FRANCE[1]

1. Short term trends

General comments on trends for 2009

The results for 2009 are mitigated, with a quasi stability in the number of fatalities and a slight decrease in the number of injury accidents (-2.9%) and in the number of injured (-3.1%).

- -4 273 fatalities in 2009 (compared to 4 275 in 2008)
- 72 315 injury accidents (73 390)
- 90 934 injured.

To understand the situation, it is important to look more precisely at the evolution of safety for the different road users. Despite an increase in mobility (+1.2%) (which followed an historical decline in 2008 as a consequence of the economic crisis), there has been an overall continuous decrease in the number of road users killed, with the exception of motorcyclists for which the situation deteriorated seriously in 2009, with a 11.7% increase in the number of fatalities (see more details in Section 2).

Preliminary trends for 2010

Based on preliminary data for 2010, an overall improvement in road safety was observed during the first semester of 2010 compared to the first semester of 2009:

- Fatalities : -10.6%
- Injury accidents: -15.3%
- Injured people: - 18.1%

2. Long term trends

Change in numbers of fatalities, seriously injured and injury crashes

Between 1970 and 2009, the number of fatalities decreased by 74% and the number of injury crashes by 69%. In the same period, the number of vehicles tripled. In recent years (2000-2009), the decrease in the number of fatalities has been sustained (-48%).

A significant change was introduced in July 2002, when President Chirac announced that road safety was among the priorities of his mandate. Since then, a determined road safety policy has been developed, with effective measures regarding speed management, drink-driving and seat-belt use, the strengthening of the demerit point system, etc.

While the rate of decrease has been sustained until 2009, there has been a slowing down in the progress made in 2009, mainly in the period March to May. Nevertheless the downward trend recommenced in Autumn 2009 and preliminary results for 2010 are encouraging.

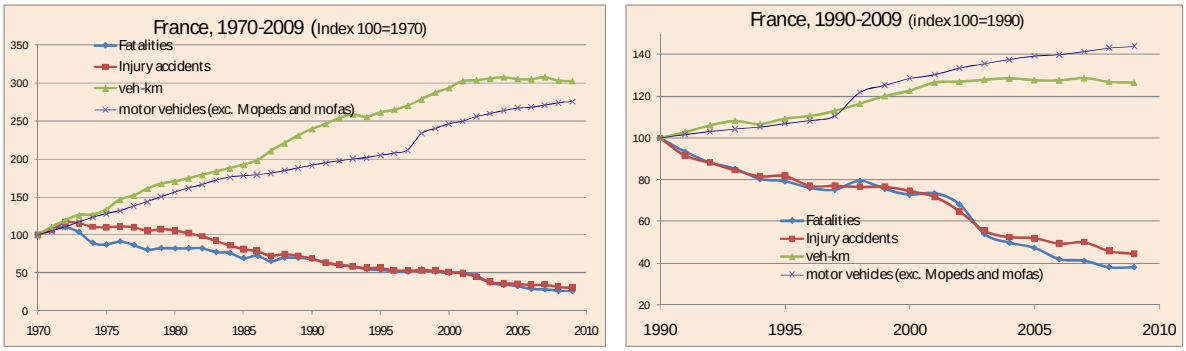
[1]. Source IRTAD, ONISR, SETRA.

Table 1. Number of road fatalities and injury crashes, 1970-2009*

	1970	1980	1990	2000	2005	2008	2009	% changeover 2008-09	% changeover 2000-09	% changeover 1970-2009
Fatalities*	16 445	13 499	11 215	8 170	5 318	4 275	4 273	-0.0%	-47.7%	-74.0%
Injury crashes	235 109	248 469	162 573	121 223	84 525	74 487	72 315	-2.9%	-40.3%	-69.2%

*For the years 2000 to 2004 a factor of 1.069 was applied to the fatality data for conversion from a six-day to 30-day recording period.

