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**SUBMISSION TO THE**

**HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON**  
**TRANSPORT AND REGIONAL SERVICES**

**INQUIRY INTO NATIONAL ROAD SAFETY: HOW CAN WE STOP**  
**MORE DEATHS ON OUR ROADS?**

**17 OCTOBER 2003**

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This submission by the Department of Transport and Regional Services (DOTARS) was coordinated by the Australian Transport Safety Bureau (ATSB) and includes input from other groups in DOTARS.

## **ROAD TRAUMA IN AUSTRALIA: THE SIZE OF THE PROBLEM**

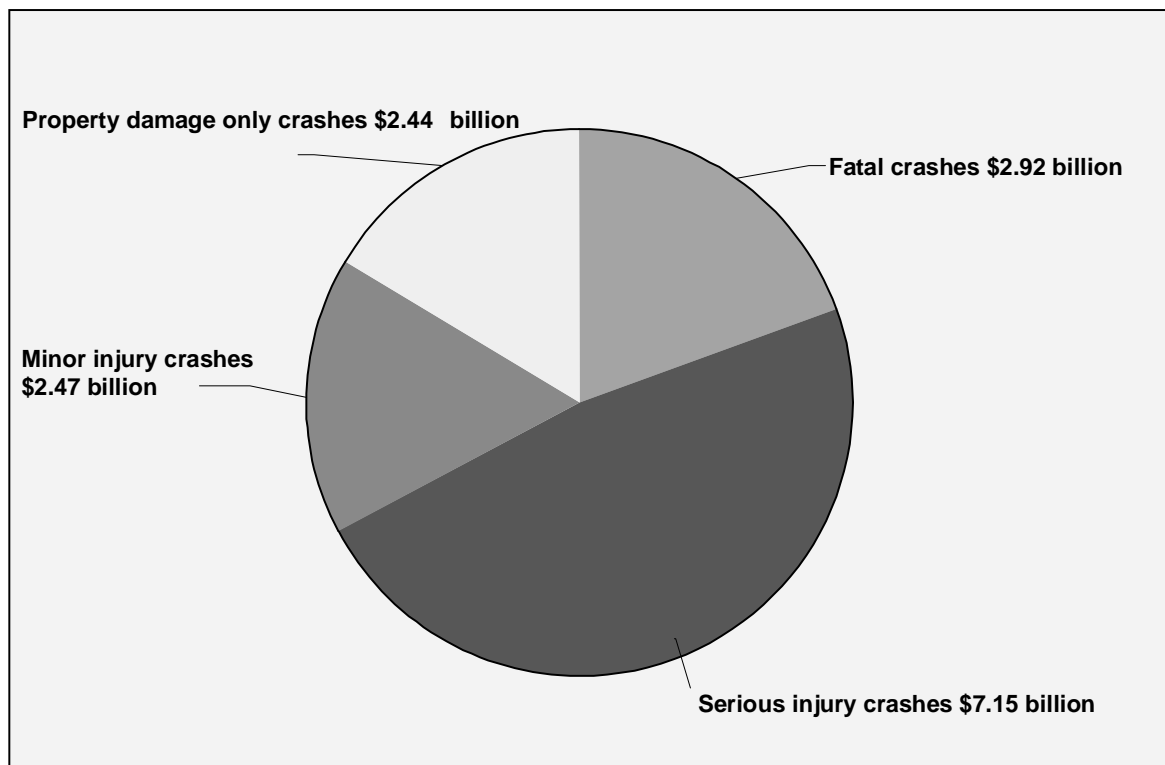
There are about 1700 road deaths in Australia each year, and more than 10 times as many serious injuries.

Road crashes are a major cause of premature death: they account for about 7% of years of life lost through all causes of death.

The economic cost of crashes has been estimated by the Bureau of Transport and Regional Economics, using a conservative 'human capital' approach, to be in the order of \$15 billion in 1996 as shown in figure 1.

