



SAVING [CAR DRIVERS] LIVES WITH DAYTIME RUNNING LIGHTS

Consultation Paper

FEMA's comments

November 2006

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Introduction

During the European Parliament Hearing on Road Safety, two experts were invited to present their analyses and conclusions regarding the mid-term review of the *EU Road Safety Action Programme*. Among the measures underlined was the standardization of Daytime Running Lights. When, after the Hearing, FEMA went to meet these experts, expressing motorcyclists' concerns about DRL and questioning some of their conclusions, we were told that while it was proved that DRL would benefit car users, there was no proof that the measures would affect motorcyclists, cyclists and/or pedestrians. It was therefore reasonable to call for the implementation of DRL throughout Europe.

For FEMA, that response is worth a thousand words as it clearly shows how imbalanced the road safety debate is in Europe. With regards to motorcyclists, road safety experts point out the motorcycle casualty trends on the one hand (mid-term review of the *Road Safety Action Programme*), and on the other hand, the same experts call for the implementation of a measure which has not been proven harmless, quite the contrary. There has not been such a controversial debate as the DRL issue and thousands of pages could be written about the methodologies applied to the research based on questionable data and context.

Reaching the set target of reducing by half the number of fatalities in Europe has become a quasi corporate target for the European institutions - with numbered results and time constraints. However, while agreeing with the overall objective of improving road safety, FEMA, as a citizens' organization, cannot agree with the approach: human lives cannot be "managed" like businesses and proposed measures aiming at reaching a defined target but at the expense of others should be abandoned.

Improving road safety is a common objective and in this context every life, whether a car driver, a motorcyclist, a cyclist or a pedestrian, is worth the same. Raising the risk, and therefore the number of fatalities, of one category of road users at the cost of saving another is ethically unacceptable. We cannot accept that motorcyclists should be sacrificed to improved car drivers' lives. European road safety policies must take into account all road users.

The present paper aims at presenting FEMA's response to the European Commission consultation on Daytime Running Lights. It will summarize motorcyclists' concerns about DRL, synthesize studies against the introduction DRL, propose a different approach to road safety debate, and finally define and explain its position statement opposing EU harmonization in this matter.

General concerns of motorcyclists

DRL are deemed to increase visual glare, obscure directional signal lights, increase visual clutter, distort distance perception and reduce the conspicuity of emergency vehicles. Studies underline that DRL mask the presence of obstacles in the roadway, such as pedestrians and less conspicuous vehicles like motorcycles and bicycles. DRL attract the attention of drivers, detrimentally distracting them from vulnerable road users. Furthermore, the perceptual capacity of persons being finite, DRL add to the driver's perceptual load the need to constantly adjust his vision to contrasting levels of illumination.

Measures, such as DRL, that directly concern vulnerable road users, should be fully investigated and properly discussed with their representative organisations before they are approved.

The special concerns of motorcyclists who use daytime running lights are that, when motorcars also use daytime running lights, motorcyclists will:



- lose the message 'motorcycle' that their light conveys to other drivers;
- be outshone and rendered less noticeable by more powerful motorcar lights in the scenarios: 'motorcar and motorcycle side by side' and 'following motorcar';
- experience the adverse effects of:
 - Confusion in the scenarios: 'motorcar and motorcycle side by side' and 'following motorcar'
 - Masking in the scenario: 'headlight in line with headlight of following motorcar';
- encounter motorcar drivers who are:
 - over-confident that other drivers will see and give way to them;
 - over-assertive that other drivers must see and give way to them;
 - distracted by motorcar lights;

- subject to glare;
- themselves be:
 - distracted by motorcar lights;
 - subject to glare.

Other concerns are:

- other vulnerable road users such as cyclists and pedestrians will have reduced conspicuity;
- police and emergency vehicles will be less perceived;
- additional power from the vehicle battery, which increases fuel consumption, will be needed, with an increase in CO2 emissions;
- less conspicuous brake lights;
- distorted distances/speed perception;
- frustration and unsafe overtaking;
- general distraction/ competition for driver's attention"

The Research

In spite of the conduct of well over fifty daytime lights studies over thirty years, the case in favour of daytime lights still lacks scientific foundation which is due to the difficulties in achieving a reliable measurement of the effect of DRL¹.

The research studies to justify the implementation of the measures on which the Consultation Paper arguments are based to justify the implementation of the measures, must also be treated with reservations.

The lack of evidence on the contribution of DRL is confirmed by official statistics, when these are available.

Our opinion is that the whole debate remains a purely intuitive and political one.

