

# Department of Transport and Works

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Submission to the House of Representatives  
Standing Committee on Communications,  
Transport and the Arts Inquiry into Managing  
Fatigue in Transport.

## **Executive Summary**

The Northern Territory, in recognition of the importance of fatigue as a contributing factor in road accidents, and to assist in continuing the Northern Territory road transport industry's good road safety record, introduced in collaboration with the road transport industry a Fatigue Management Code of Practice.

The head of power for the Code is provided by the Work Health Act, which is the principle piece of Northern Territory occupational health and safety legislation. The Act places duty of care obligations on operators for the provision of a safe and healthy working environment.

The code of practice for fatigue management takes an alternative approach to regulated driving hours (where driving hours are prescribed and the use of driver logbooks are required). The Northern Territory code focuses on safe outcomes as a result of appropriate risk assessment based on the task at hand, the application of appropriate rest times, and the adoption of driver health best practice.

The Northern Territory approach encourages operators to address fatigue issues in a holistic manner without the option of hiding behind a regulated hours regime. The responsibility for developing systems that address the guiding principles promulgated in the code is placed with the individual operator.

The Code is initially intended for use in the heavy vehicle road transport sector however the concepts and principles espoused particularly in relation to Occupational Health and Safety, duty of care responsibilities and risk assessment to achieve safe outcomes are not exclusive and are transferable across modes.

Visitors and single vehicle accidents in remote areas are a feature of road accidents in the Northern Territory.

The Northern Territory Road Safety Strategy identifies fatigue as an issue in the cause of road accidents and provides leadership for the development of appropriate counter measures by Government agencies and interested stakeholder organisations.

Specific projects including extensive public education initiatives, enforcement and engineering projects have and are being further developed to improve the safety of visitors and other long distance travellers. More work remains to be done in this area and it is too early to assess any impact of the initiatives other than awareness evaluation analysis. Examples of some printed materials are attached.

## **1. Introduction**

This Submission to the House of Representatives Standing Committee on Communications, Transport and the Arts is made on behalf of the Northern Territory Government and focuses on initiatives and measures taken in the Northern Territory to address fatigue in the heavy road transport sector and in the touring and motoring public.

The submission will address the Committees terms of reference relevant to the Northern Territory.

## **2. Background**

The Northern Territory does not regulate driving hours because of the Northern Territory's good heavy vehicle accident record, the impracticality of enforcing driving hours in a remote environment such as that found in the Northern Territory and the considered view that driving hour restrictions do not adequately address fatigue issues. The Northern Territory has relied on the heavy transport industry's common sense approach to the matter that provides the flexibility for drivers to stop and rest when they are tired and not because the logbook says it is time to rest.

The Northern Territory is not participating in national road transport driving hour regulation reforms however it has implemented a fatigue management code of practice for the road transport industry under the Northern Territory Work Health Act. This Act places duty of care responsibilities on employers and various other people to ensure the health and safety of employees and the general community.

The remote area environment of the Northern Territory calls for special care when undertaking long trips involving driving. There are a number of initiatives and programs aimed at safe road travel undertaken by Government agencies in collaboration with industry groups and other organisations. The submission will also highlight some of the more significant of these initiatives.

### 3. Causes of, and Contributing Factors to, Fatigue

#### 3.1 The Environment

The Northern Territory has a land area 1.35 million square kilometres, with a population of 190,000 people. Aboriginal people make up over 27% of the population. The road network extends to 20,000 km of that 6,000 km is sealed.

Road transport is the only form of freight movement within the Northern Territory as the only rail service is via Adelaide and terminates in Alice Springs leaving the distribution task to heavy road transport. In addition a significant proportion of freight moving into and out of the Territory is transported by road on national highway links to the west (Perth) and to the eastern seaboard of Australia through Queensland. The road environment is characterised by long straight flat sections of sealed national highway with low traffic volumes and a limited enforcement presence in more remote sections. In the main the freight task is performed by 115t road trains up to 53.5 metres long and typically comprising a prime mover coupled with a semi trailer and two dog trailers speed limited to 100km/h.

The area is generally referred to as part of the remote area zone. Climate is an important factor changing from desert Savannah in the south to tropical monsoon in the north with high ambient temperatures for a substantial part of the year.

The Northern Territory has a good heavy vehicle safety record evidenced by low accident numbers involving heavy vehicles including road trains. Fig 1 compares the Northern Territory performance against whole of Australia heavy vehicle crash statistics.