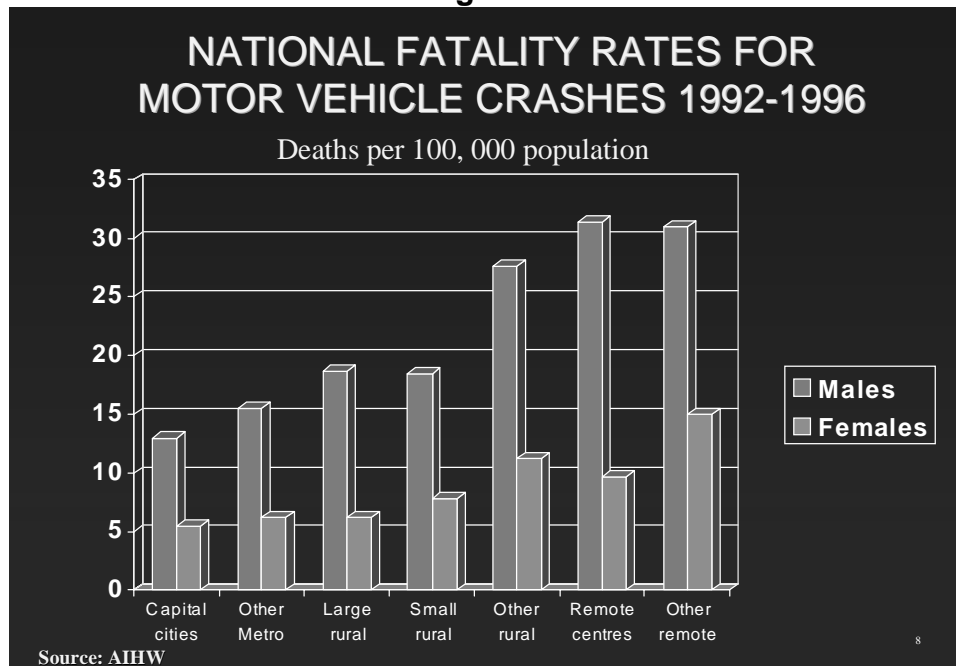
Australia has a lower road fatality rate than many developed countries, but we are not the leaders. Some other developed nations such as the UK and Sweden have fatality rates just 60% of our rate (relative to population) and these nations are working towards further ambitious reductions.

**Figure 1**  
**The economic cost of road crashes**



The rate of road deaths is particularly high for males and for people who live in rural and regional areas (figure 2).

**Figure 2**

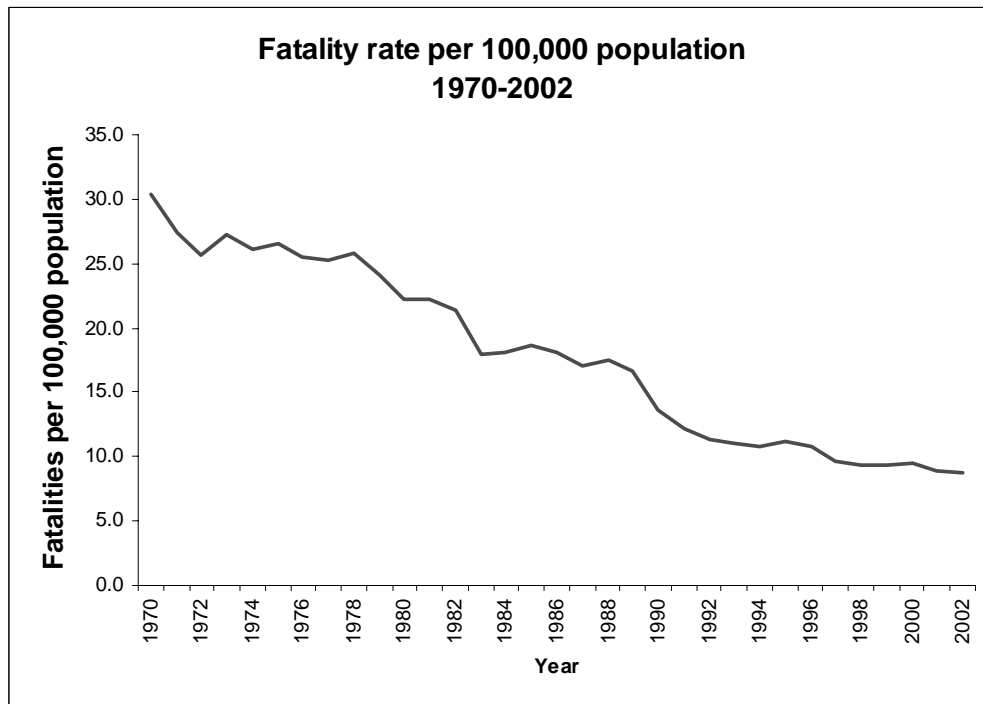


Almost half of all road fatalities are drivers (45%); the rest are passengers (24%), pedestrians (15%), motorcyclists (14%) and cyclists (2%). Trucks are involved in 17% of road fatalities. In crashes that involve a heavy truck, 15% of those killed are truck drivers. About 1% of road fatalities involve a bus, and most of these are pedestrians or occupants of other vehicles.

