



**PLAN OF SPECIAL MEASURES FOR THE
ROAD SAFETY OF MOTORCYCLES AND MOPEDS
2019 - 2020**



MINISTERIO
DEL INTERIOR



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de Seguridad Vial*

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1. INTRODUCTION

In 2007, the Directorate General for Traffic drew up a "Strategic Plan for the Road Safety of Motorcycles and Mopeds", which included measures to be implemented in the 2008-2011 period. This Plan, devised in the Higher Council for Traffic, Road Safety and Sustainable Mobility, managed to reverse the negative trend observed in previous years. In particular, the number of motorcycle deaths, which had increased by 42% in the three years prior to the Plan, fell by 45% in the three years that followed.

Furthermore, the analysis carried out in drafting the 2011-2020 Road Safety Strategy allowed the different accident profiles recorded on the Spanish road networks to be identified, and was the basis for determining the key groups and issues on which work was done throughout the process of drawing up the road safety policies for this period. One of the groups on which the RSS 2011-2020 has focused is that of "Motorcyclists", both "motorcycles" and "mopeds", establishing "Improving the safety of motorcyclists" as one of the six priorities of the Strategy and setting the objective of "Achieving a sustained decrease over time in the number of motorcyclist accidents", through three operational objectives:

- To achieve safer behaviour of motorcyclists.
- To increase road safety for motorcyclists.
- To improve knowledge on motorcyclist accidents and their mobility.

To achieve this, the following actions were proposed:

- Promote rider safety courses.
- Encourage the use of safety equipment.
- Carry out information and awareness campaigns on the risks of travelling by motorcycle.
- Carry out information and awareness campaigns on the coexistence between motorcycles and other modes of transport.
- Implicate the motorcyclist group as prescribing to the risks of travelling by motorcycle.
- Carry out monitoring and control campaigns on motorcyclists' compliance with rules, especially on roads and pseudo-sports driving areas.
- Promote the progressive incorporation of braking distribution systems in the motorcycle fleet.

- Continue the programme of installing safety barriers for motorcyclists on the roads, in accordance with the criteria and planning of licensees.
- Promote the specific exchange of best practices to improve safety in urban motorcycle travel.
- Availability of risk exposure data.
- To carry out studies to characterise the accident profiles of the key groups in the strategy and the main risk factors.

Despite the progress made with the 2008-2011 Motorcycle Plan and the actions carried out in the framework of the 2011-2020 Road Safety Strategy, there are reasons to promote an update. Some basic data are:

- Motorcyclists remain one of the most vulnerable groups on the roads. A study carried out in 2003 by the European Road Safety Council found that for every kilometre travelled by a user on a road in the European Union, the risk of losing one's life, compared to a person travelling by car, is eight times higher for a cyclist, nine times higher for a pedestrian and 20 times higher for a motorcyclist.

The studies carried out by the DGT in 2014, determined that per kilometre travelled, the risk of a motorcyclist dying is 17 times greater than that of a car driver.

- Motorcycles and mopeds represent 15% of the vehicle fleet and 22% of those killed in road accidents.
- Between 2014 and 2017, deaths on motorcycles have increased by 25%, more than any other means of travel.

For this reason, this Plan of Special Measures for the Road Safety of Motorcycles and Mopeds 2018-2020 has been drawn up, to be developed by the DGT and the agents involved.

This Plan has been approved by the Working Group WG-52 "Motorcycles and Road Safety" within the Higher Council for Traffic, Road Safety and Sustainable Mobility, and by the Management Committee of the Directorate General for Traffic.

Based on the analysis of possible measures to be implemented, a selection has been made so that the proposals meet the following criteria:

- They represent a significant degree of novelty.
- They are concrete.
- They are viable in the short or medium term.

DIAGNOSIS OVERVIEW.

- Summary table. 2017

The following table summarises the basic figures for moped and motorcycle accidents in 2017:



- Motorcycles involved in accidents with victims. 2017

In 2017, motorcycle riders were present in 27% of all accidents with victims, i.e. 27,165 accidents, while the percentage of motorcycles in the vehicle fleet was just 10%.

Motorcycles were involved in 18% of all accidents on interurban roads, and 31% of all accidents on urban roads.

Fatal injuries occurred more often on interurban roads: 251 people. 70% of all motorcyclist deaths in 2017 occurred on these roads. On urban roads, there were 108 deaths. The number of injured people hospitalised on interurban roads was 1,250 and on urban roads 1,534.

The motorcyclists who were victims of road accidents were mainly men: 93% of the deaths, 88% of the hospitalised injured and 79% of the non-hospitalised injured.

It is the 25-34, 35-44 and 45-54 age groups that have the greatest presence, accounting for 69% of deaths, 73% of hospitalised injured and 73% of non-hospitalised injured, respectively.

- Mopeds involved in accidents with victims. 2017

In 2017, accidents involving victims on mopeds amounted to 7,574, or 7% of the total, which is close to the proportion of mopeds in the 2017 vehicle fleet.

Mopeds were involved in 3% of all accidents on interurban roads, and 10% of all accidents on urban roads.

Most moped accidents occur on urban roads: 6,599 accidents and it is where the highest number of hospitalised injured are recorded, 452 and 6,816 non-hospitalised injured. In the case of deaths, the proportion is equal, 26 on interurban roads and 23 on urban roads.

Men represent a majority of the victims who use mopeds: 46 of the 49 deaths on these vehicles, and representing 77% of the hospitalised injured and 70% of the non-hospitalised injured.

The 15-24 age group has the highest numbers of hospitalised and non-hospitalised injured on mopeds. The number of deaths in this group was 10 and the maximum (11) was in the over-75 age group.

- **Evolution of the distribution of accidents with victims by vehicle type.**

Motorcycles are vehicles that show an increasing involvement in accident rates, as in 2008 they were involved in 19% of accidents and in 2017 they were involved in 27%. In contrast, in the same period the percentage of accidents involving at least one moped has decreased from 15% to 7%.

Comparing data with the previous year, in 2017, the number of deaths increased with particular significance in passenger cars (45 people), motorcycles (16 people), goods vehicles (12 people) and bicycles (11 people). In contrast, there were decreases in the number of deaths of pedestrians (38 people), bus users (18 people) and moped riders (5 people).

In 2017, on interurban roads there was a 7% increase (17 people) in the number of motorcyclists killed, with a 3% increase in hospitalised injured (36 people) compared to 2016. On these roads, motorcyclists are the second largest group of hospitalised injured, with 1,250 riders. Also on these roads, the number of deaths of moped riders (26) remained unchanged. There was one less hospitalised injury than in 2016.

On the urban roads, there was 1 fewer motorcyclist death than last year and 5% (67 people) more hospitalised injured than the previous year. On these roads, motorcyclists are the group with the second highest number of hospitalised injured in 2017 (1,534). The number of hospitalised injured on mopeds was 6 less than in 2016.

Motorcycles were the only transport means whose hospitalised injured increased compared to last year, both on urban and interurban roads.

- **The use of safety equipment**

- On motorcycles

In 2017, 1% of motorcycle riders who died on interurban roads were not wearing helmets, nor were 2% of the hospitalised injured. On urban roads, 8% of those who died on motorcycles were not wearing helmets, nor were 3% of the hospitalised injured motorcyclists.



With regard to 2016, the number of deaths without a helmet has decreased and the number of hospitalised injured without a helmet has increased on interurban roads. On urban roads both of these trends also applied.

In 2016, of the motorcyclists who died on interurban roads (excluding those in

Catalonia and the Basque Country), 41% were wearing gloves, 36% were wearing arm protection, 32% were wearing torso protection, 26% were wearing leg protection, 26% were wearing foot protection and 35% were wearing reflective clothing.

- On mopeds

Of all the moped riders who died in 2017, only 1 in 26 did not wear a helmet on interurban roads, and on urban roads 1 in 23 of the moped riders who died did not wear a helmet either.

Comparing 2017 with the previous year, a decrease in deaths and an increase in the number of hospitalised injured motorcyclists without helmets can be observed on interurban roads. On urban roads, the number of motorcyclist deaths and hospitalised injured without helmets fell compared to 2016.

- The technical inspection of motorcycles

The correct maintenance of a vehicle contributes decisively to ensuring adequate safety conditions throughout its life. These safety conditions are periodically verified during technical



inspections, depending on the period between two successive inspections of the type of vehicle and the service for which it is intended¹.

In 2017, the percentage of motorcycles involved in accidents with victims, on interurban roads, with the inspection expired at the time of the accident, was 6%. If the analysis is restricted to fatal accidents, the

percentage is 7%.

- Conclusions

The following conclusions have been drawn from the diagnosis (the period to which the data refer is indicated in brackets):

Conclusión 1. On all Spanish roads, 27% of accidents involved motorcycles and 7% of accidents involved mopeds (2017).

¹This regulation is contained in Royal Decree 2042/1994, of 14 October, which regulates the technical inspection of vehicles.