In the justification for the introduction of the mandatory application of DRL for all vehicles in Europe, it can be read that:

- *the use of DRL reduces the number of multi-party daytime accidents for cars between 5-15%;*
- *the main gain to be obtained from car using DRL is not counteracted by any possible negative effect to more vulnerable road users;*
- *a negative effect of DRL on the visibility of motorcyclists can not be ascertained. DRL for cars does not seem to diminish the effect of any motorcyclist's DRL.*
- *Given the positive contribution that DRL can make to road safety across Europe, the adoption of EU legislation must be considered very seriously.*

Questioning the quality, credibility and conclusions of the reports from the European Commission justifying DRL as a valuable road safety measure:

Following the withdrawal of the DRL provisions within the Voluntary Agreement between the European car manufacturers and the Directorate-General for Enterprise of the European Commission, in July 2001, FEMA was assured by the Directorate-General for Energy and Transport (DG TREN) that as the appropriate road users' organisation we would be fully involved in the research that they would be undertaking. Unfortunately this was not to be the

¹ Prower, S., Research officer of the British Motorcyclists Federation: "First, a comparison must be made of the accident rate of motor vehicles not using lights against a background of 0% of all vehicles using lights and the accident rate of motor vehicles using lights against a background of 100% of all vehicles using lights. Otherwise one measures only the provisional 'novelty' or 'distractive' effect of daytime running lights, not the enduring effect, once all vehicles use them, to modify and improve driver behaviour. Second, even the most sophisticated measure that has been used to date to detect a reduction in daytime multi-vehicle accidents from daytime running lights, the 'odds-ratio' test, by its formulation responds identically to a reduction in nighttime single-vehicle accidents from a lower volume of late night-time driving. So in order to distinguish the effect of daytime

case and we were only shown a copy of the Final Report just before its publication, when we were also told that it would be too late to incorporate our comments in the Final Report.

FEMA was very uneasy about a number of the conclusions reached and was particularly concerned that experiments designed to ascertain whether or not motorcycles would lose conspicuity were superficial and not relevant to real life situations. Long alone in criticizing the TNO *Human Factors, Daytime Running Lights, final report, October 2003*, FEMA is now supported by the recent report of TRL for the British government Department for Transport (DfT)². Its review of the EC reports, evaluation and conclusions reassured us that our concerns were real, both generally and with particular regards to the motorcycle conspicuity issue.

Missing and misleading collection of data

FEMA main concern has been and continues to be the scientific approach chosen for the collection and evaluation of data in the studies, where persons were shown pictures on a television monitor of traffic situations, having vehicles with and without Daytime Running Lights, and asked to identify a motorcycle.

- 1) The collection of additional data was undertaken under laboratory conditions only, which in our view cannot provide a reliable basis for drawing conclusions on real-life situations. Most importantly, test persons have only been shown static situations on a computer screen, which are considerably different from a dynamic situation in traffic. In such real life situation, the road user has to perform the driving of his vehicle and is faced with multiple other dynamic sensorial inputs, such as other cars and motorcycles, passing pedestrians and cyclists, communication with other car occupants, operation of radio, mobile telephony, GPS.
- 2) The environment in which the experiments took place and the pre knowledge of the participants that they were looking for motorcycles. This at least calls into question the conclusions reached.
- 3) In turn, TRL highlighted two specific failings of the DRL experiment, questioning the validity of the conclusions drawn:
 - the first was that the most common and severe accident type for motorcyclist where a car comes from a side road onto a main road causing the motorcyclist to hit it, was not include in the accident configuration of the research. This is particularly important because

running lights, one must record and analyse, not just data of accidents, but also data of the volume of late night traffic (and according to study design, proportion of vehicles using daytime lights).

² Daytime Running Lights (DRL): A review of the reports from the European Commission – TRL Limited - October, 2006

this is the accident scenario where the Commission believes that the benefits from DRL would be the most obvious;

- secondly, where in the experiment participants had been required to identify a motorcycle, along with other categories of vehicles, all examples separated the motorcycle from the other vehicle so that they were distinct against the background, whereas in reality the most frequent requirement would be to evaluate the conspicuity of motorcyclists by identifying the motorcycle when it was against a background of another vehicle, with or without its lights on.