Figure 1. Change in numbers of road fatalities, injury crashes and vehicles 1970-2009



Risks and rates

Between 1970 and 2009 the mortality rate, expressed in terms of deaths per 100 000 population, was divided by nearly a factor of 5, and the fatality risk (expressed in deaths per distance travelled) decreased by 91% (Table 2).

Table 2. Risk indicators 1970, 2000 and 2009

	1970	2000	2009	Change 2000-2009	Change 1970-2009
Deaths/100 000 population	32.55	12.9	6.80	-47%	-79%
Deaths/billion veh-km	90.36	15.1	7.75	-49%	-91%
Deaths/ 10 000 registered vehicles		2.4			

3. Recent accident trends

Road users

Since 1970, all road users benefited significantly from progress in road safety, with the exception of motorised two-wheelers. (The number of motorcyclists killed increased dramatically (+166%) since 1970 (see Table 3).

In the year 2009, all road user groups – with the exception of motorised two-wheelers and cyclists – benefitted from a slight decrease in mortality (-3.2% on average).

Motorised two-wheelers continued to be the user group most at risk. In 2009, they represented 1.6% of the motorised traffic but 28% of fatalities and 33% of motorised road users. In 2009, the number of motorcyclists killed increased by 11.7%. This increase mainly concerned motorcyclists (and to a lesser extent riders of mopeds and mofas). Improving the safety of motorised two-wheelers is a priority of the current road safety strategy (see recent measures adopted in Section 6).

Figure 2 shows the respective change in the number of mopeds and motorcycles in traffic and the number of moped and motorcycle riders killed.

Table 3. Fatalities by road user group
1970, 2000, 2008 and 2009

	1970		2000*		2008		2009		2009 % changeover		
									2008	2000	1970-
Bicyclists	867	5%	273	3%	148	3%	162	4%	+9,5%	-40,7%	-81,3%
Mopeds	2 874	17%	461	6%	273	6%	299	7%	+2,7%	-35,1%	-89,6%
Motorcycles and scooters	334	2%	947	12%	795	19%	888	21%	+11,7%	-6,2%	+165,9%
Car occupants	8 199	50%	5 351	65%	2205	52%	2160	51%	-2,0%	-59,6%	-73,7%
Pedestrians	3 490	21%	848	10%	548	13%	496	12%	-9,5%	-41,5%	-85,8%
Others	681	4%	365	4%	288	7%	268	6%	-6,9%	-26,6%	-60,6%
Total	16 445	100%	8 170	100%	4275	100%	4273	100%	-0,0%	-47,7%	-74,0%

* For the year 2000 a factor of 1.069 was applied to the fatality data for conversion from a six-day to a 30-day recording period.

Figure 2. Relative evolution of the number of motorised two-wheelers in traffic and the number of moped riders and motorcyclists killed in traffic