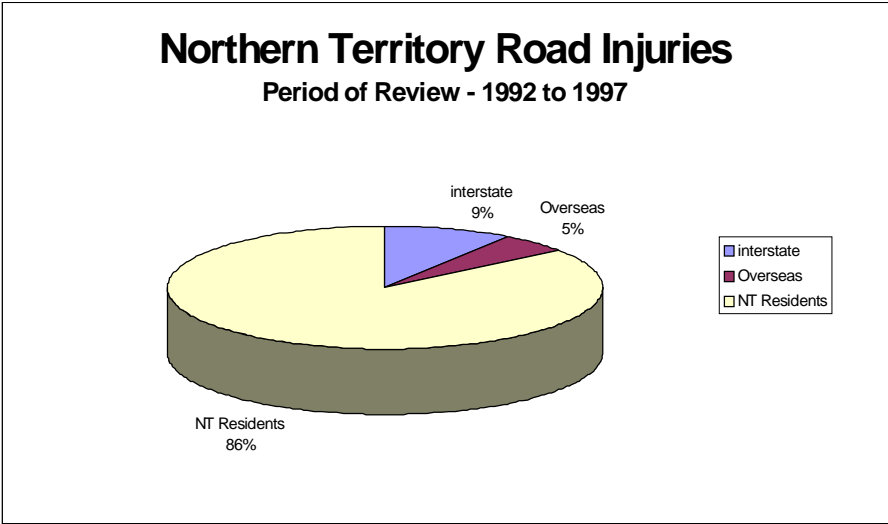
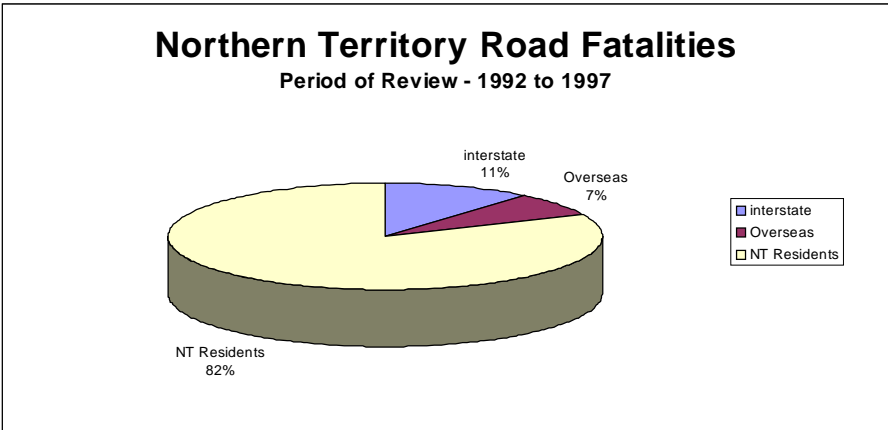
**Figure 1**

FATAL CRASHES INVOLVING ARTICULATED TRUCKS									
	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Jun 1998-May 1999	56	31	28	19	7	2	2	1	146
Jun1997-May1998	66	33	24	12	9	4	2	0	150

(Data source: Federal Office of Road Safety)

Tourism is a major contributor to Territory Gross State Product and a significant number of international and local visitors choose to travel by road. Visitors comprise approximately 20% of Northern Territory road crash fatalities as shown in fig 2.

**Figure 2**



(Data source: NT Vehicle Accident Database)

**4. Consequences of Fatigue in Air, Sea, Road and Rail Transport.**

Fatigue as a contributing factor to the cause of a road accident is not identified in national or jurisdictional road accident data because of the subjectivity involved in the investigation and the lack of a sound determining process. However fatigue as a cause of road accidents is recognised by heavy transport operators, bus and tour operators and Government agencies involved in the enforcement and education of appropriate road safety behaviour.

Capital investment in heavy vehicles in the Northern Territory is significant with each triple configured road train costing an average of \$700,000 per unit. Drivers are carefully selected by transport operators before they are given charge of these expensive pieces of equipment.

It is common for drivers of road trains to have had many years of experience driving large vehicles in remote areas and on long interstate runs.

Before the Northern Territory Fatigue Management Code of Practice was introduced, heavy transport operators in the Northern Territory employed fatigue management practices utilising both formal and informal processes dependent on the size and nature of the individual business and or transport task being performed. In some companies it has been noted that driving time is monitored through work reports and time sheets completed by the driver.

