases when:

- there is sufficient communication about enforcement;
- there is regular enforcement over a longer period of time;
- enforcement cannot be anticipated or easily avoided;
- both visible and invisible forms of enforcement are used;
- enforcement focuses on traffic violations and takes place at times when it is expected to have maximum impact on safety; and
- enforcement is linked to an effective, proportionate and fair system of penalties that acts as a deterrent.

Mäkinen has investigated the subjective risk of being caught related to traffic violations and the impacts of increasing this risk on drivers' behaviour (Mäkinen 1990). Mäkinen argues that traffic enforcement creates a certain real, or objective, risk of being caught. Communicating about the enforcement is essential. Witnessing enforcement, the consequences of being caught and the ideas formed of enforcement create a perceived, or subjective, risk of being caught. The objective and subjective risk of being caught can be increased by increasing the number of interventions in violations. The number of police interventions has an impact on driver violations.

According to Lappi-Seppälä, the basic task of the penal system is to support criminalisation. Penalties are used because of their preventative impact. This general deterrent effect is primarily associated with the threat of penalties imposed under the law.

The risk of getting caught matters (Lappi-Seppälä 2009). According to Koskinen, the risk of being caught is important in creating a general preventative impact (Koskinen 2008).

Road safety work has traditionally been understood as a multi-authority task in which the police have their specific role in supervising compliance with acts and other statutes. Mohan et al. created a frame of reference for assessing the impact of road safety work (Mohan et al. 2020). According to them, the role of the police in this frame of reference can be seen as being closely associated with human factors or vehicles. Police interventions are related to traffic enforcement, education and awareness raising. The purpose of these activities is to influence the number of accidents leading to fatalities and injuries as well as the costs incurred from accidents. The outcome will be fewer accidents leading to loss of health and more drivers behaving safely. The ultimate outcome aimed for is less road fatalities and more human development, empowerment and happiness.

According to Huotari, traffic police activities are an integral part of traffic safety work in many European countries. Policing the roads has been used as a model for shared activities between traffic enforcement and other police activities. Rather than only serving the needs of mobility and the economy, the roads are used for many types of criminal activities, and interrupting, preventing and uncovering these activities are also part of policing. These activities have been developed in such countries as the UK (Huotari 2020). Transport systems are an integral part of infrastructure associated with crime. Kemppainen argues that the traditional task of traffic enforcement by the police, or ensuring the safety and smooth running of traffic by preventing and detecting traffic crime, is expanding to crime prevention that targets offences which can be combated and detected in traffic (Kemppainen 2014).

Huotari notes that even if the time spent on enforcement did not increase, its productivity and impact will improve when those carrying out the enforcement participate more in the planning and implementation of the activities as part of analytical and knowledge-intensive work and fact-based management in which they can use feedback data and the accumulating evidence of the success and impact of the measures. Consequently, factors critical for impact in the future will include the way in which cooperation with other road safety actors can be realised at all levels of the activities, how information exchanges that serve cooperation between experts can be made to work, and how effective ways of involving citizens in road safety work can be found, both locally and nationally. New technologies create new opportunities for traffic enforcement. It is naturally important to investigate traffic offences effectively, but the fact that citizens wish to work together with the police to promote road safety and that the police genuinely appreciate the cooperation of both citizens and other parties will be even more important.

Impact assessment

On its website, Sitra describes an impact assessment it carried out of its work. According to Vataja, impact assessment basically focuses on the relationship between causes and effects, or causality (Vataja 2018). The key questions of an impact assessment are how and to what extent the examined activities have produced impacts and effectiveness. The more complex the subject to be assessed, the more challenging causality is to verify. An impact report is one way of assessing complex subjects. Such methods as process tracing and contribution analysis can also be used in assessments. The assessment can examine how the changes have been caused and what the role and significance of the police have been in creating the impacts. An essential question is what would probably have happened without police action. The more complex the phenomena being assessed, the more important it is to examine the how and the why as part of impact. Road safety is an example of a complex phenomenon of this type.

In his Master's thesis, Hänti assessed indicators of the traffic safety work carried out by the police from the perspective of societal impact (Hänti 2015). Hänti argues that the most important element of measuring impact is deciding which indicators are to be used, how they should be weighted (compared to other indicators) and, as background information, how and based on which arguments these selections were made. Another important issue is ensuring the personnel's commitment to the introduction of indicators and monitoring of their values. The perspective of citizens and customers, which is also important in road safety work in other respects, would be the primary indicator of societal impact. First and foremost, this is about assessing whether the policing (enforcement, investigation, communication, preventive action) has promoted road users' self-motivated and safety-oriented behaviour in traffic.

Impact refers to a causal relationship between an intervention and an outcome (the intervention produced the outcome). For example, the change in road users' behaviour can be manifested as an improved sense of security, compliance with rules, reduced intoxicant use in traffic, paying more attention to driving health when making a decision to drive, compliance with speed limits and safe driving speeds, use of safety equipment, and not being distracted by mobile devices when driving. In addition, the change may be manifested as compliance with the rules in commercial transport and a reduction in grey economy phenomena.

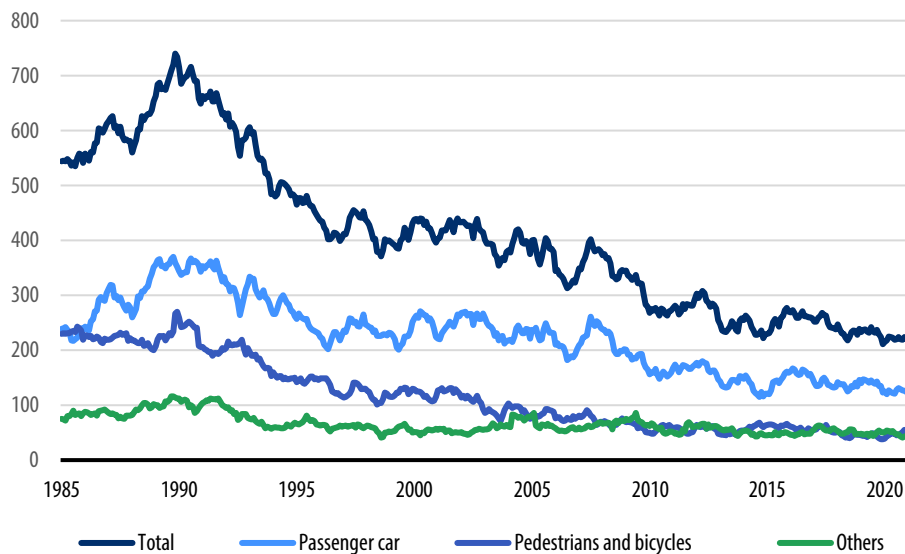
5 Road safety and situational picture of traffic

5.1 Road safety

While road safety has improved over the longer term, in recent years the number of traffic fatalities has not decreased in line with the targets. According to Statistics Finland's Official Statistics, road accidents led to 211 fatalities and left 5,013 people with injuries in 2019, of whom 390 were seriously injured. The information contained in the Care Register for Health Care is not yet included in the statistics for 2019. In 2019, 26 people committed suicide by deliberately crashing a motor vehicle. The number of persons who sustained serious injuries in 2018 was 485 in police statistics and an additional 471 in the Care Register for Health Care, bringing the total up to 956. (Statistics Finland 2021a)

According to Statistics Finland's preliminary data, 3,590 accidents resulting in personal injuries occurred in 2020. There were 221 fatalities and 4,392 accidents leading to injuries in road traffic in 2020. More accurate figures will be produced later.

Figure 1: Road deaths 1/1985 – 1/2021, fatalities in the past 12 months by month (Source: Statistics Finland 2021d)



Of those who lost their lives in road accidents between 2015 and 2019, 58% were travelling in a passenger car (45% were drivers and 13% passengers), 11% were pedestrians, 10% cyclists, 8% motorcyclists and 1% moped riders, whereas 8% were travelling in other road vehicles and 4% in other means of transport. (Statistics Finland 2021a)

According to the preliminary report of the road accident investigation teams for 2020, of those at fault in fatal motor vehicle accidents^{2 3} in 2016–2020 (preliminary information from 2020), 74% were driving a car, 6% a van, 6% a HGV, 8% a motorcycle, 1% a moped and 5% some other means of transport. (Salenius 2021a)

In 2019, 15,777 traffic accidents were reported to the police (Statistics Finland 2021a). This is only part of all accidents. The Finnish Crash Data Institute annually publishes information on damage to property and personal injuries covered by motor insurance. In 2019, there were 99,480 accidents covered by motor insurance, of which 17,776 resulted in personal injuries and 81,704 to other losses. The most common individual accident type in 2019 was damage caused while reversing. These accidents accounted for 30,188 of the total number of cases, or around 30% of all losses (Räty and Kari 2020). What the overall number of road accidents is, nobody knows.