Conclusión 2. On all Spanish roads, 20% of the victims were motorcycle riders and 6% were moped riders. (2017).

Conclusión 3. 80% of the motorcycle riders who died or were hospitalised with injury on interurban roads, occurred on conventional roads. (Period 2013-2017).

Conclusión 4. Road accident scenarios. (2017).

Interurban roads: 7,070 motorcycles involved in accidents, 251 motorcycle riders killed and 1,250 hospitalised with injury. (2017).

- 33% of the motorcycle riders who died or were hospitalised with injury were on conventional roads during the week, between 8am and 8pm. In this scenario, 61% of the motorcycle riders who died or were hospitalised with injury had a licence issued for more than 10 years. (2017).
- 33% of motorcycle riders who died or were hospitalised with injury on interurban roads happened on conventional roads at weekends between 8am and 8pm. In this scenario, 57% of the motorcycle riders killed or hospitalised had their license issued for more than 10 years. (2017).

Urban roads: 21,302 motorcycles involved in accidents, 108 motorcycle riders killed and 1,534 hospitalised with injury. (2017).

- 52% of the riders who died or were hospitalised with injury on urban roads happened on weekdays from 8 am to 8 pm. In this scenario, 59% of the motorcycle riders killed or hospitalised with injury had a license issued for more than 10 years. (2017).

Conclusión 5. Intersections:

- Motorcycles: 18% of deaths and hospitalised injured on interurban roads occurred at intersections; on urban roads, the percentage is 51%. (Period 2013-2017)
- mopeds: deaths and hospitalised injured at interurban road intersections, 26% and at urban road intersections, 55%. (Period 2013-2017)

Outside intersections:

- Motorcycles: on interurban roads, 39% of deaths and hospitalised injured were due to road exits. (Period 2013-2017)

Conclusión 6. Age of the vehicles

The age of motorcycles involved in fatal accidents were 5-9 years (7%), 10-14 years (9%), 15-19 years (7%), 20-24 years (10%) and over 20 years (12%). (2017)

Conclusión 7. Technical inspection: the percentage of motorcycles involved in accidents with victims, on interurban roads, with the technical inspection expired is 6%; in fatal accidents, the percentage is 7% (2017).

Conclusión 8. Concurrent factors:

- Speed: it is present in 25% of accidents involving motorcyclists on interurban roads,
- Distracted riding: implicit in 23% of accidents.
- Non-compliance with priority: in 19% of accidents.
- Not respecting the safety interval: in 14% of accidents

(2017)

(*) Data not including Catalonia and the Basque Country

Conclusión 9. Protective equipment.

Helmets: 9% (1% interurban roads and 8% urban roads) of motorcycle riders who died were not wearing helmets at the time of the accident (2017). 1 out of 26 moped riders who died in interurban traffic did not wear a helmet and 1 out of 23 moped riders who died in urban traffic did not either. (2017)

The use of additional equipment to the helmet is found in less than 45% of the motorcycle riders killed on interurban roads, excluding data from Catalonia and the Basque Country. (2017)

Conclusión 10. Consumption of alcohol and drugs:

The percentage of motorcycle and moped riders who died with a blood alcohol level above the permitted level is 14% on interurban roads and 24% on urban roads; the percentage who had consumed illegal drugs is 11% and 10%, excluding data from Catalonia and the Basque Country (2017).

Conclusión 11. Young riders: 11% of moped and motorcycle riders who have died are under 25. (2017)

Conclusión 12. Sex:

Motorcyclists: 93% of the dead, 88% of the hospitalised injured and 79% of the non-hospitalised injured were men. (2017)

Moped riders: 46 of 49 deaths, 77% of hospitalised injured and 70% of non-hospitalised injured were men. (2017)

Conclusión 13. Accident rate with respect to the means of transport involved in the accidents.

In 25% of the cases, the victims were motorcycle riders in accidents where no other vehicle or pedestrian was involved. The same percentage occurred in the case of moped victims. (2017)

When another vehicle was involved in the accident, the highest numbers of victims riding motorcycles or mopeds occurred when the other vehicle was a passenger car (52% in the case of motorcycles and 55% in the case of mopeds). (2017)

Conclusión 14. Motorcycles of any capacity, involved in accidents, depending on the maximum driving licence of the holder: 46% A permit, 11% A2 permit, 3% (A1) permit and 39% B+3 permit. (2017)

Conclusión 15. Owners of motorcycles with a cylinder capacity of up to 125 cc, with a 3-year B riding licence (known as B+3), entitling them to ride, are 10 times more than owners of motorcycles with an A1 licence. (2017)

Conclusión 16. Injuries:

For riders of motorcycles or mopeds, who were discharged from hospital, the most frequent injuries were observed in the lower extremities (27.9%), the torso (26%) and the upper extremities (21%). (2015)

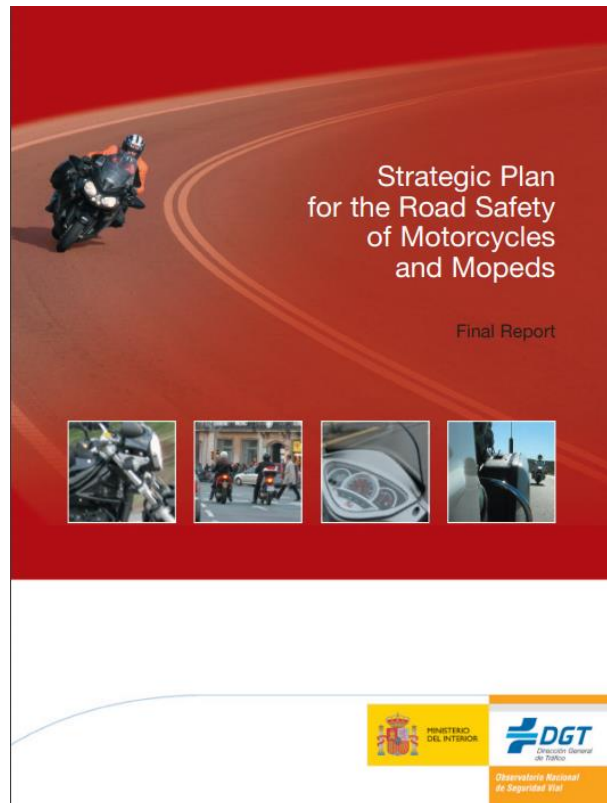
For the riders of motorcycles or mopeds who died, the most frequent injuries were to the torso (25.6%) and to the brain (23.9%). The most frequent injury mechanism was fracture. (2015)



2. BACKGROUND INFORMATION: THE STRATEGIC PLAN FOR THE ROAD SAFETY OF MOTORCYCLES AND MOPEDS 2008-2011

In Spain, between 2003 and 2007, the overall accident figures (in terms of number of fatalities) for all vehicles fell by 31%. However, the motorcycle accident rate in the same period increased by 77%. Particularly worrying was the summer of 2007 when the number of deaths on motorcycles increased by 53% compared to the previous year. In 2006, 789 people died and 6,334 were seriously injured on motorcycles and mopeds.

The Directorate General for Traffic (DGT) led the creation of a Working Group within the Higher Council for Traffic, Road Safety and Sustainable Mobility (WG52), with the active participation of the main actors in the two-wheeled sector (manufacturers, distributors, insurance companies, local administrations, rider associations, etc.). The WG52 developed the Strategic Plan for the Road Safety of Motorcycles and Mopeds, which entered the world in December 2007.



The development of the Plan was an excellent demonstration of coordination between all the actors and made it possible to have a consensual framework of measures and actions specifically designed to reduce the accident rate for motorcycles and mopeds.

The overall objectives set out in the Strategic Plan were twofold:

- Reversing the upward trend in the number of deaths and serious injuries of motorcycle and moped riders on our roads, towns and cities.
- Get the number of deaths per million motorcycles to begin a sustained decline over time.

The Plan was structured in 4 areas of action, developed in 12 programmes and 36 measures, from which the corresponding actions were derived. The four areas of action were the following:

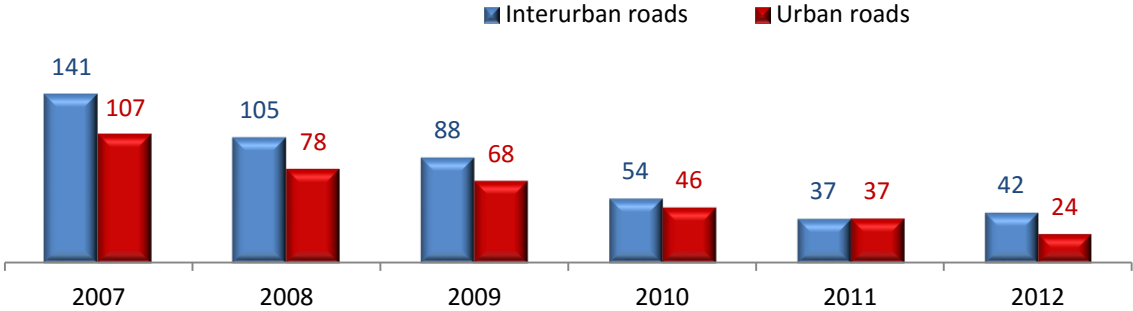
- To improve the preparation of motorcyclists for safe riding, both in entry tests and in further training in road safety;
- To reduce the high accident scenarios affecting this type of vehicle;
- To combat the risky practices of motorcycle and moped riders;
- To ensure that palliative measures are taken to reduce the severity of accidents.