Transport Research Laboratory draws different conclusions, opposing the EC justification

Remembering that no new data was introduced, TRL has come to fundamentally different conclusions on a number of key points:

- 1) the Commission's belief that a 15% improvement in fatalities and a 10% improvement in serious injuries and the 5% increase in less serious injuries was poorly based and believed that at best the improvement that could come to all of the categories was 5,9%. Four of the studies used came from a NTHSA study in the United States and were all deemed to have a low quality rating. The one European study, which had a reasonable quality rating, was judged to be based on fairly small numbers and have relatively low statistical weight. Indeed, the largest of the American studies had a weight 4 times larger than the others. If that was excluded, TRL recognised that the intrinsic effect of cars would change from a 1% increase to a 12% decrease.
- 2) The Commission concluded that the evidences of novelty effect were inconclusive. However, TRL identified that the data showed a significant reduction over different time periods following the introduction of DRL, namely 9% in the first year, a further 7% in the second year and 1% in the third year.
- 3) The Commission is of the view that the cost/benefit of introducing DRL is significantly greater than 1 (>1). These considerations led TRL to the conclusion that the Commission's belief at the benefit over cost/ratio would be significantly greater than 1 (>1) was incorrect and believed that the benefit/cost ratio would in fact be much less than 1.

As a matter of fact, the research studies, on which the Consultation Paper arguments are based to justify the implementation of the measures, must be treated with reservations.

The EC consultation paper does not take into account the research that has shown that DRL make no contribution to safety and may have negative effects for vulnerable road user³:

- a) A study conducted in 1975 by Hörberg & Rumar⁴ found that persons are capable of detecting a motorcar not using DRL in clear sight on an airfield at distances of over 3000 metres. It is therefore unlikely that drivers' central vision might be inadequate to detect vehicles not using DRL at the distances where failure to detect a vehicle causes accidents. The same study found that under streetlights in darkness, the DRL of a stationary motorcar masked the presence of an obstacle in the roadway beside it from oncoming drivers. Therefore, DRL would mask not just the presence of obstacles in the roadway and other vehicles not using DRL, but also the presence of pedestrians, pedal cyclists and motorcyclists.
- b) Two studies conducted in the eighties by Fulton⁵ and Donne & Fulton⁶ found that the effect of DRL diminishes once they lose their initial novelty effect upon drivers.
- c) The perceptual capacity of persons is finite. DRL will add to the driver's perceptual load the need to constantly adjust his vision to contrasting levels of illumination. DRL will attract the road user's attention, detrimentally distracting him from vulnerable road users.
- d) On the basis of Koornstra's work, France's INRETS⁷ decided in 1999 to conduct a study in the Landes department⁸ in order to verify through road experimentation whether DRL are effective. The study, according to the French authorities, has failed to determine a positive contribution of DRL to road safety, particularly on country roads, where most of the accidents take place, that the results were not significant. As a result, the French parliament rejected DRL.
- e) A study carried out in Austria in 2000 by Pfleger & Linauer⁹ used a test track and view recording electronic devices in order to investigate whether DRL made a contribution to safety. Whilst it failed to identify any direct danger or any benefit for vulnerable road users, it nevertheless underlined that DRL as such do not make any contribution to road safety. The conclusions of the study are that DRL may be valid for sub areas only, and that therefore no recommendation for a general obligation to use DRL can be

³ More details in annex 1

⁴ Horberg, U., and Rumar, K.: Running lights, conspicuity and glare. Report 178. Department of Psychology, University of Uppsala, Sweden, 1975

⁵ 1980

⁶ 1985

⁷ Institut National de Recherche sur les Transports et leur Sécurité.

⁸ The campaign « En Plein Jour Roulez Eclair »

⁹ Pfleger, E., Linauer, M., Untersuchung von Sehdefiziten bei unfallbeteiligten Lenkern einspuriger Fahrzeuge, Radfahrer und Fussgänger im Ortsgebiet und Freiland - Fahren mit Licht am Tag Universität für Bodenkultur, Institut für Verkehrswesen, Wien 2000

expressed¹⁰. The decision of the BMfV (Austrian Transport Ministry) and the National Parliament to promote the use, but not to support a mandatory implementation of DRL, essentially moves the self-responsibility and self-evaluation of the driver into the foreground.

- f) The Japanese Government commissioned its own motorcycle masking studies, Morita et al 2001 and JASIC 2003. JASIC 2003, in particular, found, against motorcar daytime running lights, that the daytime headlight of a motorcycle could be masked by the daytime headlights of a following motorcar. As a result, the Japanese Government prohibits motorcar daytime running lights of over 400 candlepower in Japan, and wishes to retain the discretion under international agreements to prohibit motorcar daytime running lights, as well as mandate them (communicated to UN/ECE GRE2 before its meeting in June 2004).