Only accidents reported to the police are included in Finland's Official Statistics on road accidents. When information on accident severity is combined with Official Statistics based on the Care Register for Health Care (HILMO database), about one half of those who were hospitalised because of serious injuries sustained in road accidents cannot be linked to data received from the police. In particular, many serious injuries sustained by cyclists are missing in the official accident statistics. Data on serious injuries obtained by combining hospital and police statistics are available for 2014–2018. Around 830 to 960 people a year sustain serious injuries in road traffic (Statistics Finland 2021a). According to Peltola, Airaksinen and Sintonen, almost one half (46%) of serious injuries sustained in 2014–2015 were not included in the Official Statistics (Peltola, Airaksinen and Sintonen 2018). Airaksinen, who examined accidents involving cyclists, moped riders and motorcyclists in her doctoral dissertation, found that a considerably higher number of cycling, moped and motorcycle accidents occurred in the area and during the period covered by the study than what the Official Statistics showed. Accidents in which an individual cyclist, moped rider or motorcyclist

² Fatal motor vehicle accident = Collision or a single-vehicle accident in which a person travelling in a motor vehicle (see the Vehicles Act) lost their life.

³ Person at fault is the interested party who, according to the investigation team's assessment, had a more significant impact on causing the accident, or the driver in a single-vehicle accident.

fell and which did not involve a collision with another vehicle were not included in the Official Statistics. (Airaksinen 2018)

Among the fatal motor vehicle accidents investigated by the road accident investigation teams in 2000–2019, the most common ones were head-on collisions and running off the road. In 2019, they covered 76% of all accidents. In recent years, the share of accidents occurring at junctions has been well below 10%. In 2019, 38% of motor vehicle accidents consisted of driving off the road, while head-on collisions accounted for another 38%. The total share of accidents at junctions was 9%. Of all motor vehicle accidents, 44% occurred on trunk roads and main roads, whereas 21% of single-vehicle accidents took place on trunk roads, and this figure for head-on collisions was 64%. In 2019, 73% of fatal motor vehicle accidents occurred in rural areas, 16% in urban areas and 11% in peri-urban areas. (Sihvola 2020)

5.2 Traffic offences and violations

Most violations of traffic regulations remain hidden. This is why enforcement by the police is in most cases necessary to detect traffic offences and violations. While the police registered some 110,000 traffic offences and 320,000 traffic violations in 2019, this is only a very small proportion of all violations of traffic regulations. For example, only a small part of drink driving and speeding incidents come to the attention of the police. According to Niemi, police operations have an impact on uncovering offences (Niemi 2020). The police have the greatest possibilities to influence the number of detected offences in cases where no community or private person has suffered direct losses. These offence can only be detected by the police. More efficient supervision targeted in new ways can help the police gain more information about such offences.

Table 1. Traffic-related offences and violations registered by the Police, Customs and the Border Guard in 2018–2020 (Source: Statistics Finland 2021c)

	2018	2019	2020 (preliminary data)
Causing a traffic hazard	67,558	61,883	74,610
Causing a serious traffic hazard	4,047	4,334	6,076
Driving while intoxicated	11,768	11,738	13,354
Driving while seriously intoxicated	7,238	6,760	6,985

	2018	2019	2020 (preliminary data)
Waterway traffic intoxication	285	273	237
Relinquishing a vehicle to an intoxicated person	630	467	491
Non-motor powered traffic intoxication	51	43	38
Operation of a vehicle without a licence	24,740	25,055	29,579
Flight from a scene of a traffic accident	93	105	87
Driving licence violation	1,749	1,378	1,086
Vehicle violation	23,967	20,603	11,037 ⁴
Traffic violation	385,475	327,865	115,647 ⁵
Off-road traffic violation	259	170	159
Waterborne traffic violation	1,435	1,114	530 ⁶
Radar detector violation	1,912	1,626	577 ⁷
Violation of social legislation applicable to road transport	2,696	1,852	1,696
Transport of dangerous goods substance offence	420	323	373
Providing commercial transport services without a licence	37 ⁸	94	73
Violation of professional qualification regulations	73 ⁹	191	253

⁴ Some of the traffic violations have been subject to a traffic penal fee since 1 June 2020 (the number of traffic penal fees is not known)

⁵ Figures from the period between 1 January 2020 and 31 May 2020

⁶ Figures from the period between 1 January 2020 and 31 May 2020

⁷ Cross-border traffic reduced because of the Covid-19 situation

⁸ Figures from the period between 1 July 2018 and 31 December 2018

⁹ Figures from the period between 1 July 2018 and 31 December 2018

Based on annual information produced by police raids, the number of drink drivers in the traffic flow has remained more or less stable at 0.11–0.14% in the 2010s. In 2018, this figure was 0.13%, meaning that one driver out of 770 on the road is intoxicated. The number of drivers who were below the limit subject to a penalty has varied from 0.66% to 1.00% in the 2010s. In 2018, this figure was 0.78%, which means that one out of 130 drivers in the traffic flow had had a drink (Finnish Road Safety Council 2021c). These raids have not taken place in the last few years as the police workload was increased by the security duties associated with Finland's Presidency in 2019 and, due to the COVID-19 situation in 2020, breathalyser tests were not carried out extensively.

According to Impinen et al., one out of three drivers who had been caught driving intoxicated repeated their offence in 1993–2007. The study found that the risk of reoffending was particularly high among drug users, men, young people and those with a higher than average blood alcohol levels when apprehended (Impinen et al. 2009). It has been estimated that a drink driver may drive while intoxicated around 220 times before being caught (Portman et al. 2011).

In fatal motor vehicle accidents investigated by road accident investigation teams in 2014–2018, 38% of the drink drivers who were at fault had been handed at least one penalty for driving while intoxicated in the past five years. (Räty 2020)

The number of people caught speeding is very small in proportion to the transport performance. Speed monitoring data gathered by the Finnish Transport Infrastructure Agency on main roads indicate that around 44% of vehicles in summer 2019 and 53% in the winter period (2019–2020) exceeded the speed limit on the relevant road section. In most cases, the speed limit was only exceeded by a small amount. The proportion of drivers who were over the speed limit on main roads in the summer went down slightly from the previous year, which continued a declining trend of several years. In the winter period 2019–2020, speeding increased slightly compared to the previous year. An exceptional winter season with little or no snow in parts of Finland may have affected this situation. (Kiiskilä, Mäki and Saastamoinen 2020)

In the summer season, the share of drivers who speed has decreased continuously in 2014–2019. Examined by road type, the proportion of speeding drivers only increased from the previous year on motorways. Of the most common road types, drivers were the most likely to speed on single carriageways with a permanent speed limit of 80 km/h in the summer season, whereas they were the least likely to do so on roads where the speed limit is increased for the summer. In 60 km/h zones on main roads, the speed limit was also often exceeded, especially on dual carriageways typically found in urban areas. (Kiiskilä, Mäki and Saastamoinen 2020)

The share of drivers who exceeded the speed limit for the relevant road section by more than 10 km/h was 9% in summer and 12% in winter. While the proportion of drivers who exceeded the speed limit by more than 10 km/h in summer remained more or less the same as in the previous year, an increasing trend was recorded in winter. Over the long term, the proportion of drivers who exceed the speed limit with a wide margin has declined steadily. (Kiiskilä, Mäki and Saastamoinen 2020)

According to Kiiskilä, Mäki and Saastamoinen, this was the first time the speeds of motorcycles were studied. The examination of motorcycle speeds only covered the summer season (1 May–30 September). The average speeds of motorcycles are 2 to 4 km/h higher than those of cars and vans. In 2019, 65% of motorcyclists exceeded the speed limit; 28% exceeded it by more than 10 km/h and 9% by more than 20 km/h.

5.3 Age as a risk factor in traffic

Age and experience have an impact on road safety. Young people use such vehicles as mopeds, light quadricycles, light motorcycles and other motor vehicles which have their inherent risks. As the population ages, on the other hand, the proportion of older people with driving licences also increases. When we look at fatal motor vehicle accidents in proportion to the number of driving licences, we see that young people are at higher risk and that in older age groups, the risk starts increasing again (in a 'U-curve'). Young drivers under 20 years of age and older people over 70 are at the greatest risk of causing both a fatality and a traffic accident. The reasons for the increasing risk at the two ends of the curve are different, however. Young drivers are more likely to engage in high-risk behaviours, the underlying causes of which are showing off, speeding, drink driving and possibly the use of other intoxicants. The increased risk of older people is usually caused by impaired functional capacity and illnesses.

Young people

According to the Finnish Road Safety Council, young adults (aged 18 to 24) are relatively well placed to use the road safely in terms of their physical, psychological and social development alike. Young people aged 15 to 24 are overrepresented in traffic accidents. While young people only account for about 11% of the population, almost one out of three people injured in road accidents is young. Young people's road accidents are often associated with leisure activity. While young adults can use all modes of transport, the possibility of driving a car independently is the most visible and significant change in this age group. As part of growing more independent, they continue to

question authority, and particularly young men may display impulsive and high-risk behaviours. Young drivers' accident risk drops as they accumulate driving experience and grow older. An inexperienced driver is not always able to pay attention to potential hazards. Insurance statistics show that in proportion to the number of driving licences, those who are driving for the first year are three times more likely to have a traffic accident than those who have been driving for three years. In addition to driving experience, the risks in this age group are exacerbated by lack of life experience. (Finnish Road Safety Council 2021a)

Deficiencies in young people' driving skills are related to positioning the vehicle on the road, being distracted, lack of automation in actions, difficulty of assessing the speed of oncoming vehicles, and recognising hazardous situations (Tanttu 2010).

The high-risk behaviour of young people (aged 18 to 24) is also evident in serious traffic offences. Approx. 40% of drivers suspected of causing a serious traffic hazard (in 2015–2019) were young people (Statistics Finland 2021b). However, only about 9% of valid driving licences are held by young people (Finnish Transport and Communications Agency 2021a).