For the duration period of the Plan, 162 actions were carried out to improve road safety for motorcycles. Among the most significant, we can highlight:

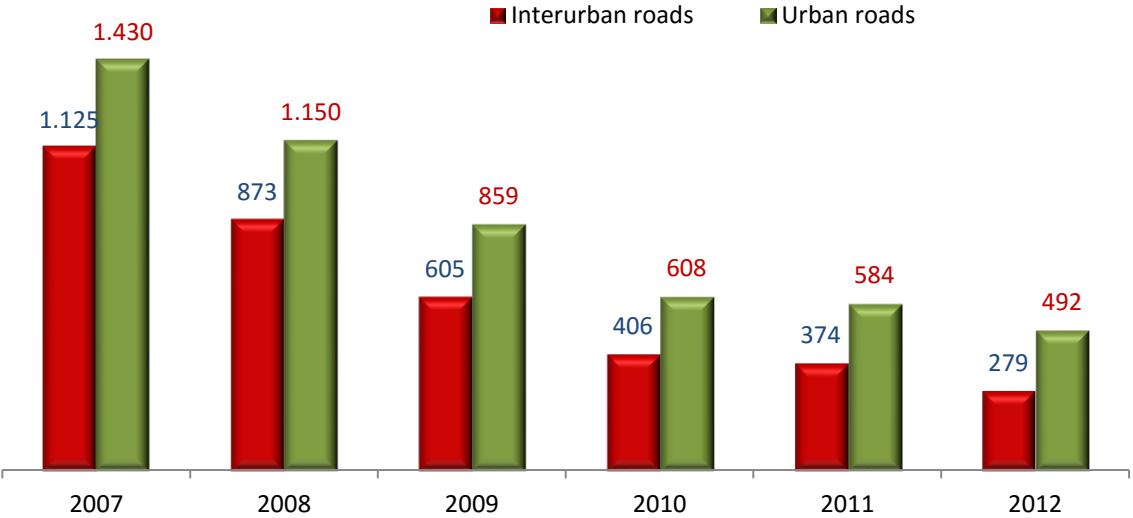
- Promoting road safety training in motorcycle access tests.
 - Incorporating the motorcycle subject into the car licence access tests.
 - Progressiveness in access to the motorcycle riding licence based on age and experience.
 - Delaying the minimum age for access to moped riding.
 - Promoting safe riding courses for motorcyclists.
 - Improving road grip and replacing guardrails on the national road network.
 - Encouraging the correct use of the helmet.
 - Carrying out specific campaigns for riders of two-wheeled vehicles, both in terms of communication and in terms of monitoring and control.
 - Increasing vigilance on risk practices.
-
- Conducting a study on the profile of the motorcyclist.
 - Elaboration and dissemination of the e-Sum Project best practices manual.
 - Preparation of the OECD White Paper on road safety for motorcyclists.

The Plan fulfilled its fundamental objective of reducing the accident rate for two-wheeled vehicles. The evolution of motorcycle and moped accidents during its period of validity (2008-2012) was as follows:

Mopeds:



Evolution of deaths on mopeds on interurban and urban roads Spain 2007-2012



Evolution of hospitalised injured on mopeds on interurban and urban roads. Spain 2007-2012

Motorcycles.

Evolution of the number of deaths on motorcycles on interurban and urban roads
Spain 2007-2012

Type of road	2007	2008	2009	2010	2011	2012
Interurban roads	471	359	325	279	251	208
Urban roads	161	136	113	107	97	94
Total	632	495	438	386	348	302

Evolution of hospitalised injured on motorcycles on interurban and urban roads Spain, 2007-
2012

Type of road	2007	2008	2009	2010	2011	2012
Interurban roads	2,091	1,783	1,619	1,431	1,377	1,252
Urban roads	1,385	1,314	1,413	1,097	1,240	1,206
Total	3,476	3,097	3,032	2,528	2,617	2,458

3. THE FRAMEWORK OF THE PLAN

4.1.- The safe system philosophy.

Drastically reducing the number of motorcyclists killed or seriously injured will require more than increasing efforts to implement traditional road safety measures. Over the last two decades, international organisations such as the World Health Organisation and the International Transport Forum have spoken of a "paradigm shift", which involves moving from traditional policies to an integrated vision in which road safety becomes a "Safe System" in which, first and foremost, the serious results of road accidents are avoided.

The Safe System is often accompanied by the so-called "Zero Vision", which presents the long-term goal of zero deaths and serious injuries. In this view, just as important or even more important than the quantitative aspect of the objective is the underlying ethical principle: as opposed to the classic approach which was prepared to take on greater road risk if this resulted in benefits in other areas - productivity, travel times - the Safe System establishes that the safety of riders must be the main design criterion of the system. We are looking for a system capable of acting in the event of human error, avoiding the accident whenever possible, but above all, reducing its consequences as much as possible. As we have said, the starting point is an ethically inspired perspective, which while accepting that human error on the road is inevitable, death and serious injury from a road accident are not.

A Safe System goes beyond reactive approaches, based on the analysis of past accidents. Instead, it takes a proactive approach to guiding safe behaviour while assessing the risks inherent in a road network and identifying priority interventions to prevent serious injuries when road accidents occur. But, above all, a Secure System does not accept sacrificing human lives in favour of other priorities.

In a Safe System there are four fundamental guiding principles:

- First, people make mistakes that can lead to traffic accidents.
- Second, the human body has a known limited physical capacity to tolerate the forces of impact before damage occurs.
- Third, while individuals have a responsibility to act with care and respect for the rules, there is a shared responsibility with those who design, build, manage and use roads

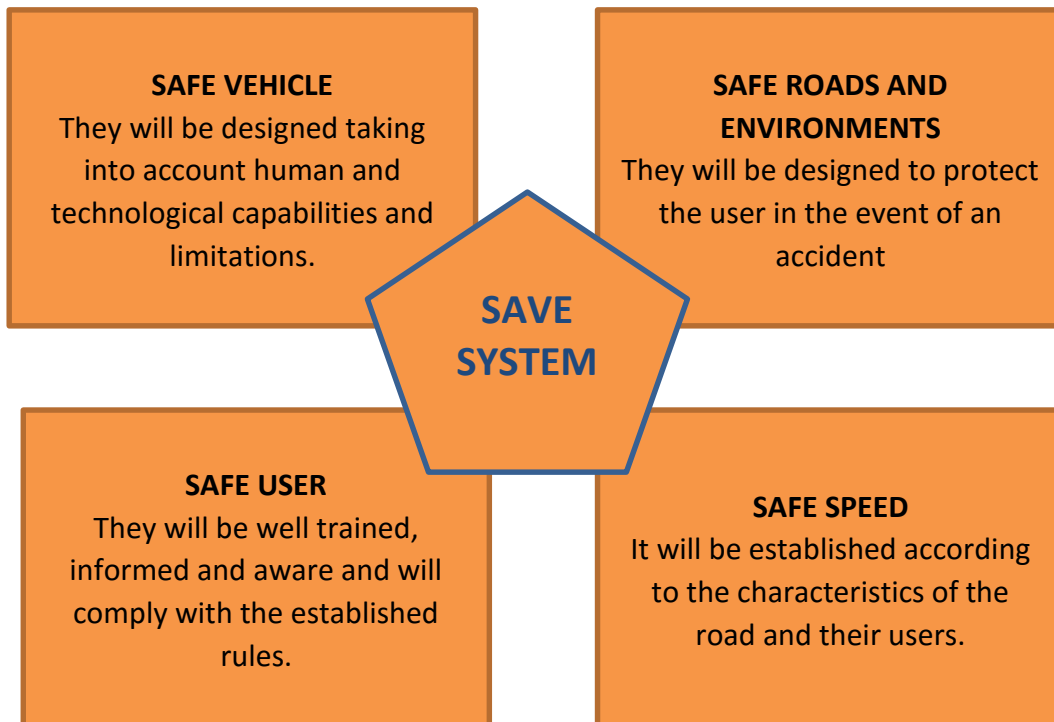
and vehicles to prevent fatal or seriously injured road accidents and to provide post-accident care.

- Fourth, all parts of the system must be strengthened together to multiply its effects and to ensure that road users are protected even if one part fails.

The Safe System adopts the spirit of "shared responsibility" for road safety among the various actors in the road transport system, so that there is a shared vision among citizens, public, private and non-profit organisations about the maximum safety ambition and how to achieve it.