## HISTORY OF IMPROVEMENT

From 1970 until 2002, the road fatality rate dropped from 30.4 to 8.7 deaths per 100,000 population. The rate for the 12 months to September 2003 was 8.2, the lowest since record keeping commenced in 1925. This reduction has been achieved in spite of a large increase in motor vehicle use. From 1970 to 2002, the fatality rate per 10,000 registered vehicles dropped from 8.0 to 1.3.

Figure 3



Source: ATSB

*'This improvement has come at a price in terms of money and social responsibility. The Australian people have been asked – and have agreed – to pay for safety in vehicles and for better roads, and to accept tougher regulations and enforcement measures.'*

— *National Road Safety Strategy 2001–2010*

## RESPONSIBILITIES

Responsibility for improving road safety is shared by the Australian Government, state, territory and local governments, other organisations capable of influencing road safety outcomes, manufacturers and road users.

The Australian Government's responsibilities include road funding (National Highways and other key roads, and the National Black Spot Programme), new vehicle safety standards, research, statistics, and national coordination.

States and territories are responsible for road funding, road construction, road rules, traffic police, driver licensing, public education, vehicle registration and in-service standards, research and statistics, and for developing their own road safety plans and strategies.

Local government responsibilities include local roads and community road safety programmes.

Other key groups involved in road safety include:

- the health sector (Australian and state government)
- the road transport and vehicle industries
- motoring organisations
- driver trainers and
- the general public
  - individual choice and responsibility is a key factor in safety outcomes.

## **NATIONAL COORDINATION**

The National Road Safety Strategy provides a framework for coordinating the road safety initiatives of the federal, state, territory and local governments and of others capable of influencing road safety outcomes.

The current Strategy (2001–2010) was adopted by the Australian Transport Council (ATC) in November 2000 and commenced in January 2001. The Council comprises federal, state and territory ministers with transport responsibilities and includes an observer from local government.

The ATC agreed that a series of two-year Action Plans should be developed, setting out specific measures available to achieve the objectives of the Strategy.

Each Action Plan was to be reviewed toward the end of its two-year period and a further Action Plan developed and submitted for the approval of the ATC. The current Action Plan (covering 2003 and 2004) was coordinated by the ATSB through the National Road Safety Strategy Panel and approved by the ATC in November 2002.

The target of the Strategy is to reduce the annual number of road fatalities per 100,000 population by 40%, from 9.3 in 1999 to no more than 5.6 in 2010.

This target was not chosen arbitrarily: it was an estimate of what could be achieved with a concerted effort. It took into account expert estimates of the effects of known measures, based on available research.

The point was to focus attention on the proposition that there are viable options available that would give us a much safer road system.

After allowing for increases in vehicle use and for the overlap when different measures are implemented in combination, the following indicative estimates were provided for the potential contribution of different types of measure to the overall target:

Safer roads	19%
Improved vehicle occupant protection	10%
Improved road user behaviour	9%
New technology to reduce human error	2%
 Total reduction in population fatality rate	 40%

A more detailed discussion of these estimates is provided in the current Action Plan (Attachment 2, page 7).

The estimates indicated that, provided other factors remained constant, almost three-quarters of the targeted 40% reduction in per capita fatality rates could be achievable from maintenance of real funding for road measures and the flow-through effects of vehicle safety improvements that were already implemented or scheduled.

Most of the remaining improvement was expected to be achievable through improved compliance with existing rules on drink driving, speed and restraint use (achieved by extending and refining enforcement programs, backed by public education and persuasion).

Only a very small proportion of the total projected safety improvement was associated with measures that had inherently long lead times. The accumulation of road and vehicle improvements over the decade was expected to be fairly uniform, and it was noted that changes through improved compliance with existing rules should be achievable sooner rather than later.

## **RECENT TRENDS**

Australia achieved significant reductions in road fatalities in the early and mid-1990s, but from 1998 to 2000 the fatality rate remained almost constant.