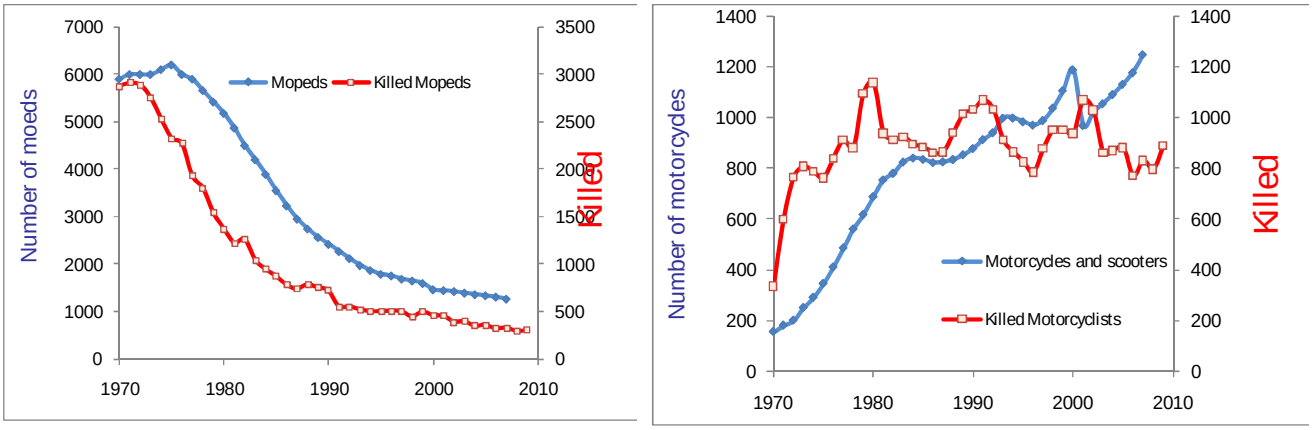


Table 4 illustrates the relative fatality risk for the different road user groups. For a motorcyclist, the risk of dying in a traffic crash is 23 times higher than that for a car occupant.

Table 4. Relative fatality risk by road user group, 2009
(* = 2007)

Breakdown in relation to number of vehicles	Deaths per million vehicles	Average kilometres travelled	Deaths per billion vehicle/km
Mopeds	245	2 020*	125
Motorcycles	642	4 728*	135
Light vehicles	70	12 745	6
Heavy vehicles	99	47 776	2

- Age groups

Since 1980, the reduction in fatalities has benefitted all age groups, but the most impressive reduction concerned the youngest groups – 6-9 years, 10-14 and 0-5 – for which fatalities respectively decreased by 92%, 86% and 83%.

Young people are overrepresented in road fatalities (see Figure 3A). The 18-24 age group represents around 9% of the population but 21% of road fatalities. The 18-20 group continues to be the one most at risk, with a rate of 18 fatalities per 100 000 population of the same age, while the rate for the general population is around 7 (see Figure 3B).

In 2009, there was a slight relative increase in the share of fatalities among those aged 25 to 65.

Table 5. Reported fatalities by age group
1980, 1990, 2000, 2008, 2009

						2009 % changeover		
	1980	1990	2000*	2008	2009	2008	2000	1970
0-5	296	220	125	42	49	17%	-60%	-83%
6-9	261	132	68	25	21	-16%	-69%	-92%
10-14	362	222	173	58	52	-10%	-70%	-86%
15-17	840	534	354	172	189	10%	-46%	-78%
18-20	1 693	1 224	867	424	403	-5%	-53%	-76%
21-24	1 703	1 566	879	534	498	-7%	-43%	-71%
25-64	6 118	5 684	4 204	2 209	2 265	3%	-46%	-64%
>65	2 092	1 603	1 358	811	796	-2%	-41%	-62%

* For the year 2000 a factor of 1.069 was applied to the fatality data for conversion from a six-day to a 30-day recording period.