PHYSICAL TOLERANCE TO IMPACT

Road users make mistakes, the mobility system must be prepared for accidents and minimise their consequences



Principles of a Safe System.

4.2.- The Spanish Road Safety Strategy 2011-2020

The 2011-2020 Road Safety Strategy set out several priorities regarding the protection of vulnerable users, since the fragility of these groups (children, the elderly, pedestrians, cyclists and motorcyclists) makes it necessary to take measures to ensure their special protection, introducing objectives, measures and actions to be developed. One of the six priorities of the Strategy is the "Improvement of Motorcyclist Safety", both on "Motorcycle" and "Moped". The objective was set to "achieve a sustainable decrease in motorcyclist accidents over time, through three operational objectives":

- To achieve safer behaviour of motorcyclists.



- To increase road safety for motorcyclists.
- To improve knowledge on motorcyclist accidents and their mobility.

Motorcycle riders are one of the groups that the DGT has historically worked with to increase their safety. Awareness campaigns, vigilance, training to improve the skills and attitudes of motorcyclists are just some

examples of the actions carried out with them. Collaboration is at its peak and more and more motorcyclist associations are demanding training resources to impart knowledge among their members.

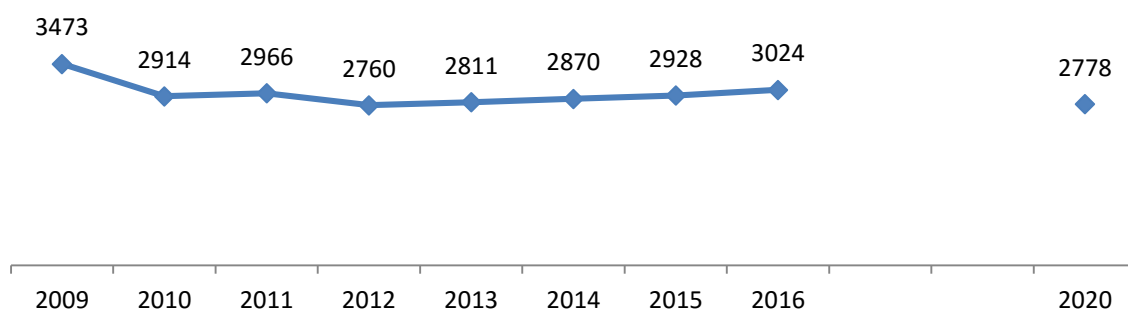
In order to achieve the objectives described for the "Motorcyclists" group in the 2011-2020 Road Safety Strategy, the measures presented below have been designated. Some are actions maintained from the original Strategy, others are expanded actions and other new actions that need consensus and ratification. All this is the result of the review of the same in 2015 and the successive updates in 2016, 2017 and 2018.

Area of action	Objectives	Strategic measures
1. Education and training	Improving the training and attitudes of motorcyclists	Implementation of progressive access to riding for motorcyclists
		Promotion of safe riding courses for motorcyclists
2. Communication	Increasing safety for motorcyclists	Promotion of the use of safety equipment for motorcyclists.
		Carrying out information and awareness campaigns on the coexistence between the motorcycle and other modes of transport.
3. The standard and its compliance	Increasing safety for motorcyclists	Carrying out surveillance and control campaigns on compliance with the rules by motorcyclists, especially in the area of alcohol and drugs.
5 Vehicle Safety	Increasing safety for motorcyclists	Progressive incorporation of security systems in the motorcycle fleet.
6 Infrastructure and ITS	Increasing safety for motorcyclists	Installation of safety barriers on the roads, prioritising the most dangerous sections of road, according to the criteria and planning of owners.
	Improving the training and attitudes of motorcyclists	Signalling of the most dangerous sections for motorcyclists.
7. Urban area	Promoting safe mobility spaces	Preparation of technical recommendations on safe urban design for vulnerable groups, mainly crossings and accesses to cities.
	Promoting safe road design to reduce speed risk situations	Traffic calming through the extension of pedestrian areas, 30 zones and meeting areas.

As one of the concrete, quantifiable and scientific indicators for 2020 of the measures designed to deal with the problems detected, so that the priority indicated for the motorcycling community can be monitored, a reduction of 20% fewer deaths and serious injuries among motorcycle riders was set.

Evolution of indicator no. 9 of the Strategy, relating to motorcycle riders:

	2009 base figure	2010 figure	2011 figure	2012 figure	2013 figure	2014 figure	2015 figure	2016 figure	2017 figure	2020 target figure
20% fewer deaths of and serious injuries to motorcycle riders	3,473	2,914	2,966	2,760	2,811	2,870	2,928	3,024	3,143	2,778



4.3.- The motion of the Congress of Deputies of 30 March 2017

The Plenary of the Congress of Deputies, in its session of 30 March 2017, on the occasion of the debate of the Motion resulting from the urgent interpellation of the Citizens' Parliamentary Group, on the policies of the Ministry of the Interior to improve the safety of riders of motorcycles and mopeds, has agreed on the following:

The Congress of Deputies urges the Government to:

1. Identify the most dangerous sections of the entire road network, in collaboration and coordination with the various administrations with competence in the area, using accident data

and an algorithm similar to the INVIVE of the Directorate General for Traffic, specifically for motorcycles.

2. Inform motorcyclists of the location of these sections, through all available means (Internet and navigation systems, as well as on the road itself).

3. Signpost, on state-owned roads, the most dangerous sections with road markings that let motorcyclists know they are in a high-risk area in an intuitive way.

4 Replace, as a priority, the guardrails on state-owned roads with approved motorcyclist protection systems on the most dangerous sections.

5 Disseminate information to Autonomous Communities, Provincial Councils and Town Councils about which sections are highly dangerous so that they can indicate and change the guardrails in the sections where victims are concentrated, within the scope of their respective competences.

6 Rehabilitate the WG-52 (Motorcycles and Road Safety), Working Group for Motorcycle and Moped Safety, within the Higher Council for Traffic, Road Safety and Sustainable Mobility, focusing on reducing accidents and drawing up a Strategic Road Safety Plan specifically for motorcycles.

7 Evaluate and adapt the road network in matters which significantly affect the safety of two-wheeled vehicles, such as: the improvement of grip (with particular attention to anti-slip paints), potholes, cambering of the road, slippery slopes, gravel and, in general, obstacles of any kind.

8. Study certified training programmes for motorcyclists and, in turn, awareness campaigns aimed at passenger cars and heavy vehicles, making them aware of the need to respect two-wheeled vehicles".

These proposals have been taken into account in drawing up this plan.

4. OBJECTIVES AND METHODOLOGY OF THE PLAN

5.1.- Objectives

The three basic facts that justify the updating of a motorcyclist and moped safety plan have already been described above:

- Motorcyclists remain one of the most vulnerable groups on the roads. For every kilometre travelled, the risk of a motorcyclist dying is 17 times greater than that of a passenger car driver.
- Motorcycles and mopeds account for 15% of the vehicle fleet and 22% of those killed in road accidents.
- Between 2014 and 2017, deaths on motorcycles increased by 25.1%, more than any other means of travel.

The general objectives are aimed at reversing or reducing the problems outlined in this diagnosis, in particular, the plan aims to achieve:

- 20% fewer deaths and serious injuries among motorcyclists in 2020 (2,778) compared to 2009 (3,473) (indicator for the 2011-2020 Road Safety Strategy)

5.2.- Methodology.

The development of the Plan of Measures has been carried out within the framework of the working group of the Higher Council for Traffic, Road Safety and Sustainable Mobility WG-52 (Motorcycles and Road Safety).

The draft plan was presented to the group at its meeting on 27 November 2018. The measures contained therein enjoyed a broad consensus, practically unanimous, among all members in attendance.