Positive contribution to road safety: comparing DRL countries with non DRL countries¹¹

In the justification for the introduction of the mandatory application of DRL for all vehicles in Europe explained in the Executive summary of the Consultation Paper, it can also be read that: *Studies estimate the life-saving potential of DRL to be in the order of 3 to 5 % of the yearly number of road fatalities. That is to say, if measures are taken to require the use of DRL throughout the EU, it could help saving between 1.200 and 2.000 road fatalities per year and thus make an important contribution to the European target of saving 25.000 lives per year on European roads.*

Acknowledging the EC Consultation paper, FEMA therefore looked for supporting evidence of the benefit of DRL for all vehicles, in the countries where it has been introduced as a compulsory requirement and by comparing those countries with countries that have not introduced the requirement.

We had anticipated that it would be possible to analyse the accident statistics on the basis of the types of vehicles involved in multi-vehicle accidents. Unfortunately such data does not appear to be readily available. We were however able to obtain data on the number of fatalities by road user category arising from collisions with cars and make a comparison between two countries with compulsory DRL for all vehicles and two that had not introduced the measure.

We then considered the available data for multi-vehicle accidents without the categories of vehicles being identified. We looked at this from two perspectives. Firstly to see whether

¹⁰ "The often published large safety advantages could not be reconstructed (...)", idem

there was any identifiable benefit when comparing countries with compulsory DRL for all vehicles with countries that had not introduced the measure and; secondly, looking for an identifiable change in the incidence and trend of the accident statistics in countries which had introduced compulsory DRL for all vehicles, to see if any changes could reasonably be attributed to DRL.

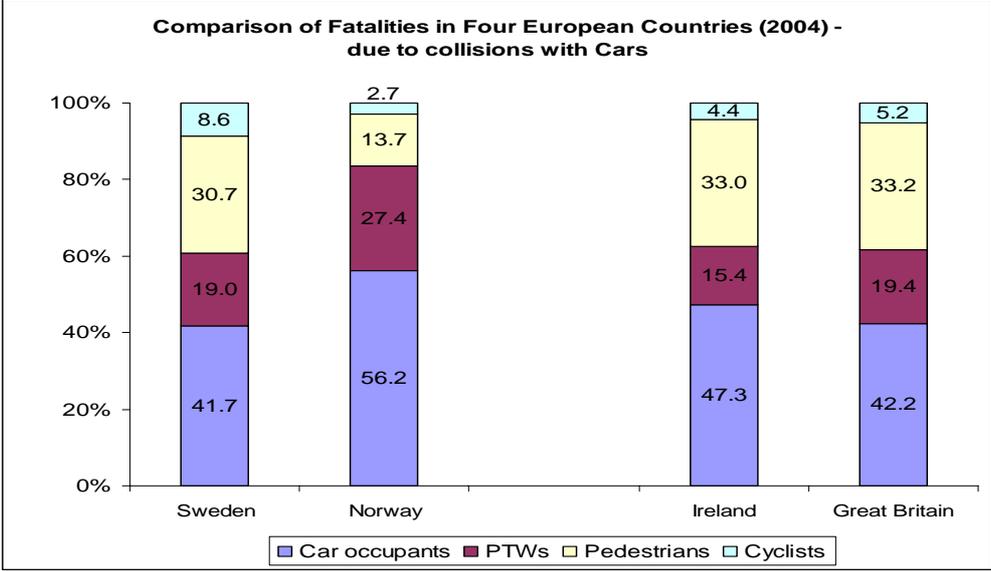


Figure one

Figure one shows the situation of fatalities in four countries, by road user category, arising from collision with cars. It can be seen that a greater proportion of motorcyclists are killed in collisions with cars in Norway, where DRL for all vehicles is compulsory, than in Ireland where it is not, while there is a very similar proportion of killed in Sweden where DRL for all vehicles is compulsory compared to the Great Britain, where it is not. It should be noted that these figures do not take into consideration that the exposure of motorcyclists is lower in Norway and Sweden due to their significantly shorter riding season.

¹¹ Source: The Motorcycle Action Group (MAG UK) response to the Consultation Paper 'SAVING LIVES WITH DAYTIME RUNNING LIGHTS (DRL)' presented by the inland transport services of the Directorate General for Energy and Transport

