



ECF response to the public consultation on the

EU Road Safety Action Plan 2011-2020

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Responsible Editor

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Founded in 1983, the **European Cyclists' Federation** (ECF) is the umbrella federation of the national cyclists' associations in Europe, reinforced by similar organisations from other parts of the world. Altogether we have 60 member groups in some 36 countries. On behalf of around 500,000 individual cyclists, we are pledged to ensure that bicycle use achieves its fullest potential so as to bring about sustainable mobility and public well-being. To achieve these aims, the ECF seeks to change attitudes, policies and budget allocations at the European level. The ECF stimulates and organises the exchange of information and expertise on bicycle related transport policies and strategies as well as the work of the cyclists' movement.

ECF website: www.ecf.com

Summary

Mobility is a basic right for every citizen. Unsafe traffic conditions and the individual perception that it is not safe to travel do limit people in their mobility or in their choice of transport mode. This is in particular true for “unprotected” (pedestrians, cyclists) and vulnerable road users (children, elderly). Many kids, for example, would love to cycle independently to school and to other after-school activities. However, their parents perceive this often as too risky and instead give their kids a lift by car, hereby adding to individual motorized transport, pollution, sedentary life styles... and unsafe traffic conditions.

These fears need to be tackled. There is good evidence to support the idea that cycling gets safer the more people do it. This is called the “**Safety in Numbers**” principle.ⁱ Countries with high levels of cycle use like the Netherlands or Denmark are less risky for cyclists than countries with low cycle use, such as Portugal or Spain. Also comparative statistics within certain EU member states support this concept. Therefore we need positive campaigns promoting the use of the bicycle, such as “Kopf an, Motor aus” (“Turn on your brain, turn off your engine”) financed by the German Federal Ministry of Transport. Mandatory helmet laws decrease the number of cyclists and should therefore not be promoted.ⁱⁱ

Authorities at all levels need to take responsible action. This includes traffic management, safe cycling infrastructure, traffic code enforcement (speed limits!), education and awareness raising campaigns and technical solutions and standards. Regarding the EU, ECF believes it should become active in these fields:

- Collecting statistics and financing research: We need comparable data at EU level on cyclist casualties and proper research into the causality of cycle accidents, among other;
- Financing education and awareness raising campaigns: Both the cyclists as well as car, van and lorry drivers should be addressed;
- Setting technical standards: This applies to safe car fronts, intelligent speed assistance as well as the design and equipment of heavy goods vehicles;
- Promoting best practices on Road Safety principles and road traffic policing;
- Enforcing existing traffic codes across the EU.

At the Velo-city 2009 conference, cities across Europe, EU Commission Vice-president Siim Kallas and the European Economic and Social Council signed the “Charter of Brussels”.ⁱⁱⁱ This Charter calls upon the European institutions to set a target of -50% of cyclists running the risk of having a fatal accident for the year 2020. If the EU applies the measures as suggested in this paper, this is a realistic goal!