The following entities are part of the WG-52

Entity

Guardia Civil Traffic Group

AMM. Asociación Mutua Motera [Mutual Motorcyclist Association]

ANESDOR. Asociación Nacional de Empresas del Sector de Dos Ruedas
[National Association of Companies in the Two-Wheeled Sector]

ASOCIACIÓN LOS ÁNGELES VERDES [LOS ANGELES VERDES
ASSOCIATION]

Barcelona City Council

Madrid City Council

Malaga City Council

Seville City Council

Valencia City Council

CNAE. Confederación Nacional de Autoescuelas [National Driving School
Confederation]

CONDUCCIÓN SEGURA EN MOTO [SAFE MOTORCYCLING RIDING]

CSM. Escuela de Conducción Segura de Motocicletas [Safe Motorcycle Riding
School]

RACC Foundation

HONDA MOTOR EUROPE SPAIN

KM CERO. Club de motoristas [Motorcycle Club]

Ministry of Development. Directorate-General for Roads

Ministry of the Interior Directorate General for Traffic

MOTOR PRESS IBÉRICA

PMSV. Plataforma Motera para la S. Vial [Motorcycle Platform for Road Safety]

RACE. Real Automóvil Club de España [Royal Automobile Club of Spain]

RFME. Real Federación de Motociclismo de España [Royal Spanish Motorcycling Federation]

RMCE. Real Moto Club España [Royal Motorcycle Club Spain]

TAC. Driving school

UNESPA. Unión Española de Entidades Aseguradoras y Reaseguradoras [Spanish Union of Insurance and Reinsurance Companies]

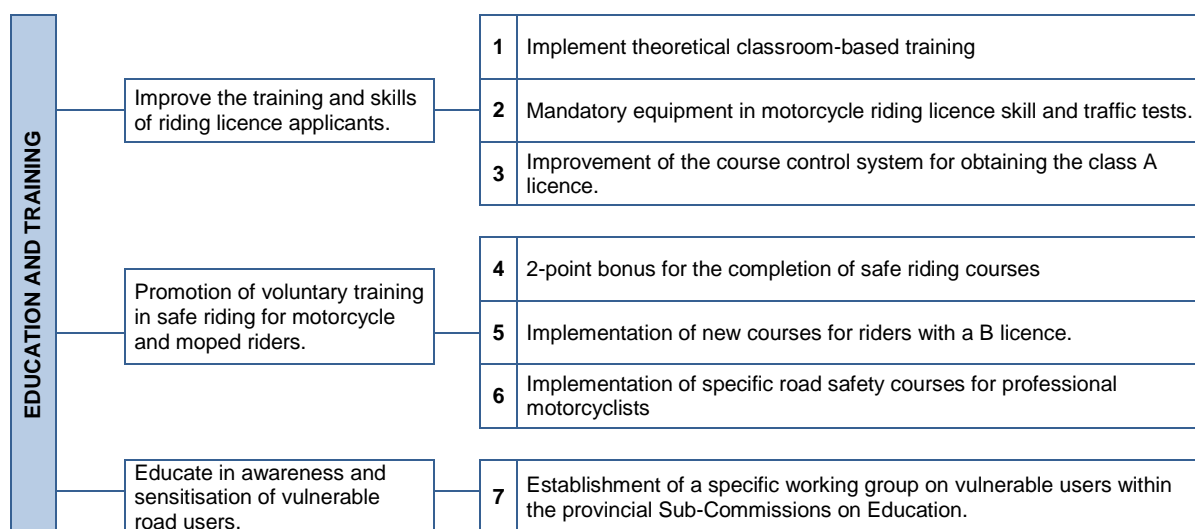
5. PLAN OF MEASURES AND DEVELOPMENT OF THE SOLUTION TREE

Area 1: Education and Training.

This first area of action includes 3 programmes and seven associated measures.

- Programme 1.- Improve the training and skills of riding licence applicants.
- Programme 2.- Promotion of voluntary training in safe riding for riders of motorcycles and mopeds.
- Programme 3.- Educate in awareness and sensitisation of vulnerable road users.

Programme 1.- Improve the training and skills of riding licence applicants.



Measure 1.- Implement mandatory theoretical classroom-based training.



Objective and description

Road safety must be very much present in the content of theoretical education for access tests to any vehicle and, especially, in those of motorcyclists due to their condition as vulnerable road users.

Rider training has traditionally been based on learning the rules and signs of the road and the handling of the vehicle. However, the causes of road accidents are more likely to result from attitudes than lack of knowledge of the rules, which makes it necessary to expand the minimum content required in the tests.

The reform of the General Regulations for Drivers proposes compulsory classroom-based training prior to obtaining a Class B riding licence. This training aims to raise awareness of the

need to adopt behaviour at the wheel that respects other road users, promoting values that encourage coexistence and raise awareness of the serious consequences of road accidents and the responsibility of the rider on them. Specifically, the compulsory content to be taught includes "the risk factors associated with riding motorcycles".

In order to guarantee that all applicants for a motorcycle riding licence receive a minimum level of awareness and identification of the risk factors associated with riding these vehicles, in relation to accessing the specific knowledge control test for obtaining the AM, A1 and A2 licences, 6 hours of classroom-based training with theoretical content is established as obligatory. In order to be admitted to the specific knowledge control tests for these licences, the applicant must prove they have received the following training:

- a) Main risk factors associated with riding these vehicles: 2 hours of training adapted to each type of licence.
- b) Riding techniques. 2 hours of training adapted to each class of licence.
- c) Use of protective equipment and the consequences of not using it or using it incorrectly: 2 hours of training adapted to each class of licence.

Deployment

The development and implementation of this measure requires the prior modification, by means of a Royal Decree, of the General Regulations for Drivers. This amendment is already being processed and is scheduled to enter into force in 2019.

Measure 2.- Mandatory equipment in motorcycle riding licence skill and traffic tests.

Objective and description

An essential element for the safety of motorcyclists is their own equipment, which is a fundamental element in minimising the consequences in the event of an accident. Research has also shown significant benefits in the use of protective²clothing. A study carried out by Rome et al. (2011)³ showed significant reductions in the risk of injury if motorcyclists wore protective clothing. Motorcyclists were less likely (around 20 - 60%) to be hospitalised if they

² ITF (2015), Improving Safety for Motorcycle, Scooter and Moped Riders, ITF Research Reports, OECD Publishing, Paris, <https://doi.org/10.1787/9789282107942-en>

³ "Motorcycle protective clothing: Protection from injury or just the weather" (from Rome, 2011)

wore a jacket, special trousers or gloves, and less likely to be injured if the limb areas were protected.

Elvik and Vaa (2004) have reviewed several studies on the impact of the use of protective equipment. Injuries would be reduced from 33% to 50% with the use of protective equipment. The cost-benefit ratio was estimated at 5.3, which makes protective equipment a highly efficient measure for reducing the volume and severity of injuries.

The use of compulsory equipment in the skill and traffic tests for obtaining motorcycle riding licences contributes to the fulfilment of two objectives:

- Improving road safety in examination tests,
- Raising awareness and sensitising the applicant to the importance of wearing adequate safety equipment on the motorcycle.



In order to comply with this measure, it will be established as obligatory that applicants for riding licences of classes AM, A1 and A2, for the aptitude and behaviour tests on closed circuit and open road tests in general, must have the appropriate protective equipment, which will be composed of an approved helmet, gloves, jacket and trousers designed and manufactured for riding a motorcycle, as well as boots made of leather or similar synthetic material that sufficiently protects the ankle.

Deployment.

The development and implementation of this measure requires the prior modification, by means of a Royal Decree, of the General Regulations for Drivers. This amendment is already being processed and is scheduled to enter into force in 2019.

Measure 3.- Improvement of the course control system for obtaining the class A licence.

Objective and description.

The General Regulations for Drivers, which transpose Directive 2006/126/EC of the European Parliament and of the Council, of 20 December 2006, require, in order to obtain a class A riding licence, in addition to being the holder of a class A2 licence, with at least two years' experience in riding motorcycles that are authorised by that licence, to pass a training course under the terms established in Order INT/2323/2011, of 29 July, which regulates training for progressive access to class A riding licences.

The aim of this measure is to implement a new system for inspecting these courses to ensure that they are properly used by the applicants. The inspection capacity will be exercised by companies previously accredited for the exercise of the same.

Deployment

To obtain a class A licence, a training course must be taken and passed, unlike other classes of riding licences which require theoretical and practical aptitude tests to be passed. The control of the effective performance of these courses and their delivery in accordance with the regulations that govern them is a primary objective to ensure the issuance of this kind of licence to those who demonstrate the aptitude for it. In this sense, a commitment has been made to complement the inspection work carried out by the Provincial Headquarters with a system of inspections through inspection bodies accredited by the National Accreditation Body (ENAC).

The implementation of this system requires, firstly, the definition of an assessment scheme in which, on the one hand, an inspection protocol is defined, i.e. the requirements and methodology of the inspection and, on the other hand, the requirements to be met by companies wishing to obtain accreditation. Those companies that ENAC determines to meet the requirements will become accredited inspection entities and may carry out inspections in accordance with the protocol previously defined by this Directorate General.

These companies may be contracted directly by the Directorate General of Traffic by means of a public tender to carry out the inspections to be determined and, at a later stage, private riding schools may be required to sign a contract with one of them as a requirement for the granting of administrative authorisation.

Programme 2.- Promotion of voluntary training in safe riding for riders of motorcycles and mopeds.

Measure 4.- Point bonus for the completion of safe riding courses.

Objective and description.

One of the most exceptional measures of the 2008-2011 Plan was the implementation of safe riding courses for motorcycles, under the slogan "On a safer motorcycle". These courses had the fundamental objective of promoting the following aspects: avoiding risky practices, preparing the rider for dangerous situations and adopting best practices in riding and equipment.

The objective of this measure is to promote and encourage the completion of these courses with a bonus of 2 points, in order to favour a change in rider behaviour, encouraging those who adapt and internalise safe riding. However, this bonus requires the establishment of a series of mechanisms and requirements that guarantee the correct development of the courses, both with regard to their content and methodology, as well as all those elements necessary for their correct use.

Deployment

The implementation of this measure requires the approval of the amendment of the Consolidated Test of the Law on Traffic, Circulation of Motor Vehicles and Road Safety, approved by Royal Legislative Decree 6/2015 of 30 October.