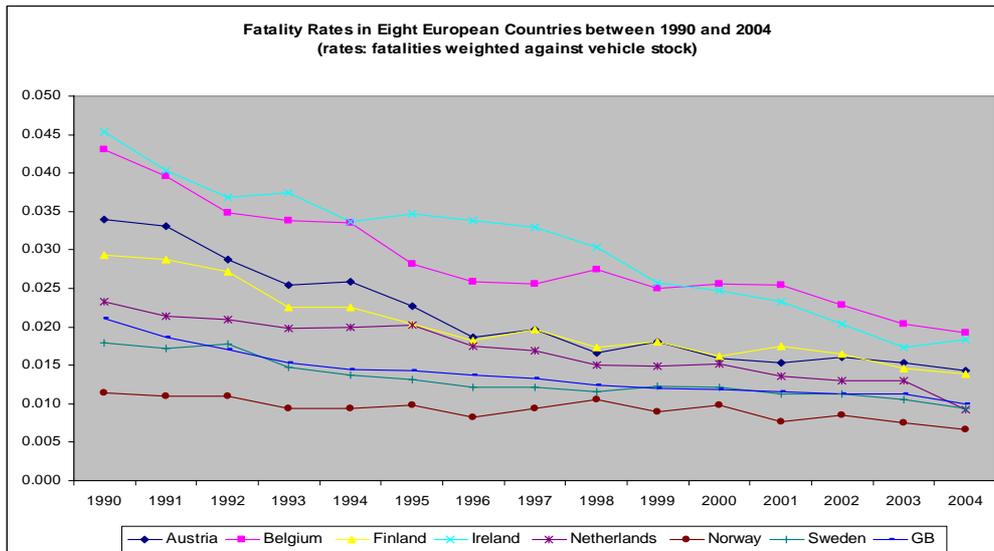


Figure two

Figure two shows that when the fatality rates weighted against the vehicle parc are compared in eight European countries over the period 1990 to 2004, no real distinction can be seen between the three DRL for all vehicle countries (Finland, Norway, Sweden) and the four countries where DRL was only compulsory for motorcycles (Austria, Belgium, Ireland, Netherlands) and Great Britain, where DRL is not compulsory for any category of vehicle but it has been estimated that over 90% of motorcyclists do ride with their lights on in daytime. Whilst it is recognised that Austria introduced compulsory DRL for all vehicles in 2006 in the context of the data period being considered it is included as a non DRL for all vehicles country.

It should be noted from Figure two that whilst all eight countries have shown significant reductions in their fatality rates and the spread has dramatically reduced from 0.011%-0.046% in 1990 to 0.008%-0.020% in 2004, the greatest improvement in the fatality rates can be seen in Austria, Belgium and Ireland, all countries that did not resort to compulsory DRL for all vehicles during the period.

	Austria	Belgium	Finland	UK	Ireland	NL	Norway	Sweden
1990	1558	1976	649	5217	478	1376	332	772
2005	768	1089	379	3201	400	750	224	440
	-50.7	-44.9	-41.6	-38.6	-16.3	-45.5	-32.5	-43.0

Table one – Percentage Change in Fatalities 1990-2005¹²

¹² Sources : Austria (KfV Road Accident Statistics 2005); Belgium: INS et SPF Mobilité et Transports (DIV). Voir aussi : Statistiques et publications du SPF Mobilité.; Finland : Statistics Finland 2005); Great Britain: Department For Transport Road Accidents and casualties 1950-2004 and Transtats for 2005); Ireland: NRA Road Collision Facts Ireland 2004 and Joint OECD / ECMT Transport Research Centre for 2005) ; Netherlands: CBA/AVV and Joint OECD / ECMT Transport Research Centre for 2005); Norway: Norway Statsbank/ IRTAD and Joint OECD / ECMT Transport Research Centre for 2005; Sweden: Vägverket).

Table one shows the reduction in fatal accidents expressed as a percentage over the period 1990 to 2005. There is 50.7% reduction in Austria, 45.5% reduction in the Netherlands and a 44.9% reduction in Belgium. If the year by year percentage change, as shown in *Table two* is examined it is interesting that the benefits of compulsory DRL for all vehicles on all roads are not readily apparent.

	Austria	Belgium	Finland	UK	Ireland	NL	Norway	Sweden
1990/1991	-0.4	-5.2	-2.6	-12.4	-6.9	-6.9	-2.7	-3.5
1991/1992	-9.5	-10.7	-4.9	-7.4	-6.7	0.3	0.6	1.9
1992/1993	-8.6	-0.7	-19.5	-9.8	3.9	-2.6	-13.5	-16.7
1993/1994	4.3	1.9	-0.8	-4.3	-6.3	3.7	0.7	-6.8
1994/1995	-9.6	-14.4	-8.1	-0.8	8.2	2.8	7.8	-2.9
1995/1996	-15.1	-6.4	-8.4	-0.6	3.7	-11.5	-16.4	-6.1
1996/1997	7.6	0.6	8.4	0.0	4.2	-1.4	18.8	0.7
1997/1998	-12.9	10.0	-8.7	-4.9	-3.0	-8.3	16.2	-1.8
1998/1999	12.0	-6.9	7.8	0.1	-9.8	2.3	-13.6	9.2
1999/2000	-9.5	5.2	-8.1	-0.4	0.5	7.0	12.2	1.9
2000/2001	-1.8	1.1	9.3	1.2	-1.0	-7.1	-19.4	-6.3
2001/2002	-0.2	-9.0	-4.2	-0.6	-8.5	-1.6	12.7	1.1
2002/2003	-2.6	-10.2	-8.7	2.2	-10.9	2.1	-9.7	-5.5
2003/2004	-5.7	-4.3	-1.1	-8.2	11.6	-19.0	-8.2	-9.1
2004/2005	-12.5	-6.4	1.1	-0.6	6.7	-6.7	-14.7	-8.5