Figure 3A. Relative representation in fatalities by age group
2009

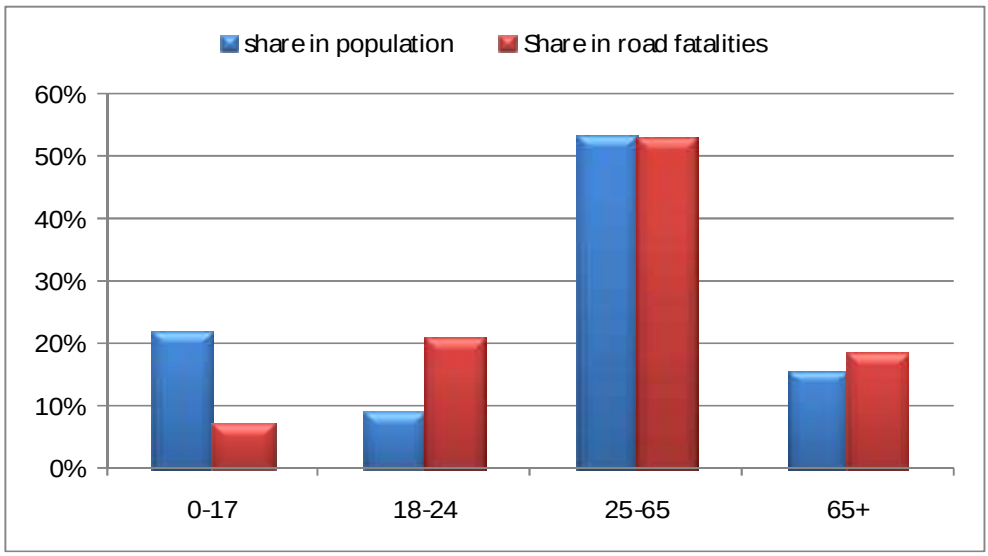
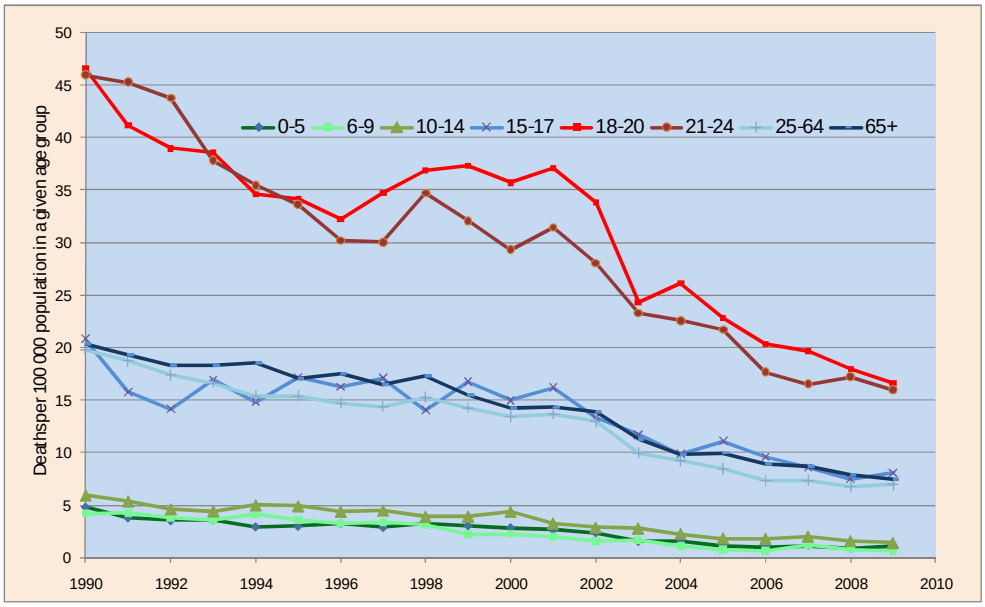


Figure 3B. Change in fatality risks by age group
(deaths per 100 000 population in a given group), 1990-2009