Salenius and Sihvola looked at the involvement of young people aged 18 to 24 in road accidents that led to fatalities investigated by road accident investigation teams in 2015–2019 and losses covered by motor insurance in 2015–2019. In 2015–2019, young drivers (aged 18 to 24) caused 168 fatal motor vehicle accidents in total. The youngest age groups were prominent among the drivers at fault in the accidents. Young drivers aged 18 to 19 accounted for 42% of those at fault (aged 18 to 24). When we look at the 21st century as a whole, the number of accidents involving young drivers has decreased considerably, but in recent years the positive development of young people's road safety has stalled. (Salenius and Sihvola 2021)

According to Salenius and Sihvola, 196 people lost their lives in motor vehicle accidents caused by young people, 78% of whom were aged 18 to 24. Of the 142 young people who lost their lives in passenger cars, slightly more than a half did not wear a seat belt. According to investigation teams' assessments, wearing a seat-belt could have saved the lives of 22 young people who failed to do so in five years. In 2015–2019, there was a total of 28 accidents leading to the death of a pedestrian or cyclist caused by young people. In 17 of these cases, the young person was the driver of a motor vehicle. The most common types of motor vehicle accidents caused by young people were running off the road (44%) and a head-on collision (42%). The most typical immediate risk factor of young people involved in a fatal accident was a vehicle handling error or an incorrect driving action. In most cases, the young person was driving alone, whereas one in three had passenger/s (typically friends) on board.

According to Salenius and Sihvola, more than one out of three young drivers at fault in a motor vehicle accident were under the influence of alcohol when it occurred (at least 0.50‰). A high number of drivers were drink driving, especially in single-vehicle accidents. It was more common for young people to drive while intoxicated when they had passenger/s on board. 16% of these young people were driving under the influence of drugs, whereas 64% of young drivers at fault exceeded the speed limit by at least 10 km/h. In most of these cases, they exceeded the speed limit by more than 30 km/h. In 2015–2019, on average 27% of the young car drivers principally at fault in these accidents violated several rules simultaneously (were driving while intoxicated with alcohol or drugs, exceeding the speed limit by at least 10 km/h and not wearing a seat belt). The average proportion of drivers who did not violate any of the above rules, on the other hand, was 22%. In addition to driving while intoxicated, speeding and failing to use safety equipment, typical background factors in young people's motor vehicle accidents included having little driving experience as well as showing general disregard for road safety and social rules. Their reckless attitude is evidenced by the fact that slightly more than one half of the drivers had a history of previous traffic violations. High-risk behaviour in traffic was often also associated with a difficult life situation in broader terms and health challenges, including mental health issues.

According to Salenius and Sihvola, the fatal accidents of young people they studied motivated the road accident investigation teams to propose the deployment of several different methods to improve road safety, ranging from influencing behaviour to mitigating the consequences of possible accidents. In efforts to influence behaviour, the range of measures should include education and supervision of driving fitness and physical functional capacity as well as driving speeds. Additionally, there should be more communication about the risk factors related to different driving conditions and lack of driving experience, for example.

Older people

According to the Finnish Road Safety Council, the share of older people with driving licences increases as the population ages in general. The number of older drivers has been predicted to increase until at least the 2040s. Healthy and fit older drivers who are used to driving do not pose a particular risk in traffic. The accident risk of car drivers starts rising after the middle age at around 70 years. As an older person's body grows more fragile, they are more likely to sustain serious injuries or die in traffic. Changes in the body also affect the type of accidents typically sustained by older people. Their ability to observe, assess and respond to traffic situations may slow down, which makes complex traffic situations particularly challenging for them. Ageing usually changes people slowly and gradually, which also makes these changes highly individual. Even if age brings ailments and shortcomings that hamper mobility, many

older people are able to counteract them by anticipation and caution. Experience and judgement are factors that improve safety. (Finnish Road Safety Council 2021b)

According to the Finnish Road Safety Council, the reasons for serious traffic accidents caused by older drivers mostly comprise observation and driving errors as well as attacks of an illness, especially in cases of running off the road. Older people have fewer accidents involving alcohol and speeding than the rest of the population. One out three fatalities and more than one half of accidents leading to injuries of older pedestrians occur at a pedestrian crossing. Older cyclists have a higher risk of losing their lives in traffic than the rest of the population. Cycling and walking are good ways of maintaining functional capacity, however. (Finnish Road Safety Council 2021b)

In traffic accidents investigated by the road accident investigation teams that occurred in urban areas in 2015–2019, the most typical risk factor underlying fatal accidents from the perspective of pedestrians and cyclists was, according to the investigation teams, associated with the condition or actions of the pedestrian or cyclist in traffic. Those aged over 74 accounted for 37% of the total number of pedestrians and cyclists who lost their lives, which indicates that in many accidents, the pedestrian's or cyclist's functional capacity and perception had been compromised by age or illnesses. Salenius 2021b)

5.4 Transport emissions and noise

Kallberg et al. compiled a literature review of the impacts of driving speed on safety and the environment. Speed has a clear impact on emissions and fuel consumption. At road speeds, fuel consumption and emissions go up in a fairly straightforward manner as the speed increases. The review found that the fuel consumption of a car is at its lowest in the speed range of 60 to 80 km/h. The volume of carbon dioxide (CO²) released in the air is directly proportionate to the fuel consumption. However, the correlation of other exhaust emissions to the speed of the traffic flow varies depending on the emission type. Carbon monoxide (CO) emissions increase with speed, more rapidly at high than low speeds. Hydrocarbon emissions (HC) also go up as speed increases, whereas more nitrogen oxides (NO_x) are released at low than high traffic flow speeds. (Kallberg et al. 2014)

According to Kallberg et al., noise from vehicles can be divided into engine and transmission noise on the one hand, and noise caused by the tyres on the other. The former type predominates up till speeds of approximately 50 km/h. At speeds higher than this, most of the noise is produced from contact between the tyres and the road surface. According to a Nordic noise model, the level of noise detected by the human ear

doubles as the speed of light motor vehicles increases from around 45 km/h to 60 km/h. The noise level also doubles when the speed increases from approx. 75 km/h to 100 km/h. Speed limits are indeed used in places to reduce noise.

Noise generated by road and rail traffic is the most significant source of environmental noise and cause of health hazards. The health and well-being impacts caused by traffic noise include disorders affecting concentration and sleep, adverse effects on cardiac health, hearing disorders and a reduction in general comfort. (Reinikainen, Asiakainen and Hänninen 2017)

According to the Finnish Transport Infrastructure Agency, noise can be abated by damping its source, for example by reducing noise emissions from vehicles, limiting the volume of traffic, and restricting vehicle speeds in road traffic. In road traffic, noise is mainly generated by the engine and tyres, and at high speeds also by the air flow. (Finnish Transport Infrastructure Agency 2020)

Especially in summer, the police receive a great deal of feedback and enforcement requests concerning noise from mopeds and motorcycles.

6 Causes and key risk factors of road accidents

6.1 Introduction

Some drivers engage in high-risk behaviours and may commit individual serious traffic offences, or several offences simultaneously, including causing a serious traffic hazard by high speeds, drink driving and other traffic offences. Especially in young people, such risky behaviour is often associated with the driver having several other young people on board. Some drivers also regularly and repeatedly violate the regulations, despite having been caught. In addition to traffic enforcement, other forms of action available to the police should also be considered in these cases, including driving bans, seizure of the vehicle, or referral to treatment in cases of substance abuse.

A great deal of research on the risk factors of traffic accidents is carried out both internationally and in Finland. In Finland, road accident investigation teams examine fatal accidents and some of those resulting in serious injuries. Provisions on these investigations are contained in the Act on the Investigation of Road and Off-Road Traffic Accidents (1512/2016). The investigation activities have continued without interruption for fifty years, renewed themselves over time, and produced comprehensive information for road safety work and proposed improvements relating to the most serious accidents.

Based on these long time series, road safety problems can be assessed over an extensive period. In fatal motor vehicle accidents (all drivers) investigated by the road accident investigation teams in 1999–2018, the most common immediate risk factors were related to vehicle handling errors. Suicides and attacks of an illness have increased their proportion during the period under scrutiny. (Finnish Crash Data Institute 2020a)

The number of fatal road accidents caused by car drivers decreased between 2007 and 2014, after which the improvement has stalled (over the period 1999–2018). Recently, one out of three accidents has been linked to an attack of an illness suffered while driving, loss of consciousness or suicide. When we only look at fatal motor vehicle accidents that do not involve an attack of an illness, loss of consciousness or suicide among those examined by the investigation teams in 1999–2018, we find that 18% of the car drivers at fault were simultaneously under the influence of an intoxicant, exceeded the speed limit by at least 10 km/h, and failed to wear a seat belt. The

proportion of these drivers has increased slowly throughout the period under scrutiny. In this period, the proportion of drivers aged over 64 who caused a fatal motor vehicle accident has increased from around 15% to almost 25%. (Finnish Crash Data Institute 2020a)

Among the fatal accidents examined by the road accident investigation teams in 2000–2019, the most common accident types over the long term have been head-on collisions and running off the road. In 2019, they covered a total of 76% of all accidents (running off the road accounted for 38% and head-on collisions also for 38%). In recent years, the share of accidents occurring at junctions has been well below 10%. Single-bicycle accidents accounted for 41% (n = 12) of cycling accidents, and 67% (n = 18) of cycling accidents occurred in urban areas. Of pedestrian accidents, 75% (n = 9) occurred outside pedestrian crossings and 8% (n = 1) at a pedestrian crossing. 67% (n = 8) of pedestrian accidents occurred in urban areas. (Sihvola 2020)

6.2 Fitness to drive (driving health and fatigue)

Driving health refers to the driver's functional capacity in traffic. Its key components are vision, cognition and motor functions. Many illnesses may affect driving health (Finnish Transport and Communications Agency 2019). In fatal motor vehicle accidents (all drivers) examined by the road accident investigation teams in 1999–2018, the proportion of those associated with health risks among all accidents increased considerably in this period, and if we include mental illnesses and alcoholism, as many as 35% of drivers at fault in fatal accidents have been found to have health risks in recent years. (Finnish Crash Data Institute 2020a).