In addition, it will be necessary to develop the content and other aspects of the courses by ministerial order.

This measure is integrated by the development of the following actions:

- Review and update of the content of the safe riding courses within the Training Subgroup of the Motorcycle Working Group of the Higher Council for Traffic, Road Safety and Sustainable Mobility.
- Review of the contents of the courses developed for both urban and interurban areas and review of the number of hours devoted to theoretical and practical training.

- Establish a system of accreditation of the schools and training centres that provide these courses.
- Encourage the completion of these courses with a 2-point bonus.
- Promote the implementation of these courses by WG52 members, through communication measures and economic incentives.

Measure 5.- Implementation of new courses for riders with a B licence.

Objective and description.

The motorcycle fleet of up to 125cc has experienced significant growth over the last few years. In 2003, these vehicles accounted for 22% of all motorcycle registrations, but by 2016 this percentage had risen to 57%. Simultaneously, the number of riders with a B licence of at least 3 years who ride motorcycles of up to 125cc has increased.

There is no census of people riding motorcycles of up to 125cc with a B license of 3 years. The only possible approximation is the number of people with this permit who own this type of motorcycle. This number was 714,777 in 2016 (the most recent year with detailed data available). This is more than 10 times the number of motorcycles of up to 125cc owned by A1 licence holders.

The aforementioned evolution has had an impact on the accident rate: while in the period 2003-2016, the number of motorcycles of over 125cc involved in accidents with victims increased by 76%, the number of motorcycles of up to 125cc increased by 437%. It is estimated that in 72% of cases of motorcycles of up to 125cc involved in accidents, the rider had a B license for 3 years.

Taking into account the above, the aim of this measure is to promote voluntary courses for holders of class B riding licences for more than 3 years who wish to ride motorcycles of up to 125cc. These courses will become part of the "Safer motorcycle" catalogue.

Deployment

This measure requires, first of all, the reactivation, within WG-52, of the motorcyclist training sub-group, which will be responsible for determining the content, programme and duration of these courses. Courses given by schools in accordance with the requirements defined in the subgroup will become part of the "Safer Motorcycle" catalogue.

Measure 6.- Implementation of specific road safety courses for professional motorcyclists.

Objective and description

The rise of e-commerce in our country is generating, among other consequences, a strong increase in the presence of motorcycles and mopeds in our cities, where these vehicles are already a real alternative to the car due to their great mobility, speed and ease of parking.

Motorcycles and mopeds are one of the main working tools for certain sectors of our business fabric (courier and food delivery companies, etc.).

Given this reality, it is necessary to promote safe riding courses for these professional groups that use motorcycles or mopeds, both on the job as well as *en route*.

This measure involves the implementation, in collaboration with the competent authorities, of subsidised courses for professional groups who use motorcycles or mopeds as a work tool.

Deployment

The deployment of the measure consists of the following phases:

- Definition of course content.
- Identification of the entities collaborating in the teaching of the courses.

Programme 3.- Educate in awareness and sensitisation of vulnerable road users.

Measure 7.- Establishment of a specific working group on vulnerable users within the Provincial Sub-Commissions on Road Education.

Objective and description

Motorcyclists are part of the so-called vulnerable user group, along with pedestrians and cyclists. In 2017, this group accounted for 46% of all deaths in traffic accidents, 80% if we limit the analysis to urban roads. The promotion of sustainable means of transport by the various administrations and companies highlights the importance that these forms of transport will

have in the future, but at the same time implies the need to pay special attention to the safety conditions of pedestrians, cyclists and motorcyclists.

This priority attention to the safe mobility of the most vulnerable groups gives us in turn the opportunity to reinforce and energise coordination with the different agents related to road safety in the country, whether at an autonomous, provincial or local level, through the provincial sub-commissions on road education and in the context of a public-private social participation model that allows for the consensus of measures with which to prevent this emerging problem.

Within the framework of the Traffic and Traffic Safety Commissions, both at regional level, in the autonomous cities of Ceuta and Melilla, and at provincial level, the constitution of Provincial Sub-Commissions on Road Education was urged in all provinces during 2017. This measure is intended to promote the actions necessary for the creation of specific working groups to deal specifically with vulnerable groups in the field of road safety. Through these groups, the involvement and collaboration of regional, provincial and local administrations will be promoted, as well as schools, universities, police, associations and foundations. Actions will also be designed to protect vulnerable users.

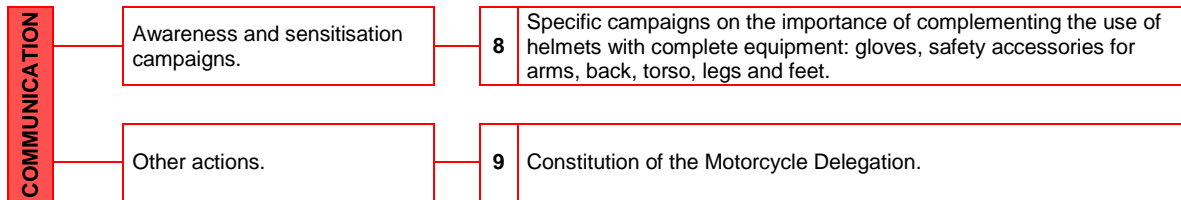
Deployment

The deployment of this measure will be carried out on the instruction of the Director General of Traffic, containing the objectives and specific actions to be developed in the working groups of vulnerable people. The deployment at provincial level will be led by the Provincial Traffic Headquarters.

Area 2: Communication.

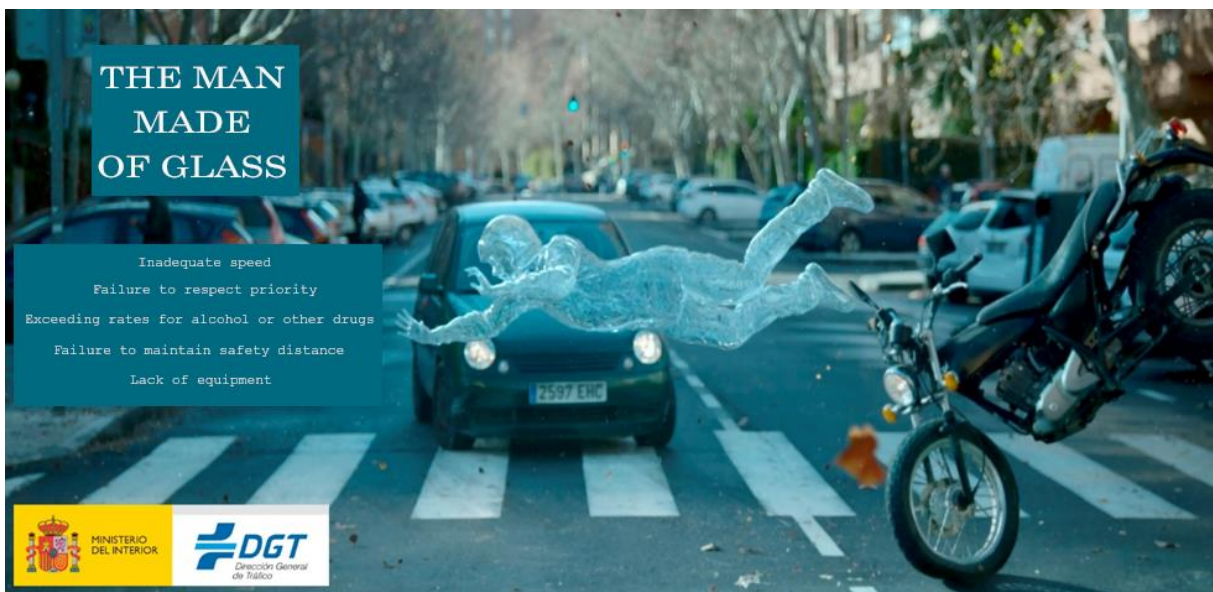
This second area of action includes 2 programmes and two associated measures.

- Programme 1.- Carrying out of awareness and sensitisation campaigns.
- Programme 2.- Other actions.



Programme 1.- Carrying out of awareness and sensitisation campaigns.

Measure 8.- Specific campaigns on risky practices and the importance of complementing the use of helmets with complete equipment: gloves, safety accessories on the arms, back, torso, legs and feet.



Objective and description.

Communication campaigns can influence attitudes and behaviour, providing information about the main risk factors and how to reduce their incidence in the risk of accidents and injuries. In the area of motorcyclist safety, campaigns should focus on:

- Vulnerability of motorcyclists and the most common accident scenarios and risk factors.
- Risky behaviour of motorcyclists.
- Coexistence with other modes.

Along with the correct use of the helmet, it is necessary to make the motorcycle rider aware of the importance of the complementary use of safe equipment: suitable gloves and footwear, jacket and trousers with plastic protections on elbows, back, shoulders and knees, etc.

Encouraging their use can have a significant impact on improving the harmful consequences of accidents on two-wheeled vehicles.