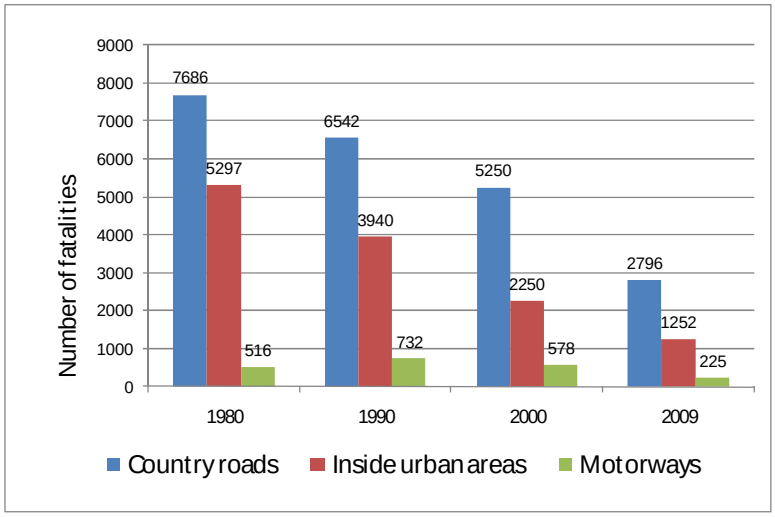


- Road type

France has a very large road network (1 million km), of which 80% is rural (not including interurban motorways). When fatalities per billion vehicle-km travelled are broken down by type of road, the road risk on country roads is shown to be very high. In 2009, 65% of fatalities occurred on rural roads, 29% on urban roads and 5% on motorways.

Motorways are the safest network, since they absorb 20% of the traffic and account for 5.3% of fatalities.

Figure 4. Reported fatalities by type of road
1980, 1990, 2000 and 2009



4. Recent trends in road user behaviour

- Drink-driving

The maximum permissible blood alcohol content is 0.5 g/l and 0.2 g/l for bus drivers.

In 2009, alcohol was a contributing factor in 24% of fatalities. Among those drivers killed, 30.1% had a BAC above the limit (this figure was 28.3% in 2008). Drink-driving is now the first cause of fatalities in France (mainly due to the fact that speed-related crashes have diminished).

- Speed

In 2002, speed enforcement was significantly strengthened with the introduction of automatic speed cameras. Between 2002 and 2009, the average speed decreased by 10% (see Figure 5) and the rate of speed violation decreased from 52% in 2002 to 26% in 2009. It is estimated that this contributed toward saving 11 000 lives between 2003 and 2009.

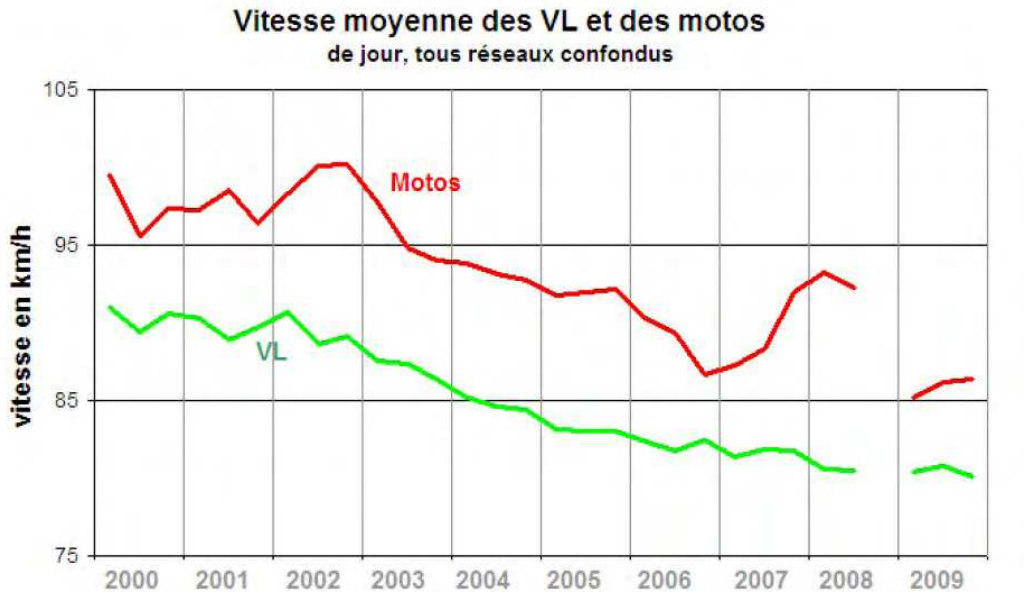
In 2009, the decrease in average speed by passenger cars continued. It is estimated that the average speed decreased by 0.6 km/h, contributing to the saving of 130 lives. Nevertheless, 760 lives could have been saved in 2009 if speed limits had been strictly respected.