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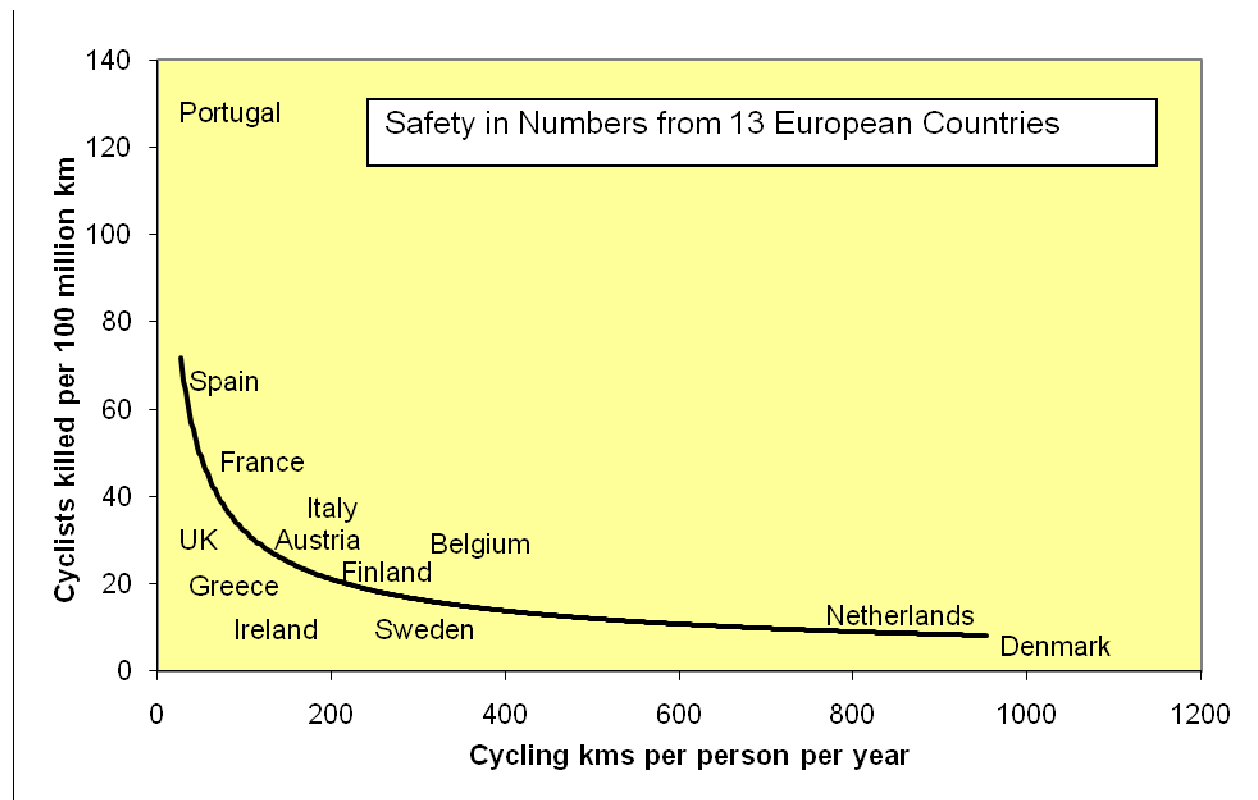
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1) Safety in Number

Accident and fatality statistics published reveal following data:

- 1) Bicycle fatalities for EU-14 have decreased by 35 % between 1997 and 2006 (all transport modes: - 29 %)^{iv};
- 2) Bicycle fatalities account for 6.4 % of all transport fatalities in 2006 in the EU-14^v;
- 3) Most accidents in the Netherlands with cyclists happen in urban areas: 67 % at intersections and 33 % on road sections. For traffic accident victims outside urban areas the opposite is true: 57 % on road sections, 43 % at intersections^{vi};
- 4) The most important crash opponents were cars: 58%. Encounters between cyclists and lorries account for 4% of seriously injured cyclists,^{vii}
- 5) The ERSO counts total bicycle fatalities for every country in a given year. In our view, this is not a suitable method to compare cycling safety between countries. Linking the number of fatalities to the distance travelled serves as a better measure in this respect. It measures the frequency of fatalities per unit of distance covered per person.

Applying this method, it reveals that countries with a high cycling modal share have fewer cyclists killed per distance travelled. In Denmark, people cycle over 900 kilometres a year and it is a far safer country to cycle in than Portugal, where barely 30 km is covered by each person by bike annually.



Research suggests that a doubling of cycling would lead to a reduction in the risks of cycling by around a third, ie. the increase in cycle use is far higher than the increase in cyclists' casualties.

- UK: London has seen a 91% increase in cycling since 2000 and a 33% fall in cycle casualties since 1994-98. This means that cycling in the city is 2.9 times safer than it was previously.
- The Netherlands has witnessed a 45% increase in cycling from 1980-2005 and a 58% decrease in cyclist fatalities.

Possible reasons why the “Safety in numbers” effect occurs:

- 1) Drivers grow more aware of cyclists and become better at anticipating their behaviour.
- 2) Drivers are also more likely to be cyclists themselves, which means that they are more likely to understand how their driving may affect other road users.
- 3) More people cycling leads to greater political will to improve conditions for cyclists.

This means that we can promote cycling without worrying that this will lead to more casualties. It is clear that ‘more’ and ‘safer’ cycling are perfectly compatible. The challenge is not to worry that more cyclists mean more casualties, but to tackle the fears that deter people from cycling in the first place.