In the case of some smaller companies including owner drivers where often there were no formal fatigue management systems, it was reported that rest is taken when drivers are tired and that drivers are habitual on long trips and will routinely stop at certain times when they know they are tired. This flexibility of non regulation allowed drivers to focus on their individual body clocks reducing incidences of fatigue.

It has been reported that bus companies generally operate buses in accordance with schedules and timetables and in accordance with individual company policy on fatigue and fatigue management systems.

Retrieval of accident victims or attendance at road accidents in a remote area environment in time to provide essential initial treatment and assessment is problematic. Therefore the consequences of an accident in a remote environment are often far more severe than those arising from an accident of the same or similar seriousness in an urban situation where trauma units and services are more easily accessible.

The Northern Territory does not have an open road heavy vehicle speed limit and has recently increased the speed capability limit for road trains from 90 km/h to 100km/h. Our experience suggests that in a remote area environment drivers will travel at a speed they consider appropriate for the road, the prevailing conditions and ability to pay in terms of costs and the perceived level of enforcement regardless of the speed limit. Fatigue can become a factor when travelling long distances on straight roads in hot conditions at low speeds.

Fatigue, as a road safety issue is addressed primarily through road safety promotional and educational material, and is also a feature of remote area enforcement and specific campaigns targeting visitors conducted by Police in the Northern Territory.

## **5. Initiatives in Transport Addressing the Causes of Fatigue**

### **5.1 Fatigue Management Code of Practice**

In recognition of the importance of fatigue as a contributing factor in road accidents and to assist in continuing the Northern Territory road transport industry's good road safety record the Northern Territory in collaboration with the road transport industry has developed and put in place a Fatigue Management Code of Practice (copy attached).

The head of power for the Code is provided by the Work Health Act, which is the principle piece of Northern Territory occupational health and safety legislation. The Act places duty of care obligations on operators for the provision of a safe and healthy working environment.

The objective of the code of practice is to provide operators with practical guidance that they should apply in the management of fatigue in the workplace. The general principles have been based on the practical experience of Northern Territory operators. Transport operators will determine the best way in which the principles are applied in individual businesses so that the operating procedures are best tailored to suit their individual needs while meeting performance based Occupational Health and Safety outcomes.

The introduction of the code has been applauded by the National Road Transport Committee as a positive move in the combat of fatigue related crashes involving heavy vehicles. Western Australia also has in place a Code of Practice for Fatigue Management under its own occupational health legislation. The Code was developed in close consultation with OH&S regulators, the Transport Workers Union and the heavy road transport industry including the Northern Territory Bus Proprietors Association. Public meetings were held in Darwin and Alice Springs during the development phase.

The code is marketed primarily through the Northern Territory Road Transport Association, which reports wide acceptance, and take up rates within industry. It is also reported that the Code is included in enterprise bargaining agreements between drivers and employers.

## **5.2 Fatigue Initiatives Targeting Motorists**

The Northern Territory Road Safety Strategy identifies fatigue as an issue in the cause of road accidents and provides leadership for the development of appropriate counter measures by Government agencies and interested stakeholder organisations.

Many of the Northern Territory's road safety programs targeting hazards experienced by travellers or that specifically encourage safer behaviours by visitors, have been developed by various agencies under the umbrella of the Northern Territory Tourist Commission's 'Tourism Drive Strategy' or are complementary to it.

Some examples of tourism printed material that includes specific road safety advice for safe travel in the Northern Territory are attached for the committee's reference.

The Road Safety Council of the Northern Territory with a limited budget for the area to be covered plays a major role in initiating and managing public education programs targeting the travelling public including visitors. Police also play a significant role through the conduct of enforcement including specific campaigns that include warnings on appropriate fatigue management. The Department of Transport and Works also make a significant contribution to combating fatigue through the general upgrade and maintenance of the road network and through specific initiatives such as the provision of rest areas and truck parking bays.

Specific projects and initiatives developed to improve the safety of visitors and other long distance travellers include:

- **Tourism Drive Strategy**

The Northern Territory Tourist Commission tourism drive strategy is presently promoting three regions of the Territory, around major transport routes. This is one of the major collaborative projects developed by the Northern Territory Tourist Commission, the Department of Transport & Works, the Road Safety Council and industry groups.