Between 10-15% of car and truck drivers drive 10 km/h above the limit. This proportion is significantly higher for motorcyclists (between 25-30%).

Table 6. Change in average speed, January 2008-December 2009

	Jan-April 2008	May-August 2008	Jan-April 2009	May-August 2009	Sept-Dec 2009
Average speed of passenger cars (km/h, all networks)	80.8	80.4	80.4	80.6	80.0
% of drivers above the limit	35.7%	32.3%	34.7%	31.0%	31.9%
% of drivers 10km/h above the limit	13.3%	10.9%	11.7%	9.1%	10.8%

Figure 5. Change in the average speed of passenger cars and motorcycles, 2000-2009



- Seat belts and helmets

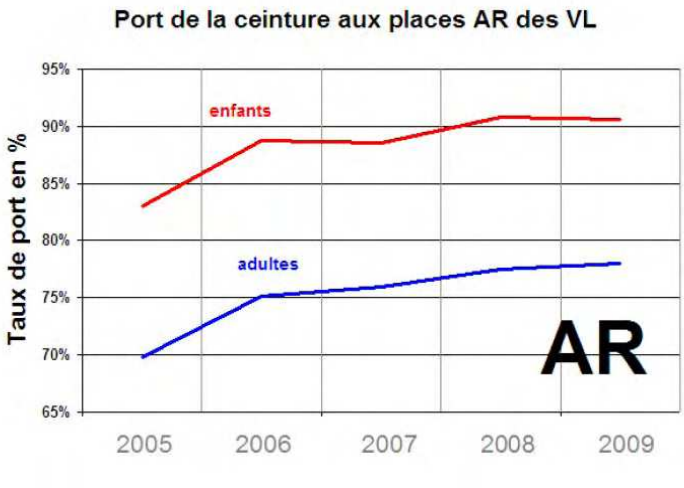
The seat-belt usage rate is very high in France, and among the best in OECD/ITF countries (see Table 7). However, in 2009 the wearing rate for drivers slightly decreased in urban areas (from 96.3% in 2008 to 94.6% in 2009). Regarding rear-seat passengers, the usage rate progressed for adults (78%) but slightly decreased for children (96.6%).

Helmet use is mandatory for motorcyclists (including mopeds). It is not compulsory for cyclists. The data available (site soundings) show an almost 100% usage rate, however the quality of the helmet and its correct buckling are very variable from one user to another, from one situation to another, etc.

Table 7. Change in seat-belt usage rate

	1980	1990	2000	2009
Motorway – driver	94%	91%	96%	99%
Rural roads – driver	79%	87%	94%	99%
Urban areas – driver	55%	55%	78%	95%

Figure 6. Change in seat-belt usage rate on rear seats of cars for children and adults



- Distracted driving: the use of mobile phones

It is forbidden to drive with a hand-held mobile phone. The use of hands-free mobile phones is tolerated. France started to monitor the use of phones while driving in 2009. In 2009, it was estimated that at any time, 2.3% of car drivers and 4.4% of truck drivers were using a hand-held phone while driving. Further research is needed to understand the contributing role of hand-held phones in accidents.