2) Statistics and research

Good and comparable data and statistics are at the basis for taking appropriate measures in order to improve road safety. Absolute accident and fatality figures per country are only helpful in identifying national trends. As mentioned above, linking the number of fatalities to the distance travelled serves as a better measure in this respect. It measures the frequency of fatalities per unit of distance covered per person and allows comparison between different transport modes. This facilitates monitoring of how well member states are doing in maximising the "safety in numbers" benefits of more and safer cycling.

Apart from good statistics, we need independent research into the causality of cycle accidents, for example caused by dead spot, excessive speed levels, etc.

EU-wide cooperation is also needed on the regulation of cycle-friendly lorry design and on what solutions work best to address the cycle-lorry problem. This includes research on dead spot mirrors, underrun protection, material used for lorry side-doors, etc. Further research should be carried out on intelligent speed adaptation and safe car fronts, to give but a few examples.

3) Education and awareness raising campaigns

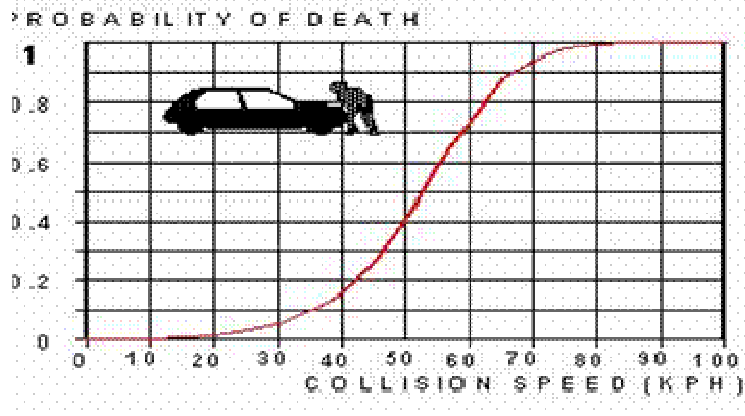
Cyclists as well as motorized road users should be educated on how to behave safely in traffic. Kids, ideally, receive bicycle training at school as mandatory part of their curriculum. Moreover, cyclists should be targeted with public information on respecting the traffic code (not riding through red lights, for example), and be informed on how to avoid dead spot accidents and how to avoid accidents, ie. blind spot accidents.

Directives 2006/126/EC on driving licenses sets minimum requirements for theory and practical test related to vulnerable road users. The Commission should analyse whether these minimum requirements have been transposed into national law. Heavy vehicle drivers should be trained regularly on how using correctly technical equipment (i.e. dead spot mirrors). Their awareness should be raised by campaigns on how to drive safely. Many good practice examples exist at national level.

4) Technical standards

i) Intelligent Speed Adaptation

A fundamental risk factor in traffic is speed. Speeds of individual vehicles are related to an exponential increase in crash rate and injury severity. Unprotected road users, when colliding with motorized vehicles, do mainly "absorb" the collision energy. However, the human body tolerates only a limited amount of external forces. When the amount of external forces exceeds the physical threshold, severe or fatal injury will occur. Hence, higher speeds result in more severe injury. Weight (mass) of the motorized vehicle also play a very prominent role in the outcome of crashes.



Violating speed limits is to blame for around 30 % of all traffic fatalities. Hence, many lives could be saved if drivers would respect speed limits.

Intelligent Speed Adaptation (ISA) is an in-vehicle system that supports drivers' compliance with the speed limit. The level of support varies from informing, over warning and intervening to automatic control, ie. by a speed limiter.

This can be done through an advisory system, where the driver is informed or warned, or through an intervention system where the driving systems of the vehicle are controlled automatically to reduce the vehicle's speed.

All case studies suggest that ISA have a significant speed reducing effect. Depending on the ISA types and penetration (% of vehicles equipped with ISA), accident and fatality rates would be reduced as well. Other benefits are less emissions (air pollution and noise).

In November 2002 the European Parliament and the Council adopted legislation (Directive 2002/85/EC) on the installation and the use of speed limitation devices for all vehicles over 3.5 tonnes and for all vehicles carrying eight or more passengers. This Directive applies as of 2005 for new vehicles and as of 2008 for vehicles registered after 1 October 2001. ECF welcomes this regulation.