The target of the National Road Safety Strategy for 2001 to 2010 is a 40% reduction of road fatalities per 100,000 population, from the 1999 rate of **9.3** to no more than **5.6** in 2010.

Uniform progress toward the target would have required a cumulative reduction in the fatality rate of 9.7% after two years (to December 2002) and 14.2% by the end of 2003, relative to the base figure.

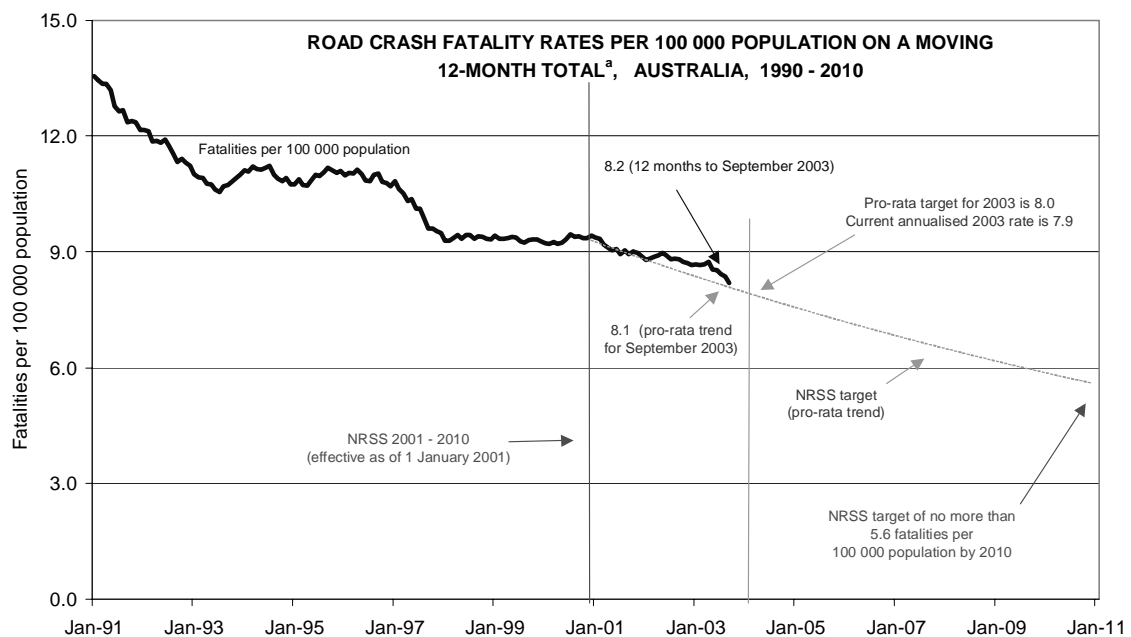
The actual cumulative reduction by December 2002 was 6.8%.

In the first nine months of 2003 there were 1188 fatalities. This was 6.9% lower than the same period last year and corresponds to an annualised fatality rate of 7.9. If this rate holds for the remainder of the year, the cumulative reduction will be 14.8%, which would slightly exceed the pro-rata reduction target of 14.2% (a fatality rate of 8.0).

Table 1 and figure 4 summarise the national outcomes.

**Table 1: Road fatalities and fatality rates: Australia**

Year	Fatalities	Fatalities per 100,000 population	% change in fatality count from previous year	% change in fatality rate from previous year	Cumulative fatality rate reduction (base=9.3)
1999	1,764	9.3			
2000	1,817	9.4	+3.0%	+1.4%	
<b>2001</b>	1,737	8.9	- 4.4%	- 5.7%	4.4%
<b>2002</b>	1715	8.7	- 1.3%	- 2.6%	6.8%
<b>2003</b>	1188 (Jan-Sep)	7.9 (annualised)	- 6.9% relative to Jan-Sep 2002	- 7.9% relative to Jan-Sep 2002	14.8% (annualised)

**Figure 4**

a. Each point represents the fatality rate over the preceding 12 months.

Source: ATSB

Table 2 shows results for individual jurisdictions to September 2003. In most jurisdictions, the annualised 2003 fatality rate is lower than the rates for 1999 and 2000.

Since 2002, Victoria has shown the largest fatality rate reduction (17%). The reduction in Victoria for the 12 months to September 2003 (80 fatalities, 19%) compares with a total national reduction of 112 fatalities (5%) over the same



period. The downward trend in Victoria began in 2002 and has reversed an upward trend in previous years. The start of the downturn coincided with the introduction of stricter speed enforcement measures, including reduced enforcement tolerances.