5. National road safety strategies and targets

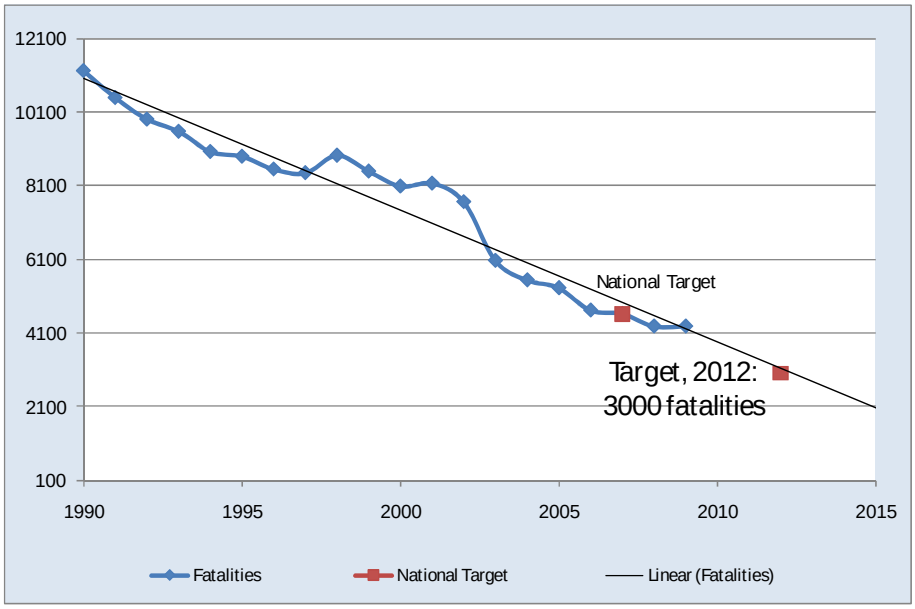
- National road safety strategy

On 18 February 2010, the Interdepartmental Committee for Road Safety (chaired by the Prime Minister), determined 14 new measures under six main objectives (see details in Section 6).

- Targets

In 2007, President Sarkozy set a national target for reducing the number of road fatalities to 3 000 by 2012. This corresponds to a reduction of 35% over the 2007 level; that is, an average annual reduction of 8.3%. There are no quantitative subtargets. In 2009, there was no improvement in comparison to 2008. An average annual reduction in fatalities of 11% in 2010, 2011 and 2012 will be required to reach the target set for 2012.

Figure 7. Trend in progress towards road fatality target



6. Recent safety measures (2008-2010)

- Alcohol and drug abuse

New measures adopted in 2010

- Equipping police and gendarmerie units with 5 000 electronic breathalysers to augment roadside alcohol tests;
- Raising roadside drug tests to 10 000 a year;
- Charging the cost of drug tests to the offenders instead of tax-payers;
- Making breathalysers available in bars.

Continuous implementation of previous measures:

- Preparation of a law allowing judges to oblige a driver testing with a positive BAC to install an alcohol interlock in his car, or to confiscate the vehicle in case of recidivism under the influence of alcohol or drugs. This law will be presented to Parliament at the end of 2009;
- Mandatory alcohol interlock in school buses (September 2009).

- Speed management: fighting speeding

New measures adopted in 2010

- Signposting large, automated speed-control sections, instead of individual radar locations;
- Installing 100 control devices on mean speed throughout large sections (control section).

Continuous implementation of previous measures:

- The implementation of automatic speed cameras continued in 2009 and will continue until 2012 (500 devices per year, including red light or headway cameras).

- Enforcement

New measures adopted in 2010

- Immediate clamping of vehicles involved in a major road offence;
- Sentencing to three years of jail and a 5 000 euro fine in cases of failure to report an accident.

Continuous implementation of previous measures:

- First implementation of red light cameras started at the beginning of 2009.

 Safety of motorised two-wheelers:

New measures adopted in 2010

- Making moped power-restraining devices fully respected;
- Imposing compulsory moped anti-derestriction checks every two years;
- Compulsory prior training before driving all light motorcycles;
- Promoting new roadside fittings and signposts, less aggressive to motorised two-wheelers.

 Increasing awareness of future drivers

New measures adopted in 2010

- Organising road safety events in high schools

 Preventing occupational road risks

- Developing occupational road safety plans

 Vehicle standards and equipment

- July 2008, compulsory reflecting jacket and triangle
- Cyclists must wear a reflecting jacket outside urban areas at night.