Deployment

This action will be implemented by the Communication Unit of the Directorate-General for Traffic.

Programme 2.- Other actions.

Measure 9.- Constitution of the Motorcycle Delegation.

Objective and description.

Different members of the WG-52 have defended the need for the different administrations with competency in the area of motorcyclist mobility and safety to form a delegation that will serve as an interlocutor with all the relevant agents and promote the necessary actions. To this end, the "Motorcycle Delegation" will be created in the Directorate General for Traffic, which will have the following functions, among others

- Dialogue with other administrations, organisations and entities related to the mobility and safety of motorcycles and mopeds.
- Representation of the Directorate General of Traffic in this area.
- Identification and promotion of best practices as regards policy for the improvement of road safety of motorcycles and mopeds.

The delegation of the motorcycle will be made up of representatives from different Units of the DGT, to exercise and promote the necessary actions across the Organisation. All this taking into account the framework defined within the Higher Council for Traffic, Road Safety and Sustainable Mobility.

Deployment

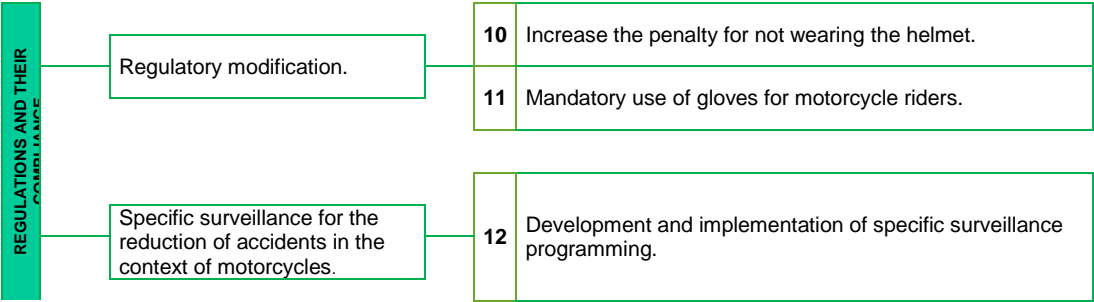
The deployment of this measure consists of:

- Constitution of the Motorcycle Delegation.
- Initiation of contacts with all the agents involved.
- Development of the assigned functions.

Area 3: Regulations and their compliance.

This third area of action includes 2 programmes and two associated measures.

- Programme 1.- Regulatory modification.
- Programme 2.- Specific monitoring for the reduction of motorcycle accidents.



Programme 1.- Regulatory modification.

Measure 10.- Increase of the penalty for not wearing the helmet.

Objective and description

The entry into force on 1 July 2006 of Law 17/2005 of 19 July, regulating the licence and the points-based riding licence, contributed in a remarkable way to saving lives on our roads. With the passage of time, however, it has become advisable to revise the text, as far as some infringements are concerned.

The percentages of helmet non-use reduced significantly between 2006 and 2017, but there is still a small number of riders who continue to be unaware of the need to comply with this standard.

The use of helmets is a vitally important element of road safety for motorcycle and moped riders:

- Three out of four motorcyclists die as a result of head injuries.
- The risk of suffering a brain injury is multiplied by three, if the rider or passenger of the motorcycle does not wear a helmet.
- If the helmet is used correctly, the probability of escaping unscathed from the accident increases by 20%.
- Wearing a helmet considerably reduces the risk of suffering head injuries in an accident. An international review of studies on helmet use shows that the risk of severe damage decreases by 69% when the helmet is used.⁴

On this basis, it is considered appropriate that the penalty for not wearing a helmet should be 4 points, instead of the current 3.

"Helmets for preventing injury in motorcycle riders"⁴ (Liu, B.C., 2007)

Deployment

This measure demands the modification of Royal Legislative Decree 6/2015 of 30 October, approving the consolidate text of the Law on Traffic, Circulation of Motor Vehicles and Road Safety.

Measure 11.- Mandatory use of gloves for motorcycle riders.



Objective and description

The hands are usually the first parapet for the motorcycle rider. When an accident occurs and you fall, you instinctively tend to put out your hands to avoid the blow, so they are the most damaged part of your body. The gloves protect the hands from wounds, cuts and abrasions.

According to a 2011⁵ study, motorcyclists wearing gloves are 31% less likely to suffer hand and wrist injuries and 45% less likely to suffer injuries if they also wear integral jackets. In 2016, only 41% of motorcyclists who died on interurban roads were wearing gloves.

The proposed measure will make its use obligatory, initially on interurban roads, following the example of other countries around us. This is a measure with broad consensus among WG-52 members.

The mandatory use of gloves can also serve as an incentive to use other voluntary protective equipment.

Deployment

This measure requires the amendment of the General Traffic Regulations (Royal Decree 1428/2003).

Programme 2.- Specific surveillance for the reduction of motorcycle accidents

Measure 12.- Development and implementation of specific surveillance programmes.

Objective and description

The Directorate General for Traffic periodically carries out surveillance campaigns aimed at verifying compliance with the regulation on certain types of road or by certain groups of users: conventional roads, speed, consumption of alcohol and other drugs, vans and motorcyclists, among others. In the area of surveillance of motorcyclist behaviour, surveillance operations were carried out in 2018 on various weekends between April and September. The presence

⁵ Motorcycle protective clothing: Protection from injury or just the weather?, Accident Analysis and Prevention 43 (2011) 1893-1900.

of agents from the Guardia Civil Traffic Group was particularly increased on the sections of road that are usually travelled by motorcyclists. Surveillance was carried out both on the roadside and from the air, using DGT helicopters. In addition, special operations were carried out on the occasion of the Motorland-Alcañiz and Cheste Motorcycle Grand Prix races.

The particularities of motorcyclist traffic on interurban roads recommend complementing regular surveillance campaigns with more continuous attention to roads and sections with high traffic intensity for these vehicles. The aim is to make the monitoring and punishment of risky practices of motorcycles and mopeds more effective, strengthening the monitoring of risk factors of accidents - inappropriate speed, alcohol and other drugs, anti-regulatory invasion of the lane in the opposite direction, etc⁶.

Deployment

The initial deployment of the measures will be carried out by means of pilot tests in the provinces with the greatest presence of motorcyclists on interurban roads. The concrete actions are:

- Identification of the routes most frequented by motorcyclists and with the highest accident rate for this group.
- Establishment of a specific surveillance programme to be carried out by Guardia Civil Traffic Patrols, Commanders, helicopter and drone patrols on previously identified routes, especially at weekends.
- Similarly, a comprehensive approach is intended to be adopted on routes at particular risk, with a combination of surveillance and infrastructure measures.
- In the areas with the highest number of accidents, signs will be installed indicated the number of motorcyclist victims in that area, to raise awareness and sensitisation which helps increase attention to riding.

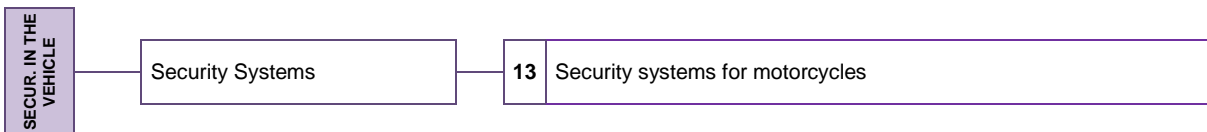


⁶ ITF (2015), Improving Safety for Motorcycle, Scooter and Moped Riders, ITF Research Reports, OECD Publishing, Paris, <https://doi.org/10.1787/9789282107942-en>

Area 4: Vehicle safety

This fourth area of action contains only 1 programme with one measure associated with it.

- Programme 1.- Security systems.



Programme 1.- Security systems.

Measure 13.- Security systems for motorcycles.

Objective and description

A significant proportion of motorcycle accidents are caused by the rider losing control of the vehicle in an emergency braking situation, or by fuel spills from heavy vehicles on the road. There are already a significant number of systems on the market which can assist the rider in avoiding these accidents. In the area of braking, studies suggest that a combination of ABS and combined braking can significantly⁷ reduce the risk of injury.

The objective of this measure is to promote the implementation of safety systems on motorcycles (combined braking, ABS, eCall, etc.). With regard to the eCall system, an automatic emergency call system, progress is being made towards its inclusion by means of different solutions; some exclusively incorporate the unit on the motorcycle itself and others add part of the device to the rider's protective equipment (helmet, jacket, trousers, etc.) with the fundamental aim of guaranteeing voice communication, providing information on the seriousness of the accident and reducing the response time of the emergency services.

⁷ The combined benefits of motorcycle antilock braking systems (ABS) in preventing crashes and reducing crash severity. Traffic Injury Prevention Volume 17, 2016 - Issue 3.