**Table 2: Fatalities per 100,000 population, by jurisdiction**

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	Australia
1999	8.9	8.1	8.9	10.1	11.7	11.2	25.2	6.1	9.3
2000	9.2	8.5	8.7	11.0	11.2	9.1	25.8	5.6	9.4
2001	7.9	9.1	8.8	10.1	8.6	12.9	25.3	5.0	8.9
2002	8.4	8.1	8.6	10.1	9.2	7.6	27.9	3.1	8.7
Jan-Sep 2003 (annualised)	7.7	6.7	7.9	10.0	8.7	8.4	27.4	2.9	7.9
<i>Change:</i>									
1999 to Jan-Sep 03	-14%	-17%	-11%	0%	-25%	-25%	9%	-53%	-15%
<i>Change:</i>									
2000 to Jan-Sep 03	-16%	-21%	-10%	-9%	-22%	-8%	6%	-49%	-15%
<i>Change:</i>									
2002 to Jan-Sep 03	-8%	-17%	-8%	-1%	-5%	11%	-2%	-8%	-9%

The road-user groups showing the largest fatality reductions in the first 9 months of 2003 are motorcyclists (down 17% on the same period last year from 156 to 129) and pedestrians (down 11%, from 195 to 173). There has been a small decrease in passenger fatalities (7%) and driver fatalities (4%), and no change in bicyclist fatalities.

## IS THE TARGET ACHIEVEABLE?

The current Action Plan was developed jointly by all Australian jurisdictions, with advice from leading researchers from Australia's principal road safety research organisations, and input from the National Road Safety Strategy Panel, which represents a broad range of organisations with a stake in road safety issues.

The disappointing rate of progress in improving road safety outcomes in the first two years of the current Strategy provided the impetus for a major re-appraisal. The consensus conclusions of this review were as follows:

*'While it is not possible to be precise about the reasons why progress has been slower than had been expected two years ago, the bottom line is clear: unless action is taken to achieve better results, there is a growing prospect that the target of the Strategy will not be achieved.'*

*'There is no reason to believe that the target is unachievable.'*

*'Measures to achieve a faster rate of progress are available. They are well researched, and likely to be cost-effective. They are not particularly radical: in*

*fact, to a large extent they represent best-practice approaches already adopted in some other developed countries.'*

Further details of this review, including a discussion of possible reasons for slower than expected progress, are provided in the Action Plan (Attachment 2).

The recent trends in some individual jurisdictions (particularly Victoria) confirm that substantial and rapid reductions in road fatalities are still achievable.

## **AREAS OF FOCUS IN THE CURRENT NATIONAL ACTION PLAN**

The Action Plan was designed to provide a clear focus on priority action areas in road safety.

These include areas where there is the potential to achieve a significant impact on road trauma within the next few years, and others that will lay the foundation for longer term gains.

There was a strong consensus among officials in all jurisdictions, and among road safety experts consulted in the preparation of the Action Plan, that the number of road fatalities over the rest of this decade—and beyond—will depend critically on the action that is taken in two key areas:

- Speed management  
(Improving compliance with speed limits, and selective reduction of limits on roads with a relatively high crash rate)
- Application of engineering measures to improve the safety of roads  
(Including both black spot programmes and targeted “mass application” of cost-effective measures to improve the safety of larger sections of the road network).

The Plan identifies other areas where there is a prospect of substantial gains (or worthwhile gains at relatively low cost):

- Driver impairment  
(Alcohol, other drugs and fatigue)
- Vehicle measures  
(Including seat belt reminder devices; encouraging corporate and individual vehicle purchasers to select safer vehicles; and development of a National Heavy Vehicle Safety Strategy)
- Licensing and driver management  
(Including measures to reduce the incidence of unlicensed driving and

motorcycle riding, and enhance the effectiveness of licence suspension as a deterrent penalty)

- Special groups and issues

(The National Strategy noted particular concerns about safety outcomes for a number of specific groups of road users, including cyclists, motorcyclists, pedestrians, elderly road users, youth and indigenous people. The Action Plan suggests that the most effective options for improving the safety of these groups include measures that are not specifically targeted to group members: such as improved speed management and safer road infrastructure. However, the Action Plan puts forward a small number of group-specific measures to supplement the general measures.)