The number of fatal motor vehicle accidents caused by car drivers decreased between 2007 and 2014, after which period this trend has stalled. Recently, one out of three accidents has been linked to an attack of an illness suffered while driving, loss of consciousness or suicide (Finnish Crash Data Institute 2020a). In 2018, a background risk associated with the driver's fitness, including alcohol consumption, illness, fatigue or mental condition, was a factor in 69% of accidents (Sihvola 2020).

According to Airaksinen, Korpinen and Parkkari, the investigation team data indicates that a total of 169 suicides were committed in Finnish road traffic in 2008–2013; 84% of those who lost their lives were drivers and 16% pedestrians. The majority of those who committed suicide were men. Most of them had mental health problems, and more than a third were under the influence of alcohol at the time of the incident. The

use of medicines was also common. 11% of the drivers had no right to drive, and according to the available information, intervening in the right to drive for mental health reasons was rare. (Airaksinen, Korpinen and Parkkari 2016)

In an international ESRA survey, Goldenberd and Nikolaou found that in the past month, as many as 29% of Finnish drivers had been driving while feeling so tired that they had difficulty keeping their eyes open (Goldenbeld and Nikolaou 2019). In a survey conducted by the Finnish Road Safety Council in 2020, 14% of the respondents said they had been driving while feeling so tired that they were afraid of falling asleep at the wheel during the last 12 months, and 6% had on an occasion fallen asleep for at least a second (Finnish Road Safety Council 2020). According to Kilpeläinen, Radun and Summala, various estimates put the annual proportion of fatal motor accidents where fatigue is one of the factors at 15% to 30% in Finland (Kilpeläinen, Radun & Summala 2005).

Of the traffic accidents examined by the investigation teams in 2014–2018, 16% had been caused by an attack of an illness suffered by the driver. Following the methodology used in road accident investigation, an attack is classified as an immediate accident risk when it leads directly to the cause of the accident. In an accident of this type, the driver usually dies while driving, as a result of which the vehicle often collides with an obstacle in the road environment or another vehicle. Sometimes the attack progresses slowly enough to allow the driver to stop the vehicle. An attack suffered by the driver usually led to a single-vehicle accident, typically running off the road. (Koisaari 2021)

In addition to being an immediate risk, a physical or a psychological illness was an underlying risk factor in 39% of accidents. While the accumulation of background risks usually leads to the immediate risk of an accident, the effect of an individual background risk on causing the incident is usually difficult to itemise, as the interactions between background risks are complex. The driver's illness as a background risk can have many different types of impacts. The driver's physical functional capacity may be almost perfect but due to a disturbance in the brain, for example, they may start driving against the traffic on a one-way road. On the other hand, the driver may also suddenly lose their physical functional capacity or it may be impaired as a result of an attack, which may slow down their use of the vehicle's controls or cause driving errors. (Koisaari 2021)

The most common immediate risks of accidents caused by an underlying illness were various levels of vehicle handling errors (29%); 76% of the drivers who made such errors were intoxicated. The next most common immediate risk was an accident caused deliberately (28%). Accidents caused by an underlying illness mainly occurred in rural areas (79%), and they were mostly collisions with another vehicle (53%). Assessing

the impact of medication on driving ability is challenging. Polypharmacy can become a problem even with fairly ordinary medicines. Drivers causing accidents often have multiple illnesses and also take several medications for them. There is little researched evidence concerning the effects of driving while under the influence of such combinations of pharmaceuticals. Some medicines affect driving even on their own. (Koisaari 2021)

The Safety Investigation Authority has investigated some accidents involving HGVs in which driving health was found to be a factor. In 2015, the Safety Investigation Authority looked into a collision between a car and a bus on main road 2 in Karkkila. The investigation found that this was an obvious case of a suicide. The driver had had persistent problems with their life management and mental health, despite offers of help from their family and the health care services (Safety Investigation Authority 2015). In 2018, the Safety Investigation Authority investigated an accident in Kuopio in which a bus had taken a motorway exit and ended up driving off a bridge and down onto a railway. The driver had a long-term illness that had not led to any special measures at the driving health examination or other contacts with the health care services. These investigation reports indicate that attention should also be paid to driving health in traffic enforcement and other traffic safety work carried out by the police (Safety Investigation Authority 2019).

6.3 Intoxicants (alcohol, drugs and others)

Alcohol, drugs and medicines taken in order to become intoxicated are the most important risk factors in traffic. In addition to drink driving, fitness to drive may also be impaired for other reasons, including fatigue caused by a hangover and cognitive disorders resulting from long-term use. Alcohol can exacerbate the symptoms of other diseases (such as susceptibility to arrhythmia) and impair driving ability. Excessive alcohol consumption may be associated with episodes of unconsciousness. The combined effects of alcohol and many pharmaceuticals can significantly affect driving performance. (Finnish Transport and Communications Agency 2019)

The number of drink driving cases at the EU level is difficult to estimate (as data collection methods vary greatly), but we can realistically estimate that alcohol is a factor in 20% to 28% of all road deaths (Ecorys 2014). The significance of drugs is even more difficult to ascertain as there are no harmonised testing methods, and as yet no systematic data collection. However, it has been demonstrated that driving under the influence of certain prescription and illicit drugs may increase the accident risk by two to seven times (EMCDDA 2012).

Among cases of driving while intoxicated registered by the police, the proportion of cases involving drugs and pharmaceuticals has increased over the past ten years. In 2020, more than one half of suspected driving while intoxicated offences (about 20,300 cases) involved drugs and pharmaceuticals (Statistics Finland 2021b). According to the National Bureau of Investigation, the most common drug in cases of driving while intoxicated in 2019 was amphetamine, which has been detected more frequently in samples in recent years.

If we only look at those fatal motor vehicle accidents examined by the investigation teams that do not involve an illness, loss of consciousness or suicide in 1999–2018, we find that the proportion of those who drive (cars) while intoxicated has not changed significantly over the relevant 20-year period. On average, 30% of car drivers who caused road accidents were under the influence of alcohol. The number of accidents caused by intoxicated drivers has gone down at the same rate as the total number of accidents. The proportion of drivers under the influence of drugs has increased slowly during this period. (Finnish Crash Data Institute 2020a)

According to the Finnish Crash Data Institute's substance abuse report from 2020, about one out of three drivers who caused fatal road accidents in 2014–2018 drove under the influence of alcohol, drugs or pharmaceuticals that affected their ability to drive. It was usually the intoxicated driver who died in these accidents. Most of those who lost their lives in the accidents were travelling in a vehicle driven by an intoxicated person. Failure to use safety equipment often affected the severity of accidents caused by intoxicated drivers. Almost 70% of car drivers who were under the influence of alcohol (blood alcohol level over 0.5 promille) or drugs did not wear a seat belt. What intoxicated drivers have in common is that most of them were men, and the largest age group was 25 to 54. (Räty 2020)

In addition to the effects of drugs, medicines and alcohol, the most typical risk factors identified by the road accident investigation teams in accidents caused by intoxicated drivers were speeding, not wearing a seat belt and general disregard for traffic rules. Other common risk factors related to human activities included the driver's mental state and medication, fatigue, not having a driving licence, lack of driving experience and intoxicated passengers. On average, the cars of intoxicated drivers at fault in road accidents were 16 years old, around 2% had technical faults that contributed to causing the accident, and 8% were uninspected. (Räty 2020)

The number of fatal motor vehicle accidents (all drivers) caused while driving under the influence of drugs has increased slowly over the period under scrutiny. In the 2010s, an average of 13 drug-related accidents were examined a year, accounting for

5% to 10% of all motor vehicle accidents investigated. Drug use noted in accident investigations is commonly associated with using a combination of several intoxicants. (Finnish Crash Data Institute 2020a)

Accidents caused by drivers under the influence of drugs occurred evenly throughout the week and at different times of the day (but were the most frequent in the afternoon), whereas drink drivers' accidents mostly occurred during weekends and at night. Accidents of drivers under the influence of drugs were more likely to be collisions with other vehicles, whereas accidents caused by drink drivers typically were single-vehicle accidents. (Räty 2020)

Single-vehicle accidents accounted for 74% of the accidents caused by drink drivers (blood alcohol level at least 0.5 promilles), while 26% were collisions with other vehicles. Of drink-driving accidents, 12% occurred in urban, 10% in peri-urban, and 78% in rural areas. Main and trunk roads accounted for 44%, local and connecting roads for 41% and private roads for 15% of accidents in rural areas. 51% of accidents caused by drivers under the influence of drugs were single-vehicle accidents and 49% collisions with another vehicle, and 72% of them occurred in rural areas. (Räty 2020)