This is an integrated program that informs travellers about the unique attractions, history, economy and environment of the regions and provides advice on safer travel. Information is distributed by the Regional Tourist Associations, at Wayside Inns (Roadhouses), at selected roadside rest areas (10 sites along the Stuart Highway from Darwin to South of Alice Springs) and at visitor centres. One major road safety benefit is that visitors become more aware of distances and times involved in a journey and see the travelling as an important part of the experience, not solely the destination. The more frequent stops serve to reduce fatigue.

Information of local conditions and laws also encourages safer behaviour.

- **Roadside Rest Areas**

Roadside rest areas are an integral element of the Tourism Drive strategy – as places where people can rest and as sites for the provision of information to travellers.

In addition to commercial roadhouses the Northern Territory has an extensive network of roadside rest areas that are currently undergoing upgrading works to improve the amenity for motorists. Truck parking bays are also provided for the exclusive use of trucks. These bays are different to roadside rest areas and do not include any amenities.

The Department of Transport and Works has developed a rest areas policy which considers where they should be located and the facilities which could be provided at these sites (shade, dust suppression, landscaping, water etc).

Tourist information stands are also provided at selected locations.

One special site will be developed at the Northern Territory/South Australia border where numerous travellers stop for 'photo opportunities'. Signage will cover the broad range of Northern Territory road rules (and traffic enforcement strategies – Random Breath Testing; Red Light & Speed Cameras etc) as well as provide some road safety hints.

- **Visitor Quiz**

The Northern Territory Tourist Commission, Road Safety Council and their South Australian counterparts have developed a quiz which also encourages tourists to stop regularly at the major centres, Wayside Inns and tourist information stops to complete the quiz questions.



The quiz covers the Explorer Highway (Stuart Highway) which runs from Port Augusta (South Australia) through to Darwin. Anecdotal reports indicate that this quiz has been very well received by visitors, which enhances their enjoyment of the journey and is an effective tool to combat driver fatigue. The Northern Territory Tourist Commission is presently redesigning and enhancing the booklet before it is reprinted.

- **“The Territory By Road” Multilingual Map**

This map, which shows major roads and tourist destinations in the Territory, contains road safety messages in seven languages on the reverse side. The map was developed following extensive consultation with industry and is distributed free of charge throughout the Northern Territory to car rental companies, accommodation providers and tourist information centres and at airports and roadhouses. Limited numbers are also provided to select interstate vehicle rental companies. The map has been well received and a reprint is planned.

The Messages for tourists focus on a number of road safety issues and in particular highlights fatigue and offers suggestions for trip planning, including the need for adequate rest.

Road surface categories are identified, explained and illustrated; estimated driving times between major centres and attractions are provided; and the map links with the three Tourism Drives.

- **Keep Left / Seat Belt Stickers**

These stickers have been distributed to rental car companies to be placed on dashboards of vehicles. This serves as a reminder for international drivers to use their seat belts and to always keep left.

- **Rental Vehicle Industry Initiatives**

Rental car companies advise their clients about choosing appropriate vehicles for the intended journey; they provide instruction about vehicle operations; propose travel itineraries that include planned stops; and generally advise about environments through which their clients will be travelling.

- **“Belt Up” Signs**

These road signs were introduced some years ago at roadside rest areas, truck stops and Wayside Inns. They are placed at the traffic exit points onto highways to remind vehicle occupants to always wear seat belts.

- **Caravan Brochure & Poster**

These posters and pamphlets were initiated by the Northern Territory Road Transport Association and were developed by the Road Safety Council in consultation with the Northern Territory Tourist Commission and the transport & tourism industries.

The brochure and poster have been distributed by the Northern Territory Tourist Commission at Caravan, Camping and 4X4 promotions across Australia; at its inter-state/territory branches; and through a network of caravan park, Wayside Inn, automobile associations and tourism information centres across the Territory and throughout Australia. This pilot project will be evaluated at the end of the 1999 tourist season.

- **Road Safety Audio Tape**

This pilot project was initiated by the Yulara Road Safety Sub-Committee of the Road Safety Council. Road safety messages have been translated into German, Italian and Japanese. The cassette tapes will be copied, and then distributed through hire car outlets at Yulara for placing into vehicles that will be hired by international visitors or Australians who may not be familiar with Northern Territory remote area driving conditions. The project will be evaluated later in 1999 and its potential for wider use assessed.