7. Major recent or ongoing research (2009-2010)

This section presents a selection of road safety research reports published in 2009. Further information can be found on the following websites:

PREDIT: www.predit.prd.fr
INRETS: www.inrets.fr
CERTU: www.certu.fr
SETRA: www.setra.fr
LCPC: www.lcpc.fr

 On-going research projects

- PREDIT: major project on the quality and safety of the transport system.
  See: http://www.predit.prd.fr/predit4/goDirect.fo?cmd=go&inCde=2

 The economics of road safety

- ICASES: Comparaison internationale sur les systèmes de contrôle automatisé de la vitesse – International comparison of automatic speed control systems. Carnis, INRETS, 2009.
- ATSERR: Approche territoriale et socio économique du risque routier – Territoral and socio-economic approach toward road risk. Fleury, D., INRETS, and Saint-Gérand, T., Université de Caen, 2009.
- ISOMERR : Comparaison Rhône-Alpes/Catalogne : Les pratiques de mobilité et risques d'accidents routiers des ménages : inégalités sociales, culturelles et territoriales en France et en Espagne. Haddak, M., UMRESTTE, 2009.
- ESPARR-ECO : Dommages économiques et sociaux des accidents corporels de la circulation : une approche par la victime, à partir des données de la cohorte ESPARR. Hours, M., UMRESTTE, INRETS, 2009.

- Biomécanique

  - Willinger, R. (2009), Critère de blessure de la colonne cervicale sous choc arrière. University of Strasbourg, CCAR.
  - PROMOTO : Amélioration de la Protection des Motocyclistes par un gilet avec Airbag Intégré Serre, T., L. Thollon, D. Cesari, J.-L. Martin, C. Masson, C. Perrin, A. Moskal, Y. Godio, M. Llari, S. Bidal, F. Delcroix, F. Njilie, O. Deroaldes, F. Dufour, H. Maillard (2009).
  - APROSYS: Final report on Biomechanics subproject activities. Verriest, J.-P., (2009), Sustainable Surface Transport, Integrated Project on Advanced Protection Systems, TIP3-CT-2004-506503, APROSYS.

- Design and road safety

  - Boutin, A.-M. (2009), Design, Transport et Mobilité, APCI.

- Fatigue and distracted driving

  - ATLAS: Impacts des inattentions sur la conduite automobile : approche multidisciplinaire - psychologie cognitive, neurophysiologie, épidémiologie, mathématiques. Gabaude C., INRETS, 2009.

- Technologies for road safety

  - SPEEDCAM : Limitation de vitesse. Nashashibi, F., ARMINES, 2009.
  - SAGILLIS (Safe And Green Intelligent Led Lighting Systems): Feasibility Study, 2009.
  - SURVIE (Sécurité des usagers de la route et visibilité) : Approche systématique des situations dégradant la visibilité du conducteur.
  - ARPOD (Architecture Radar pour une Protection OmniDirectionnelle): Pare-choc intelligent, 2009.

- Road safety policy

  - Guilbot, M. (Ed.) (2009), Sécurité routière et réseaux institutionnels locaux. Actes des séminaires du département Mécanismes d'accidents. Vol. 2, Coll. Actes INRETS No. 111, 162p.

- Infrastructure

  - Brenac, T. (2009), Common before-after accident study on a road site: a low-informative Bayesian method. European Transport Research Review, Vol. 1, No. 3, pp. 125-134.
  - Goyat Yann, A. Riouall, T. Chateau, L. Malaterre, L. Trassoudaine (2009),Trajectory measurement of vehicles: a new observatory, Advances in Transportation Studies, an international Journal, Section A 18, 30 September.

8. References – Useful websites and references

Road Safety in France, analysis by the National Road Safety Observatory	http://www2.securiteroutiere.gouv.fr/infos-ref/observatoire/observatory.html
SETRA, Technical Department for Transport, Roads and Bridges	http://www.setra.equipement.gouv.fr/English-presentation.html
INRETS – Transport and Safety Research Institute	www.inrets.fr
CERTU	www.certu.fr
LCPC	www.lcpc.fr