A valid driving licence at the time of the accident was held by 82% of drink drivers, albeit some of them did not have the right to drive the vehicle in question, and 15% had been banned from driving or lost their right to drive for some other reason. In three cases, the right to drive had expired, and seven (4%) had never held a driving licence. A valid driving licence at the time of the accident was held by 64% of drivers under the influence of drugs, albeit some of them did not have the right to drive the vehicle in question, and 36% of them had been banned from driving or lost their right to drive for some other reason. In three cases, the right to drive had expired, and six had never held a driving licence. Medicines that affect fitness to drive are potential intoxicants, especially if alcohol or other intoxicants have been taken at the same time. (Räty 2020)

At the time of the accident, 72% of drink drivers exceeded the speed limit by at least 10 km/h, while 47% exceeded the speed limit on the relevant road section by at least 30 km/h. Of drivers under the influence of drugs, 63% were at least 10 km/h over the speed limit, and 43% exceeded the speed limit on the relevant road section by at least 30 km/h at the time of the accident. (Räty 2020)

6.4 Driving speed

Driving speed affects in many ways the driver's ability to respond to situations on the road. In their literature review of the impacts of driving speed on safety and the environment, Kallberg et al. found that speed has many types of impacts on the driver's ability to respond and the consequences of potential accidents (Kallberg et al. 2014). As the speed increases, the driving task becomes more difficult, increasing the risk of different errors which might lead to an accident. Higher speeds leave the driver less time for observing and recognising hazardous situations and increase errors in assessing distances and speeds, reducing the time and distance available for making decisions and getting out of the way as well as the chances of avoiding a collision by braking or steering action. The consequences of accidents for those onboard depend on the vehicle's change of velocity at the time of the collision, the magnitude of which depends not only on the speed of the parties but also the direction of the collision and the mass differences between the parties. In a collision with a car, a pedestrian's risk of death increases strongly when the collision speed exceeds 30 km/h.

In the European Union's Road Safety Policy Framework for 2021–2030, safe speed is identified as a key area of safe road use. Around one out of three fatal road accidents are (partly) caused by excessive or inappropriate speed (OECD/ECMT 2006). In addition, accidents occurring at higher speeds cause much more damage than those occurring at lower speeds. Based on research findings, the European Transport Safety Council has calculated that if average speeds were reduced by as little as 1 km/h on all roads across the EU, more than 2,200 road deaths could be avoided every year (Elvik et al. 2019).

In Finland, the underlying risks related to the driving speed (including speeding and driving too fast considering the conditions, the driver's skills or the vehicle) were a factor in 41% of the accidents examined by the road accident investigation teams in 2019. The proportion of those who were speeding was 37%, which corresponds to the long-term average. Of the drivers principally at fault, 16% were both under the influence of alcohol and speeding. (Sihvola 2020)

In fatal motor vehicle accidents examined by the road accident investigation teams in 1999–2018, one out of five drivers at fault (all drivers) exceeded the speed limit by at least 30 km/h. The proportion of those who speed increased at the beginning of the millennium and has remained the same since 2005. (Finnish Crash Data Institute 2020a)

According to the Finnish Crash Data Institute's 2020 report on substance abuse (driving while intoxicated in fatal motor vehicle accidents), 72% of the intoxicated drivers in

2014–2018 exceeded the speed limit by at least 10 km/h at the time of the accident, and 47% exceeded the speed limit for the relevant road section by at least 30 km/h. (Räty 2020)

6.5 Safety equipment

According to data collected by the Finnish Road Safety Council, 96% of people wore a seat belt in the front seat of a passenger car in 2020, while 89% did so in the back seat of a car in urban areas. The proportion of people who wear a seat belt has gone up in the 2010s (Finnish Road Safety Council 2021d). Based on information in the European CARE database, it is estimated that safety belts and child restraints already save around 5,700 lives a year in the EU, and around 2,800 more lives could be saved if all passengers in a vehicle wore their safety belts. (CARE database 2020)

In fatal motor vehicle accidents investigated by the road accident investigation teams in 1999–2018, 55% of the drivers at fault (all drivers) used safety equipment at the time of the accident. This proportion has not changed significantly during the period under scrutiny. (Finnish Crash Data Institute 2020a)

In 2019, 67% (n = 167) of all persons involved in fatal motor vehicle accidents in cars and vans had their seat belts on, while 54% of those who lost their lives in these accidents (n = 73) and 74% (n = 49) of those who were injured wore their seat belts. Of those not wearing a seat belt who lost their lives in cars and vans, 36% (n=21) could have survived with different levels of probability. With different levels of probability, the seat belt saved the lives of 47% (n = 23) of those who were injured, and could have reduced the severity of injuries of 49% (n = 24). Wearing a seat belt could have prevented the injuries, or afforded protection from more severe injuries, in the case of 66% (n = 11) of those who did not wear a seat belt. (Sihvola 2020)

According to the Finnish Crash Data Institute's 2020 report on intoxicant use, not using safety equipment is a prominent factor in drink driving accidents. (Räty 2020)

6.6 Causes of pedestrian and cycling accidents

Based on the Finnish Workers' Compensation Center's data, it is estimated that compensation was paid for 23,000 accidents that occurred while commuting and that were covered by occupational accident insurance in 2019. Of the total number, 13,500

were pedestrian and 4,900 cycling accidents. (Finnish Workers' Compensation Center 2021)

The number of fatal pedestrian and cycling accidents investigated by the road accident investigation teams in 2000–2019 has decreased slowly in recent years. In the last ten years, cyclists were at fault in an average of 70% of the cycling accidents investigated. While this proportion varied greatly in the early 2010s, in recent years it has remained at slightly over 70%. In 2019, cyclists were principally at fault in 63% of the investigated cycling accidents (41% were single-bicycle accidents and 59% collisions). Cyclists were principally at fault in 42% of accidents between motor vehicles and cyclists. (Sihvola 2020)

A total of 39 accidents in which pedestrians or cyclists lost their lives were investigated in 2019. The total number of fatalities was 40, consisting of 27 cyclists and 13 pedestrians. Single-bicycle accidents accounted for 41% of the cycling accidents. Urban areas were the scene of 67% of the cycling and 67% of the pedestrian accidents. Of pedestrian accidents, 75% took place outside pedestrian crossings and 8% at a pedestrian crossing. (Sihvola 2020)

Of fatal pedestrian accidents examined by the investigation teams in urban areas in 2015–2019, 43% (n=29) occurred at pedestrian crossings. In six of the accidents that occurred at pedestrian crossings, the vehicle was turning right, and in two cases it was turning left. In 15% of all pedestrian accidents (n=10), the pedestrian was crossing the road outside a pedestrian crossing. Of cycling accidents, 63% (n=32) were collisions between parties travelling in intersecting directions. In 15 of these cases (47%), the cyclist was crossing the road along a cycle path at a junction, whereas in six cases (19%), the cyclist was crossing along a cycle path elsewhere. Six (12%) of all cycling accidents involved collisions between parties travelling in opposite directions. (Salenius 2021b)

In pedestrian accidents, the pedestrian was principally at fault in 40% of the cases on average. There has been a very slight downward trend in this proportion up till 2018. As the number of cases is small, however, annual variations have been fairly large. In the pedestrian accidents investigated in 2019, the pedestrian was principally at fault in 54% of the cases. On average, 20% of the pedestrians and 17% of the cyclists who were involved in accidents in 2010–2019 were under the influence of alcohol at the time of the incident (limit 0.5‰). (Sihvola 2020)

In 2019, the most typical immediate risk factors for drivers of motor vehicles who were at fault in pedestrian and cycling accidents were related to the fact that the driver had not observed the other party involved in the accident or the situation. These risks were found to affect 69% (n = 9) of the drivers. For cyclists, a common immediate risk

factor was an attack of an illness, which affected 47% (n = 9). The accident was caused intentionally by 29% of the pedestrians who were at fault (n = 2). (Sihvola 2020)

A significant number of accidents resulting in serious injuries to cyclists are not reported to the police. Information on them can only be obtained in the hospitals' care registers, and Statistics Finland examines this data separately for statistical purposes. For a description of this process, see section 5.1.

6.7 Other causes of fatal motor vehicle accidents

Distraction

According to the European Union's Road Safety Policy Framework for 2021–2030, distraction whilst driving, in particular by mobile devices like smartphones, but also by electronic systems integrated in vehicles, is a major factor in causing crashes. Studies have found that the accident risk increases twelve times when making a phone call and six times when typing a text message (Dingus et al. 2016). In Finland, the risk associated with using a mobile phone was a factor in 4% of accidents examined by the road accident investigation teams in 2018¹⁰.

Technical faults

A technical fault was found in 10% (n = 13) of the vehicles whose driver was principally at fault in accidents examined by the investigation teams in 2019 (other than problems relate to tyres). In 2% of the vehicles (n = 2), the faults were a factor in causing the accident. Of all cars and vans involved in the accidents, 1% (n = 2) had a tread depth of 1.5 mm or less (measured on the worst tyre). The tyre pressures were correct in 78% of the cars and vans. (Sihvola 2020)

¹⁰ It is not always possible for the investigators to determine if a mobile phone was used/affected the incident.