Table two : Annual Percentage change in Fatalities between 1990 and 2005
(NB: Increases in fatalities are identified by the colour orange)

The measure before the period for which we have been able to obtain comparable statistics, 1977 for Sweden, 1983 for Finland and 1986 for Norway. Finland, however, introduced the measure in stages with the final stage applying to all roads in 1997.

Whilst it could be argued that Sweden and Norway's position as the countries with the lowest levels of fatalities over the period, could be due to their earlier introduction of compulsory DRL for all vehicles, it does not explain the similar situation in the Great Britain.

Recognising that massive benefits have been and are being claimed for compulsory DRL for all vehicles, up to 22% by Koonstra and between 1,200 to 2,000 fatalities by TNO and the European Commission, one would expect to find some discernable statistical evidence showing the benefit. That is unless the lives of car drivers that are being saved are being offset by increasing numbers of other, more vulnerable road users being killed in accidents with cars.

The lack of evidence on the contribution of DRL is confirmed by official statistics, when these are available.

- In Europe, in the countries where DRL laws are presently enacted (Scandinavia) – though having very peculiar conditions of lighting (weather, angle of the sun on the

horizon, etc) - research and statistics were not able to clearly identify a positive contribution of DRL to road safety.

- In Israel, a comparative analysis on safety effect carried out after a six months on-six months off DRL experience came to the conclusion that DRL offer no safety benefit.
- In Australia, having reached the same conclusion, a DRL law has been repealed.

To our knowledge the only country that has published a vehicle category by category evaluation of the effectiveness of compulsory DRL for all vehicles is Denmark. Whilst in the Danish experience since the introduction of the law a positive tendency was identified for motorcars and cyclists, a significant negative effect was found in the accidents involving pedestrians and in those involving motorcycles. In April 2001, Denmark supplied an evaluation of DRL safety effects to the Working Party on Road Traffic Safety of the United Nations Economic Commission for Europe. It was acknowledged that *“No specific reason for the increase has been identified but no other explanation than the Daytime Running Lights can be pointed out”*.

The environmental impact

The use of DRL requires additional power from the vehicle battery, which increases fuel consumption. This is also recognised by the European Commission. In addition, because additional fuel consumption, DRL generates additional pollution with an impact on exhaust gasses, fine dust and NOx.

- On March 30th 2005, Dr. Pieter Tans made a report about the level of CO² worldwide. Compared with 1990, the level increased from 315 to 378 ppm or by 20%;
- The lowest estimations amounts the costs to 1.13 billion€ for the European Union.

At national level:

- Germany calculated that the use of DRL by the German vehicle fleet would generate on its own an annual emission of 690.000 tons of CO₂;
- For the UK it was calculated that by accepting DRL, this should mean an increase of an extra 1.85 million tons of CO₂. At this moment it would be approximately 560 million tons CO₂ on a yearly basis.

Furthermore, DRL also implies further environmental pollution deriving from bulb replacement. Without DRL, the typical lamp life is one year; with DRL, lamps need to be replaced three times per year. These additional costs from DRL are entirely borne by the consumer. Why is that a Working Party in Geneva spends months on trying to diminish the thickness (by microns) of lightbulb threads. Since there are billions of lightbulbs every year this will lead to an astonishing 250,000 kgs of toxic Thungsten waste. With DRL, when lights keep on burning during daytime (75% of the traffic is during daytime), it would increase to 350,000 kg of toxic waste, since the lifetime of a lightbulb stays the same, but if it is used more then it will have to be replaced more often.

At this moment scientists send out strong signals that the fossil fuels are depleting, but there is no study about the impact of DRL on oil supplies...¹³

¹³ MAG Belgium

Advantages of DRL for other stakeholders

Since 2001, the balance has leant towards the most powerful and organised lobby from the private sector, the losers being the environmentalists and Vulnerable Road Users.