The mix of measures adopted in individual jurisdictions, and the details of specific measures, will vary to reflect local circumstances and priorities. The Action Plan cannot pre-empt the administrative or legislative processes required before implementation of many of these measures. However, all jurisdictions agreed that planning and implementation should focus on these priority areas.

The Action Plan (Attachment 2) lists specific priority action items in these broad areas, and provides information about the reasons for selecting these priorities.

Additional background information about the two key priority areas identified in the Action Plan is provided in Attachment 6 (*Speed and road safety*) and Attachment 7 (*Road funding in Australia for safety improvements*).

People aged between 17 and 20 are heavily over-represented among vehicle occupants killed and seriously injured on Australian roads. Recent research shows that there are several promising avenues for improving the safety of young and novice drivers, including extensions to graduated licensing systems (flagged in the Action Plan for consideration) and innovative approaches to driver training. Attachment 8 (*Options for improving young and novice driver safety*) provides more detailed information.

The National Road Safety Strategy for 2001–2010 notes that new and emerging technology (commonly known as Intelligent Transport Systems) has considerable potential to improve road safety, particularly in the longer term.

Systems with potential safety applications include:

- intelligent cruise control (to maintain safe following distances)
- speed alerting and limiting systems
- alcohol detection advisory and interlock systems
- incident management systems
- seat-belt reminder and interlock systems
- emergency notification (mayday) systems

- electronic driving licences (to reduce unlicensed driving and ensure that drivers adhere to their licence conditions)
- alcohol interlocks for drink driving offenders.

Although the long-term potential of such systems may be large, the Strategy document made cautious assumptions about the fatality reductions that could be achieved by 2010 from such systems.

A recent comprehensive review of potential road safety benefits of new technology has been prepared by Monash University Accident Research Centre<sup>1</sup>, and copies will be provided to the Committee.

## **NATIONAL HEAVY VEHICLE SAFETY STRATEGY**

A National Heavy Vehicle Safety Strategy (NHVSS) and Action Plan were approved by the ATC in May 2003 (Attachments 4 and 5).

The Strategy identifies a series of objectives and actions designed to achieve a significant improvement in heavy vehicle safety over the next decade. It covers both trucks and buses. The objectives and broad priority areas identified for heavy vehicle safety are similar to those in the general Strategy, but action items specific to heavy vehicle safety have been developed.

The broad strategic objectives are:

1. increased seatbelt usage by heavy vehicle drivers;
2. safer roads;
3. more effective speed management (both heavy and light vehicles);
4. reduced driver impairment (both heavy and light vehicles);
5. safer heavy vehicles;
6. enhanced driver and industry management; and
7. effective enforcement.

An Action Plan has been developed to address these strategic objectives (Attachment 5).

The NHVSS was the result of an extensive process of review and consultation. It is supported by industry and union representatives, and all jurisdictions.

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<sup>1</sup> Regan M, Oxley J, Godley S and Tingvall C (2001). *Intelligent transport systems: safety and human factors issues*. Noble Park, Australia: Royal Automobile Club of Victoria.

Development of the NHVSS was coordinated by the National Road Transport Commission (NRTC), with input from DOTARS (ATSB and Surface Transport Regulation Division).

A task force chaired by NRTC, and including representatives from industry, transport agencies and the police, has been formed to coordinate and monitor implementation.

## CONCLUSION

Meeting the fatality rate target of the National Road Safety Strategy remains a major challenge. However, it is a challenge that can be met with a concerted and coordinated effort focussed particularly on the priorities in the 2003 and 2004 Action Plan. In the longer term, technology offers great promise for further gains to stop more deaths on our roads.

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*'The road toll should not be accepted as inevitable.'*

*'The priority given to road safety should reflect the high value that the community as a whole places on the preservation of human life and the prevention of serious injury.'*

*—National Road Safety Strategy 2001–2010*

**LIST OF ATTACHMENTS**

1. National Road Safety Strategy 2001–2010
2. National Road Safety Action Plan for 2003 and 2004
3. National Road Safety Action Plan for 2001 and 2002
4. National Heavy Vehicle Safety Strategy 2003–2010
5. National Heavy Vehicle Safety Action Plan 2003–2005
6. Speed and road safety
7. Road funding in Australia for safety improvements
8. Options for improving young and novice driver safety
9. Road fatality statistics
10. Potential Benefits and Costs of Speed Changes on Rural Roads