6.8 HGVs

In fatal accidents involving a HGV, the party at fault often is another vehicle. According to preliminary data for 2020, HGVs were at fault in 10 fatalities in 2019 (in 2016–2020, this figure varied from 8 to 13) and parties in 40 collisions (40 to 55 in 2016–2020). (Salenius 2021a)

In 2011–2019, a HGV was at fault in approx. 18% of fatal HGV accidents on average (collisions and single-vehicle accidents) and in 40% of accidents that proved fatal for a pedestrian or a cyclist. Accidents involving a HGV claimed the lives of 77 pedestrians, of which one out of four at a pedestrian crossing. This figure for cyclists was 29. (Finnish Crash Data Institute 2020b)

Accidents involving HGVs are associated with a high risk of death and injury as a default, and they frequently have serious consequences. An accident with a HGV is highly likely to have serious consequences. Serious accidents have been investigated by the Safety Investigation Authority and the road accident investigation teams.

In 2004, a head-on collision occurred between a heavy vehicle combination and a bus in Konginkangas, Äänekoski. According to the Safety Investigation Authority's investigation report, the weak structure of the trailer's bodywork, inadequate securing of the load and high vehicle speed were factors in the fatalities and severe injuries for the part of the vehicle combination. For the part of the bus, the poor crashworthiness of the vehicle's front end, not wearing seat belts, the high speed of the vehicle during the incident, and the large difference in the masses of the two vehicles were noted as the factors that lead to injuries. As the immediate reason regarding the driver of the vehicle combination was found loss of control of the vehicle while driving, and the most significant background factors were unsuitable positioning of the vehicle on the road, the vehicle's inappropriate speed, and potentially reduced driver alertness. In the case of the bus driver, as the immediate cause was noted an observation error, as a result of which action to avoid the collision was taken too late. As a background factor was recorded high vehicle speed in slippery road conditions. The Safety Investigation Authority issued a total of 17 safety recommendations, of which the following are relevant to policing: trucks' speeds, driving and rest times, overloads as well as securing and supporting of loads; increased traffic enforcement; attaining the enforcement targets for the part of HGVs set for the police by the government and the EU; and supervising the wearing of safety belts. (Safety Investigation Authority 2004).

In an accident on main road 7 in Pyhtää in 2006, a vehicle combination transporting cars to Russia and a bus travelling from Kotka to Helsinki had a head-on collision. Ac-

According to the Safety investigation Authority's investigation report, the most likely immediate cause of the accident was that the driver of the vehicle combination fell asleep for an instant. The Safety Investigation Authority issued safety recommendations, of which monitoring driving times and rest periods and, partly, monitoring HGVs in cross-border traffic are relevant to policing. (Safety Investigation Authority 2006).

In 2011–2019, the road accident investigation teams had identified technical faults in a total of 61 (9%) of HGVs involved in fatal road accidents. The investigation teams estimated that in 20 vehicles, the faults were at some level a factor in the causation of the accident. In eight cases, the accident was directly caused by a technical fault; in other words, the technical fault was the immediate risk factor identified by the team. While the faults in the other 41 vehicles were registered in the accident investigation, it was concluded that they did not have an impact on the accident. The most common fault type was brake failures, which were found in 27 vehicles. (Finnish Crash Data Institute 2020b)

In a sample of other than fatal accidents involving HGVs investigated by the teams (40 accidents), the reports noted in the context of technical faults that in many cases, the general condition of the truck and its trailer was poor. Rust damage and fractures in structures that had developed over a long period of time, usually caused by corrosion, were observed in them. In trailers, faults in their coupling devices, axles or brakes, defects in swap bodies or their coupling devices, or unexpected failures caused by sudden incidents were detected. These faults are often caused by continuous neglect of maintenance. (Finnish Crash Data Institute 2020b)

6.9 Accidents in off-road traffic

Airaksinen et al. found in their study that the greatest number of snowmobile accidents occurred to local residents in recreational snowmobiling. The most common accident mechanism was a collision with an obstacle, which was preceded by losing control of the snowmobile and running off the trail. Overturning the snowmobile was also a fairly common mechanism of injury, especially for inexperienced drivers. A key observation of the investigations was that the number of quad bike accidents resulting in personal injury has increased in recent years along with the growing number of quads¹¹. Statistics indicate that quads already have more accidents than snowmobiles. (Airaksinen et al. 2015)

¹¹ In this context, quad bikes and category T3 tractors are referred to as quads, which is a commonly used term.

Valtonen looked at 56 fatal off-road traffic accidents examined by the investigation teams in 2014–2018 as well as six snowmobile accidents that the teams had investigated as road accidents. A total of 45 people lost their lives in the 41 investigated snowmobile accidents, four of which claimed the lives of not only the driver but also the passenger. A large proportion of the snowmobile accidents occurred while driving on ice, and the accident was often caused as the snowmobile ended up in water by breaking through a weak section of the ice. The study concluded that the risks of driving snowmobiles on ice should be emphasised more. (Valtonen 2020)

Valtonen found that 25 accidents involving other vehicles were investigated as off-road traffic accidents in the relevant period. A total of 13 of these accidents involved different types of quads (unregistered off-road quads, quads registered for road use or tractors). All of them were single-vehicle accidents. In addition to the incidents involving snowmobiles and quads, four cases in which a vehicle (three cars and a van) broke through the ice were investigated as off-road accidents. Two accidents involving a tractor (other than quad tractors) were investigated, in one of which the vehicle had broken through the ice. There were also two fatalities involving two-wheel motor vehicles. In one of them, a moped driver broke through the ice, and in the other a motorcycle drove off a minor road.

According to Valtonen, the proportion of accidents that occurred on ice and, in particular, cases where a vehicle broke through the ice or ended up in an ice-free area was large in general. These accidents usually occurred to local people in an environment with which they were relatively familiar. Alcohol was also a factor in a high number of the accidents. It was confirmed that one out of three drivers in off-road accidents had been drink driving (their alcohol level was measured).

6.10 Accidents in waterborne traffic

Information on accidents in waterborne traffic can be obtained from data collected by the authorities and voluntary organisations. Of the authorities' data sources, data collected by the Police, the Border Guard and the Finnish Transport and Communications Agency were included. The voluntary organisations include maritime and lake rescue associations, whose umbrella organisation is the Finnish Lifeboat Institution. It should be noted that the Finnish Lifeboat Institution does not have an authority's powers to investigate the impact of alcohol on incidents, which is why information on alcohol as a factor in accidents is not included in data provided by the Finnish Lifeboat Institution.

According to the preliminary data, 28 people died in waterborne traffic accidents¹² in 2020, ten of which took place in the Finnish sea area and 18 in inland waterways. All these cases were related to recreational boating. In 2019, there were 43 fatalities, and on average in 2016–2018, 45 people lost their lives each year in waterborne traffic accidents. In 2020, ten motorboats, one sailing boat, two water scooters and 16 rowing boats were involved in the fatal accidents in waterborne traffic. In about 79% of the cases (n = 22), the accident type was capsizing or tilting. The human factor in fatal boating accidents that occurred in 2020 was incorrect action in 50% (n = 14) and alcohol in 36% (n = 10) of the cases. In 2020, the proportion of cases involving alcohol was higher than in 2019 and the average for 2016–2018. Weather conditions had an impact on the causes of the accident in 18% of the cases. (Finnish Transport and Communications Agency 2021b)

According to the waterborne traffic accident statistics compiled by the Finnish Transport and Communications Agency, around 2,200 of such accidents reported to the authorities occurred in 2019, of which around 2,140 involved pleasure craft. Around 70% of the accidents occurred in Finnish sea areas and 30% in inland waterways. The most common type of accident was damage to the craft, often due to a technical fault in the steering equipment or propulsion machinery, or incorrect action. In 2016–2019, an average of 26% of accidents in waterborne traffic were caused by incorrect action and 3% by alcohol. It should be noted that cases involving alcohol are not always registered. In six out of ten cases, no human factors were identified as the cause of the accident. (Finnish Transport and Communications Agency 2020)

The most common types of accidents involving motor boats and sailing boats recorded in the statistics are damage to the boat and running aground. However, the annual number of accidents cited above only includes part of the accidents in waterborne traffic and covers exclusively the incidents which have come to the attention of the authorities and which specifically involve an accident. It is estimated that the number of accidents not reported to the authorities is many times higher every year. In addition, authorities and maritime rescue actors are also called to assistance in situations which, rather than an accident, involve some other need for help. (Parliament 2018)

¹² An incident caused by the equipment, operation or functioning of a watercraft that occurs in water and results in personal injury, property damage, environmental damage or a rescue mission.

7 Objectives of the Programme

The objectives of this Programme concern every road and waterway user as well as all off-road traffic. The objectives set out below have not been prioritised, and their importance may vary from situation to situation. The list is also not intended to be exhaustive.

The interventions may vary and should indeed be widely applied. Operating in traffic is frequently subject to a licence, for example a driving licence or an operating licence. In addition to enforcement, police actions related to licences and permits and passing on information to other permit authorities can help promote desirable behaviour.

The police organisation or allocation of resources to the police are not assessed in the context of the objectives discussed in this Chapter and the means set down in the Programme for achieving them. While stepping up traffic enforcement and introducing new technologies would be effective ways of improving traffic safety, this programme does not control the amount and allocation of police resources. As stated previously, rather than to the Programme, this question is relevant to the overall resource allocation of the police.