Safety research papers and studies seem to focus mainly on technological solutions as a panacea for casualty reduction throughout Europe. DRL is one of them.

However, rather than a long-term solution to the problem of road accidents, the DRL debate appears to be the result of powerful lobbying from other stakeholders from the private sector.

The most recent example is the proposed “voluntary agreement” by the automotive industry: In July 2001, the European Commission informed the Council and the European Parliament that: *‘ACEA, the European Automobile Manufacturers Association, had offered to accept a voluntary agreement in order to prevent the far progressed project of a directive on an improved pedestrian protection by imposing strict requirements for the design of the front parts of motor vehicles. Part of this voluntary agreement was also a paragraph containing the offer to ‘immediately equip new vehicles with daytime running lights’. ‘These lights should be in compliance with the requirements of the ECE Regulation No. 87 and should be activated automatically’.*¹⁴

Since 2001, the balance has leant towards the most powerful and organised lobby from the private sector, the losers being the environmentalists and Vulnerable Road Users.

¹⁴ Source: Summary Of The Discussion Concerning Daytime Running Lights In Germany Transmitted By The Experts From Germany Informal Document No.1 (50th GRE, 7-11 April 2003, Agenda Item 6.5.

FEMA proposals

Instead of implementing DRL for all vehicles in all European countries, FEMA would be in favour of:

- **Better awareness:** theoretical and practical hazard perception test must identify motorcycle awareness as a fundamental part of the testing regime of car drivers;
- **Better training:** extend the testing and training of car drivers to look for vulnerable road users.; training and awareness techniques for motorcycle riders;
- **Favouring lighting technology which automatically turns the lights on according to the visibility conditions;**
- **Improving all road users' sight**
- **Improving data collection:** preventative information, casualty and accident statistics, accurate data and realistic definitions
- **Further research:** DRL needs to be further and properly (objectively) investigated.

Better awareness

Cars are the major cause of deaths on European roads therefore the focus of EU Commission safety reduction strategies must first and foremost consider better road awareness through changing the attitude and behaviour of car drivers as well as motorcyclists, rather than opting for DRL.

Indeed, there is not one sentence in the Directive that recognises the human behaviour (of car drivers) as the greatest cause of fatalities in Europe. Indeed there has been no requirement what so ever to change the behaviour of car drivers through improved testing and training by focussing specifically on road awareness for vulnerable road users.

DRL for motorcyclists is by and large mandatory throughout Europe, either explicitly through legislation or implicitly due to the hard wiring (AHO) by manufacturers. Yet in spite of this, 40% of motorcycle annual fatalities in Europe are due to collisions with cars.

Theoretical and practical hazard perception test must be overhauled to take into consideration the causes of collision accidents and thus, must identify motorcycle awareness as a fundamental part of the testing regime of car drivers, in order to reduce the potential for collisions between cars and motorcycles.

Better training

The most effective, long term solution to the reduction of road fatalities in Europe is to extend the testing and training of car drivers to look for vulnerable road users. This is a relatively cost effective measure that would have long term effects. Practical training for car drivers must include consideration of inattentive blindness at junctions, which we believe should include training drivers to rock back and forward as well as looking both ways.

The EU Commission needs to address training and awareness techniques for motorcycle riders. This has not been addressed in the Third European Driving Licence Directive. There is not one sentence in the Directive that recognises that human behaviour is the greatest cause of fatalities in Europe. – indeed there has been no requirement whatsoever to change the behaviour of car drivers through improved testing and training by focusing specifically on road awareness for vulnerable road users. Instead, the Member States have preferred to impose further training on motorcyclists while completely ignoring the one most significant cause of motorcyclist fatalities.

Favouring lighting technology which automatically turns the lights on according to the visibility conditions

Many cars now include a device that automatically switches on the headlights when lighting conditions become insufficient. This technical innovation switches on lights automatically in tunnels, dark woods, at dawn or dusk, or in difficult weather conditions.

This system does not lead to unnecessary fuel consumption and does not put vulnerable road users in danger as the headlights are only switched on when required by lighting conditions.

Improving all road users' sight

Regular eyesight examinations of drivers and riders are the best way to ensure that the road is safer for everyone. The French association ASNAV (Association Nationale pour l'Amélioration de la Vue) estimates that "30% of drivers are visually impaired and that 7% do not have the minimal eyesight requirements according to the French 'Code de la Route'". ASNAV regrets that instead of ensuring everyone has an adequate eyesight, measures are taken to make cars more visible.

Improving data collection

Preventative information – Aviation, Railway and Shipping sectors gather information to analyse near misses in order to understand how to avoid future collisions, the knowledge gained from this type of research in road transport, could have profound positive effects on reducing vehicle collisions.