- **Rollover Vehicle Display**

This was also a Yulara Road Safety Sub-Committee initiative adapted from a Western Australian police project. The display consists of a Land Cruiser station wagon that was involved in a single vehicle rollover crash. The occupants of the vehicle were all wearing seat belts which helped prevent any serious injury. The wreck incorporates signage that alerts motorists to the dangers of fatigue, long distance driving, non-wearing of seat belts etc.

The display is moved from location to location, mainly in the southern region of the Northern Territory, to prominent tourist destinations and stopovers. Northern Territory Police often assist in the re-location of the trailer. The display has attracted a lot of positive feedback, and will be a part of the 1999 Road Safety Council Northern Territory Show display.

- **Driver Reviver Stations**

This project, which involved Northern Territory Police, Road Safety Council and Motor Vehicle Registry personnel, has not operated for some time in the Northern Territory because such stations are labour-intensive and costly in terms of time (including co-ordination) - relative to the numbers of travellers who receive messages.

Driver reviver events are therefore only suitable (in the Northern Territory) for specific events/times when many travellers are on a particular road. The involvement of the local community, industry and government agencies is essential.

- **Media Messages**

Road safety messages have been included in a select number of tourist-focused publications such as backpacker magazines; the Northern Territory Tourist Commission's "Motoring Guide" & "Holidays in the Top End" and the private publication "Exploring the Stuart Highway - Further than the eye can see...".

- **Road Developments**

Highway developments undertaken by the Department of Transport and Works, such as extending the network of sealed roads (replacing gravel roads); widening the sealed carriage way (from one to two lanes); sealing shoulders; and providing overtaking lanes and placing Raised Reflective Pavement Marker's in strategic locations all contribute to road safety.

The sporadic nature of road crashes on the Northern Territory road network and difficulties in determining fatigue as a primary determining factor, has meant that the use of audible edge marking on roads has not been considered. Audible edge marking has a high cost particularly in remote area environment.

- **Internet Site**

Northern Territory internet sites provide information for travellers and also includes access to up to date information on road conditions.

- **Intelligent Transport Systems**

Emerging cutting edge technology being developed under the Intelligent Transport Systems banner is already attempting to address crash avoidance and fatigue issues. Some leading car and truck manufacturers are ramping up to include Intelligent Transport Systems technology in new vehicle models. This technology may well provide innovative methods of reducing the incidence of fatigue as a cause of road crashes.

## **6. Ways of Achieving Greater Responsibility by Individuals, Companies, and Governments to Reduce the Problems Related to Fatigue in Transport.**

The Northern Territory code of practice for fatigue management takes an alternative approach to regulated driving hours, where prescriptive hours and the use of logbooks are required. The Northern Territory code focuses on safe outcomes as a result of appropriate risk assessment based on the task at hand, the application of appropriate rest times, and the adoption of driver health best practice.

The Northern Territory approach encourages operators to address fatigue issues in a holistic manner without the option of hiding behind a regulated hours regime. The responsibility for developing systems that address the guiding principles promulgated in the code is placed with the individual operator.

The use of regulated driving hour regimes including log books to control fatigue is unlikely to achieve desired outcomes and driving hours originated from a desire to reduce the competitiveness of road transport against rail.

In remote areas there is a balance to be found between the distance to be travelled and the quality of rest at the end of a trip. Fatigue is often dependent or a result of what a person has been doing before undertaking a task.

The Code is initially intended for use in the road transport sector however the concepts and principles espoused particularly in relation to Occupational Health and Safety duty of care responsibilities and risk assessment to achieve safe outcomes are not exclusive and are transferable across modes.

More needs to be done in relation to fatigue amongst travellers and particularly fatigue as a cause of crashes involving international tourists. Road crashes involving this group are often hidden by overall crash numbers in larger jurisdictions with big population centres and are therefore not identified as a major issue, however as can be seen from Northern Territory research there is a significant involvement by overseas tourists in remote area crashes.

Predicted increases in tourist numbers by tourism authorities in coming years as a result of interest created by the Sydney Olympics should focus the efforts of national road safety practitioners on the co-ordination and development of effective strategies in addition to initiatives being developed in jurisdictions.

## **7. Conclusion.**

In addition to current countermeasures the Northern Territory believes that the rapid development of intelligent transport technology including crash avoidance and driver monitoring devices in association with the adoption of performance based principles and codes of practice provides a way forward in efforts to minimise fatigue as an issue in the transport sector.