7.1 Key impact objectives

- Reducing the number of fatal road accidents and serious injuries and combating the grey economy in commercial transport
- Preventing, detecting, investigating and submitting to consideration of charges traffic offences and offences uncovered in traffic as well as maintaining traffic safety

7.2 General objectives of the traffic enforcement and safety work of the police

7.2.1 Traffic enforcement and safety work are preventive and collaborative, guided by fact-based management and geared to supporting the other objectives of the police

Preventive work

The police have a legal duty to carry out preventive work aiming to maintain the safety and security of people and society, to engender a sense of security and to sustain confidence in the police. This is achieved through early intervention in incidents and developments that undermine safety and security. Preventive work is also cost-effective, as accidents and offences harm individuals, businesses and society in various ways. Crime and disorder erode citizens' sense of security.

Cooperation

The police are one of the road safety actors, which is why cooperation and exchanges of information with other authorities and organisations involved in road safety are essential. The police work together with many stakeholders to improve road safety. This cooperation takes place at the local, regional, national and international level. Best practices for developing traffic enforcement will be sought through international cooperation and by actively keeping up with international practices. Benefits can be gained from cooperation between the police and road maintenance operators (ELY Centres and municipalities). Regional road safety plans will be drawn up in municipalities and regions. This cooperation should be integrated in the planning of monitoring and traffic enforcement carried out by the police.

Additionally, it is important that citizens wish to work together with the police to promote road safety and that the police genuinely appreciate the cooperation of both citizens and others parties. The impact of police activities is largely based on cooperation with the citizens as well as citizens' help and support for police work. (Huotari 2020)

Synergy benefits can be gained from cooperation between the police and the other permit and supervisory authorities, including the Finnish Transport and Communications Agency, the Tax Administration, the Customs, the Border Guard, the occupational safety and health authorities and the Finnish Safety and Chemicals Agency. Cooperation between police units, and between different sectors of policing in police departments, will also be important from the perspective of impact.

Fact-based management

Traffic enforcement and safety work will be guided by fact-based management. The stakeholders of the police have data reserves related to traffic, including information on driving speeds, hazardous sites and unsafe road sections in the road network as well as accident information. Drawing on this information extensively and sharing information between different actors will support fact-based management. According to Sutela, fact-based management means activities which are planned, to which resources are allocated, and which are managed. The ability to draw on analysed information in directing the activities and combating crime is a vital part of fact-based management of policing. A precondition for fact-based management of policing is that decision-making is underpinned by analysed information. The police will use analyses and analytics to anticipate and identify security threats, offences and traffic accidents and to allocate scarce resources correctly. (Sutela 2020)

To enable fact-based decision-making and management, information should be stored comprehensively and to a high quality, and it should be possible to collate data contained in different actors' warehouses into a coherent whole, based on which a genuine situational picture can be created and the impact of the activities can be monitored.

Continuing research into drink driving will be justified, as this work is in line with the traffic safety objectives of the police and produces basic information on drivers' intoxicant use in traffic. Sober driving is also one of the EU 's future road safety indicators. As part of fact-based management, the police will participate in research that serves the traffic safety work as a whole by conducting at least a study on driving while intoxicated every year and by taking part in the work of the road accident investigation teams¹³. The findings of the road accident investigation teams will be widely used in the work to prevent traffic accidents, and they can also be used in the planning of police operations and in enforcement. Participation in the investigation teams' work will also improve police competence.

¹³ Act on the Investigation of Road and Off-road Accidents (1512/2016)

Other measures that support the attainment of police objectives

The traffic enforcement and safety activities will also support the attainment of the other objectives of the police. Other offences and violations besides those related to traffic are uncovered in connection with traffic enforcement. Criminals use the road network to get around, and vehicles and roads are needed for both ordinary and cross-border organised crime activities. The objectives set for the police include combating organised crime, the grey economy and economic crime. Rather than respecting national borders, crime is organised and international. (Europol 2017)

7.2.2 Securing competence

Traffic enforcement, especially in the context of HGVs, requires special expertise and long-term competence development. Police competence must be kept up with the legislation, road user behaviour and vehicle development. Traffic is becoming increasingly diverse, and new phenomena are emerging. In addition to normal police training, organising special training necessary for traffic enforcement, especially enforcement targeting HGVs, should be possible in order to enable high-quality policing. Attention should be paid to the recruitment and induction training of new enforcement officers to ensure the continuity of this demanding work.

7.2.3 Using technology efficiently

The police will engage in versatile traffic enforcement using both marked and unmarked police vehicles. Surveillance technology should also be developed and used diversely, taking into account the possibilities created by the new Road Traffic Act that entered into force on 1 June 2020.

While traffic enforcement is still mainly carried out by police personnel, the aim is to make efficient use of technology in traffic surveillance, not only in speed control but also other types of monitoring. The effectiveness of traffic enforcement can be improved by using automated surveillance at selected sites. An effort will be made to deploy emerging technologies to enable automated surveillance of such behaviours as wearing seat belts, using mobile devices while driving and keeping a safe distance to the vehicle in front. Permanent automated surveillance will be planned and implemented in cooperation with the Finnish Transport Infrastructure Agency, ELY Centres and municipalities.

7.2.4 Communicating actively and effectively

The police will communicate and use the social media actively to promote road safety at the local and national level. Communication and active social media presence can also have a preventive effect on road safety and enhance the impact of the traffic safety work carried out by the police. Traffic safety campaigns can be effective in improving road safety (Phillips, Ulleberg and Vaa 2011). Communication and enforcement are mutually supportive. The authorities communicate openly and provide fact-based information on security issues, which helps people feel a sense of security.

The police will work together with other road safety actors in the area of communication, for example in connection with various campaigns.

7.3 Key impact areas in the traffic enforcement and traffic safety work of the police

The police will engage in traffic enforcement and safety work with the aim of improving road safety and reducing the societal harms of traffic. In particular, this will be achieved by impacting the following:

7.3.1 Driving health and alertness

Risk factors related to driving health are very common in fatal road accidents. While challenges related to driving health may occur in different age groups, the ageing of the population also has an impact on traffic. A physician decides if a person's state of health entitles them to the right to drive. The police are responsible for monitoring the driving ability and health of individual road users. Actions aiming to influence driving health are not limited to traffic enforcement. Monitoring and maintaining traffic safety are a basic part of the surveillance, emergency response and traffic enforcement activities. Crime prevention and permit administration can also address and intervene in matters related to driving health.

On different missions, the police encounter holders of the right to drive in cases where it may be suspected that the person no longer meets the health requirements for holding a driving licence or is able to drive a vehicle safely due their state of health. These situations are not only limited to tasks related driving; the police also encounter such

situations on their missions when, for example, a person intends or threatens to commit suicide, suffers from mental health problems or has an addiction. Cooperation between supervision and emergency response missions, traffic enforcement, crime prevention and permit administration of the police is important in this respect. In questions of driving health, cooperation and exchange of information between the police and physicians naturally are a key success factor, as physicians conduct the health examinations to determine if a person can retain their right to drive.

The Finnish Transport and Communications Agency has prepared guidelines on the assessment of driving health for health care professionals. They are instructed to impose a physician's temporary driving ban on a driver whose state of health does not meet the driving health requirements. The police should note that these temporary driving bans issued by a physician are only entered in the patient documents and, if they do not exceed a maximum period of six months, they are not notified to the police. Among other things, the guidelines instruct health care professionals to impose a physician's temporary driving ban on a person who is at a significant and immediate risk of committing suicide. (Finnish Transport and Communications Agency 2019)

It is essential to identify those holders of the right to drive whose health does not meet the requirements. As a precautionary measure, a temporary driving ban with immediate effect can be issued to a holder of the right to drive. Information exchanges and cooperation between the police and health care services are important from the perspective of driving health.

7.3.2 Alcohol, drugs and medicines

Sober driving is a goal identified in the European Commission's Road Safety Policy Framework for 2021–2030. Intoxicants are a key risk factor in fatal traffic accidents also in Finland.

By enforcing the drink driving rules, the risk of being caught is maintained at an adequate level and, as a rule, all drivers of motor vehicles stopped by the police are breathalysed. At the same time, the police check for any indications of the driver using other intoxicants. The development proposals received from the road accident investigation teams include more effective monitoring of speeding and driving while intoxicated as well as improving the regional targeting of enforcement. The road accident investigation teams have also stressed education and information activities focusing on the impacts of alcohol, drugs and medicines on driving ability.

The police may order a driver to undergo an evaluation of substance abuse. According to the guidelines issued by the Finnish Transport and Safety Agency to health care professionals, the driving health requirements are not met if a person is unable to refrain from driving under the influence of alcohol. Under the Driving Licence Act, driving health requirements can also be regarded as being met if the vehicle used by the person has an alcohol interlock device that prevents driving when intoxicated. Following the guidelines issued by the Finnish Transport and Communications Agency, the driving health requirements are not met if the person is addicted to drugs, uses them regularly, or abuses medications that affect the central nervous system. These requirements are also not met if the abuse of drugs or medicines has resulted in permanent changes in the state of health that impair ability to drive or put driving safety at risk by affecting the person's general functional ability, capabilities for observation, or their judgement, reactions or behaviour, including permanent organic changes in the central nervous system or balance caused by abuse of drugs or pharmaceuticals, impairment of intellectual activity, or personality or behavioural changes.