Casualty and accident statistics - The underlying statistics to determine the 'problem' of casualties and fatalities on our roads are used to promote policy, however the methods of determining casualties needs serious consideration. In the first instance, better reporting and clearer definitions of what constitutes a casualty is required.

Also, data are presented differently depending on circumstances and agendas.

For example, million kilometres travelled are estimates and this is due to the impossibility of knowing exactly how many miles or kilometres a motorcycle may or may not travel, this inevitably leads to inaccuracy and the potential for manipulation.

Absolute casualties or accidents do not consider the proportion of vehicles by category on the road, therefore give distorted results.

Furthermore, government statistics on vehicles in circulation differ vastly to the data recorded by industry and this creates further distortions and inaccuracies. Therefore *accurate data and a realistic universal definition of data* are imperative in order to have a clearer understanding of how we can improve road safety.

Further research

There is no evidence in favour of DRL. Measures such as DRL, that directly concern vulnerable road users, should be fully investigated and properly discussed with their representative organisations before they are approved.

Further research is needed in order to clearly identify the effect of DRL on vulnerable road users. Organisations representing vulnerable road users should be involved in the early steps of the discussions.

FEMA statement of position

Because of the very different situations and conditions in the member states, with no existing viable alternative for motorcycle conspicuity, the recognized environmental cost, FEMA currently opposes the harmonization of DRL at EU level. DRL should be left to the appreciation of National governments, in accordance with motorcyclists and other Vulnerable Road Users' associations.

Based on all the above facts and figures, the Federation of European Motorcyclists' Associations (FEMA) is very concerned by the European Commission's intention to introduce compulsory DRL for all vehicles in all countries. FEMA still believes that the measure will lead to a **loss of conspicuity for motorcyclists and other vulnerable road users**.

There are **sufficient doubts** concerning both the **quality of some of the research** and the **absence of clear evidence** demonstrating the benefits of compulsory DRL for all vehicles from countries where it has been introduced, to warrant its promotion as an issue for compulsory harmonisation.

While perhaps **improving car drivers' safety**, the measure will do so **at the expense of Vulnerable Road Users (VRU)**, which include motorcyclists, cyclists and pedestrians, at a time when the EU is promoting the use of alternative means of transport, for mobility and environmental reasons. Conspicuity is a key issue for motorcyclists' safety¹⁵. FEMA believes that the measure of harmonizing DRL at European level is being rushed through as, up to now, no alternative has proved to be efficient in terms of re-establishing motorcycle conspicuity. **Imposing DRL at European level now would put VRU at much greater risk.**

FEMA is also concerned that it **will lead to a shift in the responsibility** for taking appropriate action to minimise a hazardous situation, away from the car driver onto the motorcyclist, cyclist or pedestrian - this being in large part a consequence of the car driver believing that "I have my lights on so, therefore, I must have been seen by that motorcyclist/cyclist/pedestrian".

This view is all the more important when the **environmental cost of DRL for all vehicles is recognised**. At a time when we are struggling with global warming, we believe that an energy expending measure such a DRL for all vehicles should only be introduced if it can be clearly demonstrated that its appreciable costs are appreciably outweighed by its benefits. We are of the opinion that this is not the case.

Because of the very different situations and conditions in the member states, with no existing viable alternative for motorcycle conspicuity, the recognized environmental cost, FEMA currently opposes the harmonization of DRL at EU level. DRL should be left to the appreciation of National governments, in accordance with motorcyclists and other Vulnerable Road Users' associations.

Annexes

1. [Review of the evidence for motorcycle and motorcar daytime lights](#)
2. [A critical review of Elvik R, Christensen P, Olsen SF 2003. Daytime running lights. A systematic review of effects on road safety.](#)
3. [DRL studies pro and against Daytime Running Lights](#)

¹⁵ the latest in-depth study on motorcycle accident causations confirmed that "*among the primary contributing factors, over 70% of the Other Vehicle (OV) driver errors were due to the failure to perceive the PTW*" (Source: MAIDS http://www.acembike.org/html/docs/ACEM_publications/maidsfolder.pdf)

The Federation of European Motorcyclists' Associations

The Federation of European Motorcyclists' Associations (FEMA) is the representative federation of motorcycle (comprising all powered two-wheeled vehicles) users throughout Europe. FEMA represents the interests' of citizens' national organisations at the European Union and agencies of the United Nations. FEMA's primary objective is to pursue, promote and protect the interests of motorcyclists. FEMA recognises that motorcycles have different characteristics from other vehicles and emphasises the need for motorcyclists' specific requirements to be addressed.