Deployment

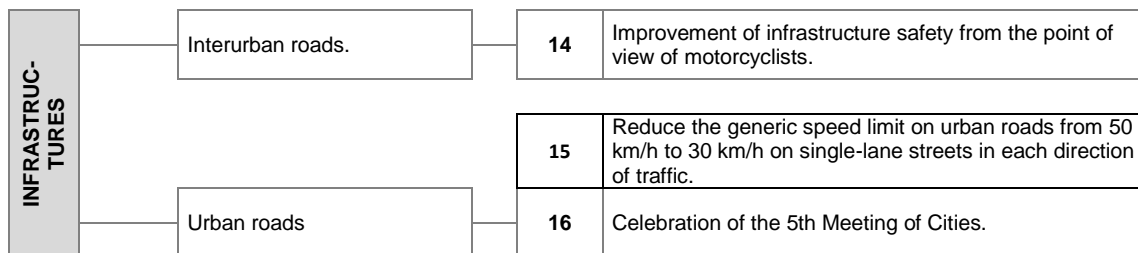
This measure will be deployed in combination with the measure 17, on knowledge, which will promote research into the effectiveness of motorcycle safety systems.

Collaboration will take place with competent administrations, associations and manufacturers in identifying the relevant safety systems, in making information on their characteristics and operation available to riders, and in developing labelling systems with safety criteria for “moto-sharing” fleets.

Area 5: Infrastructures

This fifth area of action contains 2 programmes and two associated measures.

- Programme 1.- Interurban roads.
- Programme 2.- Urban roads



Programme 1.- Interurban roads.

Measure 14.- Improvement of infrastructure safety from the point of view of motorcyclists.

Objective and description

As shown in the diagnosis, the motorcyclist accident rate has different profiles. Particularly marked are the differences between accidents on interurban and urban roads. Improving safety requires a comprehensive approach that acts on the three main influencing factors: the human factor, the vehicle and the infrastructure. This measure will focus on actions on infrastructure.

On interurban roads, the aim is to identify sections where motorcycle accidents are combined with bend radii, in order to raise the same possibilities for specific actions in the medium term, from the point of view of horizontal and vertical signalling and surveillance, designing measures that make the infrastructure more self-explanatory, visible and error-tolerant, in accordance with the safe system principles. A pilot test of safe signalling is currently underway in La Rioja. The evaluation of its results will enable the final procedure for its implementation in other parts of the network to be developed.

In urban and peri-urban areas, work will be carried out with local authorities to develop pilot tests that affect the safety of motorcyclists' movements, such as early stopping or filtering areas.

In a broader sense, the measure aims to develop technical recommendations on the design of safe infrastructure with impact for vulnerable groups such as motorcycles.

Deployment

The measure will be deployed through a series of pilot tests carried out in collaboration with the track owners. Good practices in road design will be identified in the Higher Council for Traffic, Road Safety and Sustainable Mobility, in collaboration with the relevant agents. Collaborative pilot projects for implementation and evaluation will be encouraged.

Programme 2.- Urban roads.

Measure 15.- Reduce the generic speed limit on urban roads from 50 km/h to 30 km/h on single-lane streets in each direction of traffic.

Objective and description

In 2017 a total of 509 people died in Spanish cities. Of these, 80% corresponded to the group of users that make up the so-called vulnerable group (pedestrians, cyclists, motorcyclists and moped riders). Experience shows that reducing speed has a direct effect on reducing the number of accidents among the vulnerable, but does not lead to a further slowdown in traffic (during urban journeys motor vehicles do not exceed average speeds which, in urban centres, are generally higher than 20 km/h).

This measure therefore involves amending Article 50 of the General Traffic Regulations, lowering the generic speed limit on urban roads from 50 km/h to 30 km/h for roads with only one lane in each direction of traffic, in order to achieve a positive impact on reducing urban road accidents, especially among vulnerable groups. This modification guarantees, at the same time, the fluidity of the journeys, and facilitates the passage to a shared use of the road, where motorcycles, bicycles, personal mobility vehicles and pedestrians are becoming more and more important.

Deployment

This measure requires the amendment of the General Traffic Regulations (Royal Decree 1428/2003).

Measure 16.- Celebration of the 5th Meeting of Cities.

Objective and description

The Meetings of Cities are developed as a forum for sharing good practices and experiences between local entities and various experts in the field. The 5th Meeting of Cities, which was held in the city of Malaga in February 2019, included, among the topics to be discussed, the presence of motorcycles in the city and the phenomenon of “motosharing”.

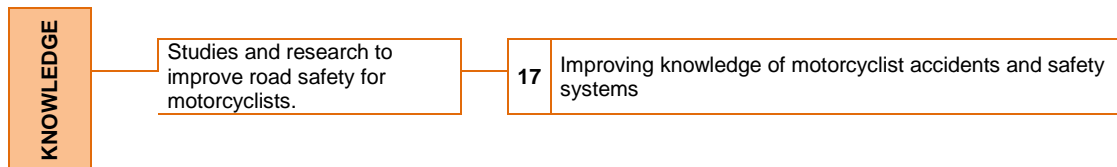
Deployment

Celebration at the 5th Meeting of Cities, which was held on the 6-7 February 2019 in the city of Malaga.

Area 6: Knowledge

This sixth area of action contains 1 programme with one associated measure.

- Programme 1.- Studies and research to improve road safety for motorcyclists.



Programme 1.- Studies and research to improve road safety for motorcyclists

Measure 17.- Improving knowledge of motorcyclist accident rates and safety systems

Objective and description

Studies and research will be promoted in the following subjects:

- In-depth investigations of accidents involving motorcyclists, in collaboration with law enforcement agents, road owners and research institutes.

- Effectiveness of motorcycle safety systems, through literature reviews and studies.
- Classification of the vehicle fleet according to safety criteria.

In addition, this measure is intended to develop and implement a system of indicators to monitor motorcyclist accidents and evaluate the effectiveness of the measures implemented for their safety. These indicators will relate both to the frequency of accidents and victims, and to mobility and risky behaviour.

Deployment

A system of indicators (outcome, exposure and performance) will be developed, taking into account the related recommendations of the European Commission.

It will also lay the foundations for the promotion of studies and research on the subjects outlined above.

7 MANAGEMENT AND MONITORING SYSTEM.

7.1.- Management bodies

The plan has two bodies for its management and monitoring:

- The "Motorcycles and Road Safety" Working Group, chaired by the Director General of Traffic, will be maintained within the Higher Council for Traffic, Road Safety and Sustainable Mobility as a group for monitoring and implementing the plan, by holding 1 or 2 meetings a year.
- The National Road Safety Observatory, as the Plan's Management Team and charged with the overall coordination and monitoring of the measures, as well as the tasks related to discussion with those responsible for them.

7.2.- Management model

The plan has been equipped with a management model which allows the measures to be implemented and which promotes collaboration between those involved, with the Directorate General for Traffic being the main body executing and supervising the plan.

This entity should seek and achieve a broad consensus in the Working Group regarding the implementation of the measure in question. This consensus may affect deadlines, material and human resources, participating entities, scope and, in general, any aspect considered important. The implementing entity will report regularly to the Working Group on the progress of the deployment of the measure.

Therefore, this model requires relatively little time to implement and has the advantage of achieving the involvement of entities, that would otherwise be completely unrelated to it, in the definition and monitoring of the measures.

7.3.- Monitoring system

The implementation of the Plan of Special Measures will be monitored within the framework of the "Motorcycles and Road Safety" Working Group.

The Plan Management Team will be responsible for preparing the appropriate technical reports to evaluate the progress of the plan and, if necessary, propose corrective actions.

The plan consists of a total of 17 measures and an initial duration of two years (2019-2020). Most of these measures are intended to be perpetuated over time, once they have been launched. Knowing this, the plan's deployment strategy does not respond to a traditional schedule that prescribes what measures will be launched when, but rather the strategy, which is more tactical than strategic, consists of launching the measures in accordance with the maturity achieved by its management model and the cohesion demonstrated by the entities participating in its implementation.

The monitoring of the Plan includes two types of monitoring indicators: results indicators and activity indicators.

Strategic performance indicators are those directly related to the objectives of the plan, i.e.

- 20% fewer deaths and serious injuries among motorcyclists in 2020 (2,778) compared to 2009 (3,473) (indicator for the 2011-2020 Road Safety Strategy)
- Reduce the risk of death for motorcyclists.

There are also two types of activity indicators:

- A first type of "macro" indicator that refers to the number of measures in the plan that are being implemented.
- A second type relates to the degree of progress of these. Note that there are measures that have a beginning but not necessarily an end, such as surveillance and control campaigns especially in the field of alcohol and drugs. In these cases, temporary milestones will be defined to allow the degree of progress to be judged.

Strategic performance indicators

No.	Type	Indicator	Baseline figure	2020 target figure
1	Motorcycle rider victims (ESV Indicator 2011-2021)	Deceased + hospitalised injured (police) On urban and interurban roads Yearly frequency	3,473 (year 2009)	2,778

Activity indicators

No.	Indicator	Frequency
1	Number of measures of the plan being implemented	Biannual
2	Degree of progress of the measures being implemented	Biannual