Intoxicant addiction and its impacts on road safety should be addressed as early as possible. One of the measures in the Target programme for the prevention of home and leisure accident accidents for 2021–2030 is directing a person with addictions to appropriate treatment. This is why it is important to support and develop the skills and capabilities of police personnel to direct a person who is suspected of driving while intoxicated or whose fitness for driving has impaired for other reasons to services or an evaluation with a low threshold.

Motivated by a citizens' initiative on more severe penalties for driving while intoxicated, Parliament adopted a resolution (Parliament 2014) in which it requires that the Government bring in more effective measures on evaluating the substance abuse situation of young people suspected of driving while intoxicated and relevant further measures. In addition, Parliament required that the Government take urgent measures to promote the use of alcohol interlock devices. Persons suspected of drink driving should be informed of these devices. One of the measures in the Target programme for the prevention of home and leisure accident accidents for 2021–2030 is promoting the use of alcohol interlock devices.

7.3.3 Young people

Young drivers under the age of 25 have always been overrepresented in road accident and offence statistics. Young people in this age group already have access to almost all modes of transport. Mopeds, light quadricycles, light motorcycles and other

motor vehicles have their inherent risks. Rather than belonging to the at-risk group, most young people strive to use the road safely and avoid unnecessary risk-taking.

Compared to adults, typical features of young people's traffic behaviour are impulsiveness, poor judgement and lack of anticipation. Their regulation of impulses and emotions is still developing, and a young person may take unnecessary risks. A significant proportion of the risk factors are additionally associated with young people's attitudes. High speeds, narrow safety margins, disregard for traffic rules, driving while intoxicated and not wearing a seat belt are typical for the high-risk driving behaviour of young men, in particular. The accident risk of a young driver is often higher when they have other young people on board. In these situations, the risks are increased by showing off and competitiveness. Risk-takers overestimate their skills.

In their traffic safety work, the police should pay particular attention to influencing the traffic behaviour of young people. In addition to enforcement, the means of achieving this end include especially such forms of preventive work as communication and educational campaigns implemented together with other road safety actors and stakeholders.

7.3.4 Driving styles and speeds

Safe speed is a goal identified in the European Commission's Road Safety Policy Framework for 2021–2030.

High-risk behaviour on the road may take many forms. For example, not keeping a sufficient distance to the vehicle ahead, dangerous overtaking, running red lights or an aggressive driving style generate hazards and give rise to a feeling of insecurity. Speeding and other high-risk behaviours are often interlinked. Driving speeds (speeding and driving too fast considering the conditions at the time, the driver's skills or the vehicle) are also a key risk factor in fatal road accidents in Finland.

The traffic system enables a certain speed level, and safety is one of the factors that affect speed limits on roads and streets. The task of the police is to ensure that the set speed limits are observed, which is a prerequisite for the functioning of the entire transport system. This is about managing vehicle speeds. Regulating and managing speeds are key road safety measures. Those who exceed the speed limit often also violate other traffic rules, for example by driving too close to the vehicle in front of them. Similarly, people who drive while intoxicated and some of those who have challenges related to their driving health drive at speeds that differ from the normal traffic flow.

Various broad-based monitoring methods can be used to influence road users with questionable attitudes. Automated surveillance can have an impact on regulating speeds and promote compliance with speed limits, and even enable continuous enforcement. Rather than selecting a certain method, several techniques should be used simultaneously. Automated traffic surveillance is a way of enhancing the impact of traffic enforcement.

In fatal road accidents, speeds which exceed the speed limit by a large margin are typical. This does not mean that drivers who exceed the speed limit by a smaller margin should not also be monitored. Managing speeds additionally has an impact on traffic emissions and the level of traffic noise.

7.3.5 Use of safety belts, child restraints and protective equipment

A high proportion of road users utilising safety equipment, including safety belts, child restraints and helmets, is a goal identified in the European Commission's Road Safety Policy Framework for 2021–2030. In Finland, too, using safety equipment could save dozens of people from losing their lives in road accidents, or reduce the severity of the injuries sustained by those travelling in the car at the time of the accident.

Enforcement focusing on safety equipment can help improve and maintain a high level of their use. Failure to use safety equipment is a prominent feature of intoxicated drivers' accidents.

7.3.6 Distraction (technical devices, mobile devices, other activities)

Driving without distractions is a goal defined in the European Commission's Road Safety Policy Framework for 2021–2030.

The aim is that drivers focus on operating the vehicle. The objective of monitoring the use of mobile devices and other technical equipment is ensuring that drivers focus on driving. When the driver is distracted, their attention is drawn to activities other than those required for safe driving. Jääskeläinen and Pöysti have studied distraction as a road safety problem. Being distracted interferes with the driving task in three main ways: the driver takes their eyes off what is happening on the road, they remove a hand from the vehicle's controls, and their cognitive functions are not focused on the

driving task. From the point of view of the accident risk, the most critical activities are those in which the driver takes their eyes and thoughts off the road for a lengthy period of time. Using electronic devices is not the only activity which may distract the driver. (Jääskeläinen and Pöysti 2014)

7.3.7 Pedestrians, cyclists and pedestrian crossings

In 2018, the Government adopted a Resolution on supporting walking and cycling, which seeks to improve the conditions for walking and cycling in Finnish municipalities as well as to support the reduction of greenhouse gas emissions from transport and improvement of public health in Finland. This Resolution sets the target of a 30% increase in the number of journeys completed by walking and cycling by 2030. The same target is contained in the National Energy and Climate Strategy. The goal is that the safety of walking and cycling will improve further, despite the increasing number of journeys. (Ministry of Transport and Communications 2018a)

The safety of pedestrians and cyclists has been improved by reducing speed limits in urban areas. Pedestrians' and cyclists' safety can be promoted by traffic enforcement and other traffic safety measures of the police. These measures can include monitoring driving techniques and speeds in urban areas, enforcing the rules related to pedestrian crossings and yielding, monitoring observance of red traffic lights, and parking supervision in hazardous areas. Supervising pedestrians, cyclists and users of new electronic means of transport is also one of these measures. Cycling accidents are usually not included in official traffic accident statistics. Data on one half of the serious injuries sustained by cyclists are only obtained from the Care Register for Health Care.

7.3.8 Commercial transport, traffic crime and the grey economy in road transport

HGVs are subject to a great deal of European Union legislation which the Member States are expected to enforce. Enforcement focusing on commercial transport (transport of passengers and goods) addresses not only factors affecting road safety, including driving and rest periods, transport of hazardous goods, technical roadside inspections, overloads and load securing but also problems related to transport licences and grey economy phenomena. Enforcement related to the manipulation of equipment intended to reduce exhaust emissions from HGVs and tachographs that record driving and rest periods is part of the supervision of HGVs and bus operations.

8 Programme implementation, reporting and indicators of objective achievement

8.1 Programme implementation and reporting

Under section 1 of the Act on Police Administration (110/1992), the Ministry of the Interior is responsible for the steering and supervision of the police sector and for the tasks in the police sector separately laid down for the ministry. Following instructions issued by the Ministry of the Interior, the task of the National Police Board is to: 1) plan, develop, direct and supervise police activities and their support functions in the police units subordinate to it; 2) assume responsibility for the equal availability and quality of services related to police duties provided for the citizens in different parts of the country; 3) make decisions on cooperation between the police units subordinate to it; 4) assume responsibility for the performance guidance of and allocation of resources to the police units subordinate to it; 5) perform any other tasks assigned to it under legislation or regulations.

The implementation of the Programme will begin once it has been approved. The National Police Board will implement the Programme and, on its basis, draw up an action and development plan for traffic enforcement and traffic safety as well as indicators for the attainment of the objectives by the end of 2021. The action and development plan shall be sent to the Ministry of the Interior Police Department for approval. The action and development plan will include evaluation criteria and indicators that support the monitoring of the outcomes and operational development. The National Police Board will guide and direct local police departments in its regional implementation. The National Police Board will ensure that the police departments implement the Programme in their daily activities through management and supervisory work.

The National Police Board will report to the Ministry of the Interior Police Department on the implementation of the programme annually by the end of March. The report will describe the results of the indicators to be set and other evaluation of the impact of the traffic enforcement and safety work. The first report covering year 2021 will be submitted in March 2022.

The National Police Board will engage in continuous self-assessment with the aim of assessing and planning further the traffic enforcement and traffic safety activities. The

National Police Board will update the action and development plan for traffic enforcement and traffic safety activities when necessary. This will be based on an evaluation of strengths and development areas. Changes in the operating environment may require changes in practices.

The Ministry of the Interior will assess the needs to change the Programme if this is otherwise required by national strategic policies or the operating environment. The Ministry of the Interior will carry out an interim evaluation of the programme in 2026.

8.2 Measurement of objective achievement

The achievement of the objectives set for the traffic enforcement and traffic safety work of the police will be assessed across a broad front. In this, quantitative and qualitative assessments of the activities and impact of the police can be used. The National Police Board will assess police activities at both the national and regional level. The National Police Board is currently developing indicators for police activities.

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Ministry of the Interior
Finland

Ministry of the Interior PO Box 26, FI-00023 Government

www.intermin.fi