However, we believe that the application of ISA should be expanded to all motorized 4-wheel vehicles in urban areas. Initially, all cars should be equipped with warning systems like SpeedAlert. This will need European legislation. After a 3 year trial period, an assessment has to be made into the effectiveness of warning systems. If accident and fatality rates of cars equipped with ISA did not decrease considerably, the European legislator should consider mandatory systems for all new cars.

ii) Safe car fronts

Since the end of 2005, EU regulations have come into force, which are based on collisions with pedestrians. More could be achieved if cyclists were also taken into account. Cyclists land on a different part of the vehicle: whilst pedestrians mainly land on the bonnet, cyclists usually hit the windscreen. A sharpening of the test requirements is therefore desirable. One of the measures

that would lessen serious and fatal injuries to cyclists considerably is an airbag on the windscreen.^{viii}



Outer car airbags could reduce fatalities of these sort of accidents by 75 % and save the lives of 350 cyclists in the EU annually. This is the result of a TNO study from the Netherlands.

ECF is calling on the European New Car Assessment Programme (EURO NCAP), an organization providing safety assessments of cars, to test these new airbag systems once they are operational. If these tests prove successfully, outer airbags should become standard equipment of new cars.

ECF is asking the European Commission a) to support financially R&D into the development of prototype outer airbags and b) to exert its influence on EURO NCAP to expand its collision test to cyclists. Testing outer airbags should be giving key attention.

iii) Heavy goods vehicle design and equipment

Blind Spot Mirrors and Detection Systems

The typical blind spot crash occurs where a lorry wants to turn (right or left, depending on continental or UK/Irish traffic code respectively) and overlooks the cyclist who intends to go

straight ahead. The cyclist has right of way. This frequently but not only happens at junctions with traffic lights where cyclists get the green light simultaneously with other traffic.

This type of accidents has usually serious consequences for the cyclist when s/he collides with a lorry. Every year approximately 400 road users lose their lives due to blind spot crashes. The fatality rate for cyclists when colliding with lorries is 41 % in the Netherlands^{ix}.

Due to recent EU legislation on blind spot mirrors^x, heavy duty vehicles of more than 3.5 tons marketed since 2007 are equipped with a front view mirror and a convex wide angle mirror. A camera can be used instead of a front view mirror. Existing heavy duty vehicles had to be retrofitted before 31 March 2009.^{xi}

At this point, it is too early to assess whether the new EU legislation on blind spot mirrors has led to a decrease in blind spot crashes. However, it is clear that these types of accidents still occur. Lorry drivers, when turning at junctions, must pay attention to traffic at the junction by looking through the window and in all his mirrors. Not all of the mirrors are in the same direction of view. While switching between the mirrors, cyclists can be overlooked.

Therefore, alternative additional measures should be looked at like detection systems. Such devices (for example Lexguard) detect the presence of cyclist in the blind spot and give the lorry driver an audio warning signal. This system should be further tested, and if proven successful, installed in all new and existing lorries.

Material of side-doors

Fewer dead spot accidents happen with busses than with lorries. This can be explained by the better visibility for the bus driver due to side-doors made of transparent glass. Also new types of garbage collection trucks come with glass side-doors. It should be researched on how this can be transferred to heavy vehicle goods as well.

Underrun protection

Due to the size and mass of heavy good vehicles, the problem of compatibility with other road users is a serious matter. Trucks are stiff, heavy and high and may pose a serious threat to the occupants of other vehicles and to vulnerable road users. EU requirements have been introduced mandating front, rear and side underrun protection for trucks with a gross weight over 3.5 tonnes.^{xii}

The current standards can however be largely improved. Research has shown that energy absorbing front underrun protection systems could save more than 1,000 fatalities per year, improved rear underrun protection systems could save a third of related fatalities per year and improved side underrun protection systems could save 45% of related vulnerable road users fatalities per year^{xiii}. The number of traffic fatalities in urban areas due to crashes of this type could be reduced by 10%^{xiv}.

iv) **Adaptation to Daytime Running Lights (DRLs)**

Due to EU Directive 2008/89/EC, cars and light vans will have to be equipped with mandatory DRLs (in the form of dedicated lights) as of 7 February 2011, other vehicles as of 2012 for other vehicles. Existing vehicles will not need to be equipped with DRLs. In its reasoning, the Commission speaks of “net benefits for Europe's road safety record”.

ECF has not been in favour of mandatory DRLs. We believe that they will make pedestrians and cyclists relatively less visible compared with motorized vehicles. Also, a psychological shift might take place: car drivers might expect pedestrians and cyclists to watch out for them as they are better visible instead of the other way round.

After 3 years, a thorough analysis of accident and fatality statistics will have to take place. If it appears that mandatory DRLs have been detrimental to unprotected and vulnerable road users' safety, existing legislation will need to be amended.

v) **Cycle lighting**

The ECF would welcome binding technical minimum specification for bicycle light products at European level, ensuring functionality and improving visibility of cyclists.

5) **Best practices**

Road Safety principles

The EU should promote advanced national Road Safety principles such as *Sustainable Safety* from the Netherlands or *Vision Zero* from Sweden. This includes cycle-friendly city and infrastructure planning and design. As a concrete example of *Sustainable Safety*, lorries should be banned in the long-term from towns and villages in order to largely prevent encounters between lorries and cyclists. This provides distribution centres, accessible via the national road network, outside the urban area. Lorries should deliver their freight to these centres, from where it would be distributed by lighter goods vehicles to the urban area. In the short and medium-run, the EU should share best practices on **lorry routing**.

An easy to implement but very practical solution to increase road-safety are **2-way cycling on one-way streets**, as made mandatory by Belgian law. 2-way cycling improves visibility between cyclists and motorized transport users.

Road Traffic Policing

Road traffic policing is known to be highly effective both in reducing road safety outcomes and in tackling crime more generally. For instance:

- France has achieved significant improvements in road safety since declaring this a national priority in 2002. The country was previously responsible for 16% of Europe's road traffic fatalities and it is now one of its leading performers on road safety. France has accomplished this through substantial investments in both safety cameras and road traffic

policing. One survey found that 45% of French drivers said that they had altered their driving behaviour due to “fear of punishment”, while 37% said they had done so due to “better awareness of risk”.

- In Australia an *Arrive Alive!* strategy in the state of Victoria led to significant decreases in average speeds and a 16% reduction in fatalities. A lower degree of tolerance for speeding offences and an emphasis on enforcement were the major tactics in achieving this change^{xv}.
- A zero tolerance approach to road traffic policing in North Wales led to an annual reduction of 278 KSI (Killed and Seriously Injured) casualties in 2005, compared with the late 1990s. The police were able to address the main causal factors for road crashes, which were speed, drink-driving and the failure to wear seatbelts. This approach was driven by the understanding that a low perceived risk of being caught was the primary reason for law-breaking^{xvi}.
- Research for the former Scottish Office found that “consideration of the costs and benefits of complying with the law” affected how frequently motorists engaged in anti-social behaviour such as excessive speeding^{xvii}.
- The UK Government’s report *New Directions in Speed Management* notes that the introduction of 30kph speed limits in Graz, Austria was met with strong public approval, yet speeds crept back to former levels when police enforcement was relaxed^{xviii}.
- The UK Parliament’s Transport Select Committee’s 2003 report on *Traffic Law and Enforcement*^{xix} noted that “Reductions in traffic law enforcement by the police appear to be linked to the number of road casualties”. The Committee cited a comparative study of road safety in Sweden, the United Kingdom and the Netherlands^{xx}, which found that the effectiveness of drink driving deterrents “depend more on the level of enforcement than on the actual value of the limit”. The Committee also cited evidence (from the UK Government’s 2003 review of its *Road Safety Strategy*^{xxi}) of a strong correlation between a decrease in the numbers of breath tests and an increase in casualties involving drink-driving between 1998 and 2002. The percentage of positive breath-tests rose from 13%, to 16% over the same period.

6) Enforcement of existing national traffic codes across the EU

ECF is in favour of a full enforcement of traffic code fines and punishments according to the law of the country where they were committed. The EU needs to ensure that foreign road users are also subject to these fines and punishments.

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^v *Ibd.*

^{vi} SWOV Fact Sheet: *Cyclists*. See www.swov.nl

^{vii} *Ibd.*

^{viii} TNO report: *Bicycle safety in bicycle to car accidents*, 2008.

^{ix} SWOV Fact Sheets: *Blind spot crashes*. See www.swov.nl

^x [Directive 2003/97/EC](#)

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^{xiv} See http://www.erso.eu/knowledge/content/40_pedestrians/vehicle_design_of_crash_opponents.htm#Vehicle_design

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^{xxi} Department for Transport. *Tomorrow's roads: safer for everyone: the first three year review*. London 2004. See www.dft.gov.uk/pgr/roadsafety/strategytargetsperformance/tomorrowsroadssafereveryo4866