Transport issues for the Australian Forest & Forest Products Industry

Prepared for Australian Plantation Products & Paper Industry Council (A3P)

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GLOSSARY

%	percent
°C	degrees Celsius
a	annum (year)
Bdouble	A combination rig consisting of a prime mover towing two semi trailers (9 axles)
CEDA	Committee for Economic Development of Australia
Converter dolly	A trailer with fifth wheel coupling designed to convert a semi trailer into a dog trailer
cm	centimetre
dbh	diameter at breast height
Folding skel	A rigid trailer used for log transport that folds up on the prime mover when empty
g	gram
ha	hectare
Jinker	A rig with pole-type trailer attached to the prime mover by a pole used for carting logs
kg	kilogram
km	kilometre
M	million
m	metre
m^2	square metre
m^3	cubic metre
m^3/ha.a	cubic metres per hectare per annum
ml	millilitre
MiniB	A combination rig consisting of a prime mover towing two semi trailers (7 axles)
NHVAS	National Heavy Vehicle Accreditation Scheme
NTC	National Transport Corporation
NRTC	National Road Transport Commission
Rear overhang	Distance from the centre of the rear axle group to the rear of the vehicle
Semi-trailer	Assumed to be single steer, tandem drive prime mover with triaxle trailer
Skel	A rigid trailer used for log transport.
t	tonne
tkm	Tonnes hauled multiplied by the average haul distance in kilometres
TACE	Transport Agency Chief Executives
Tandem axle	Group of two axles 1 to 2 m apart
Triaxle	Group of three axles with outermost axles 2 to 3 m apart
TruckSafe	Australian road transport industry accreditation scheme
VECCI	Victorian Employers Chamber of Commerce and Industry
Twin steer	Group of two axles 1 to 2 m apart connected to the same steering mechanism
Quad axle	Group of four axles with outermost axles 3.2 to 4.9 m apart
Quaddog	A combination rig consisting of a load bearing prime mover plus four axle dog trailer
$, $M and $B	Australian dollars, millions of Australian dollars and billions of Australian dollars

EXECUTIVE SUMMARY

Freight is a key cost and profit driver of the forest and forest products industry with higher payloads, quicker journeys and increased utilisation of fleet assets most important. For the forest and forest product sector in Australia, haul cost across mill inputs and outputs averages about 23% of product price and ranges from 12% for paper to 37% for chip export. On average across all product segments, log haul accounts for about 78% of all freight cost and about 18% of final selling price. Wood haulage averages about 90 km but haulage of paper, panels and sawntimber averages about 645 km.

The industry is highly dependent on road freight and thus road condition and transport regulations. About 86.6% of domestic freight for the forest and forest products industry is hauled by road, 12.0% by rail and 1.4% by coastal shipping. The wood haulage task will increase as a result of reduced availability of close-in native forest supply and as the processing and consumption of emerging hardwood plantations increases.

Access to more efficient road haulage with Bdoubles and higher mass limits is seriously constrained by the gazetting of too few roads. Bdouble use is only about 35% for inputs and 44% for outputs from the forest and forest products industry.

Under Auslink the low spend on regional roads of $291M pa (12%) and local roads of $510M (23% of Auslink funding) is a serious concern to the industry. About 75% of the forest and forest products industry freight volume and 78% of the industry's freight cost, is for haulage of logs, sawmill chips and firewood, involving a high proportion of travel on regional and local roads suffering from years of under-investment.

The Federal government collected about $16B in fuel taxes, twice the level of government funding of roads and seven times the direct Federal Government funding of roads. Fuel taxes represent almost 10% of Federal government revenue. Of the $7.8B of government road funding in 2000-01 only 45% was spent on road maintenance and regulation despite almost 60% of Australia's 808,292km of roads being unsealed. Growth in government road funding has not kept up with growth in GDP and growth in the road freight task particularly in rural areas.

The fuel excise burden is born almost exclusively by the road sector, given that rebates apply to off-road use and the very low excise on aircraft fuel. The road freight sector bears more than its fair share with diesel accounting for 41% of fuel excise, mostly from freight vehicles, yet freight vehicles make up only 3.2% of all vehicle registrations.

The fuel taxes adversely impact more heavily on the regionally based forest and forest products industry than many other sectors. The industry pays considerable excise but is less exposed to the benefits of government road funding. This is because haulage of logs and finished product represent a high proportion of the cost of getting product to market, however, the industry is more exposed to rural roads with the least government investment, and the industry is often forced to make ex-gratia payments to ensure some public roads can be used. Also lower cost rail freight is generally infeasible.

Road freight has increased in importance from 19% to 36% of the national freight task over 30years. There would appear to be a strong case for increased government funding

particularly on rural roads. Rural or non-urban road freight has grown faster than urban road freight and now represents 70% of the national road freight task.

Singling out the plantation industry for additional contributions to public road maintenance is not justified. The industry already contributes about twice as much in haulage fuel tax as is ploughed back by government funding of roads. Plantation log haulage represents less than 1% of road freight nationally; has roughly the same overall long term impact; currently does not have full access to the public road network; and is more highly exposed to haulage on B and C class roads which involve higher costs than other sectors of the road freight industry.

The plantation log haul sector has a long history of innovative uptake of new developments and responsible road use. Log haul is exclusively by articulated trucks which deliver fewer fatalities per tonne kilometre than rigid trucks. There has been strong uptake of Bdoubles and other more efficient, road friendly and safer rigs. Recently the log haul sector has embraced accreditation, new mass limits, and road friendly suspensions delivering further improvements in efficiency, safety and environmental outcomes. Uptake of efficiencies is currently seriously constrained by the gazetting of too few roads for use by Bdoubles or at higher mass.

Current regulatory reforms pose potential advantages if they deliver flexibility across freight modes, higher payloads, appropriate dimensional requirements, practical load restraint and an acceptable degree of self-regulation under streamlined accreditation schemes. However, current regulatory reforms also pose some serious threats to the forest and forest products industry in the form of inappropriate constraints, additional time and cost to meet regulatory requirements and unjustified additional charges. A challenge for the industry is to ensure the regulatory changes take into account adequately the particular efficiencies required for our industry which may be outside 'mainstream' freight considerations. A challenge for A3P is to exert sufficient influence over the substantial change in freight regulation taking place.

A3P should seek a substantial increase in government investment in roads and the urgent commencement of roads impacting adversely on the industry. It should also seek to avoid potential double taxation under incremental pricing of higher mass limits and instead lobby for some form of return to hypothecation of fuel excise. A3P should also seek an increase in the number of roads where B-doubles and higher mass limits apply and seek higher national (or local) mass limits for innovative rigs where B-doubles are infeasible (eg Quaddogs and MiniB's) and try to redefined length limits for trucks to allow efficient haulage of freight in lengths preferred by mills (eg accommodate 6.1 m softwood sawlogs).

Some other opportunities for further consideration by A3P are to seek standard gauge rail in strategic situations, ensure regulation of access to rail networks allows competitive rail freight, ensure land use regulation does not unduly limit efficient freight operations through urban encroachment or in other ways. A3P should also lobby for increased government investment associated with freight hubs, terminals and ports as appropriate.

1 INTRODUCTION

This report provides the Australian Plantation Products & Paper Industry Council (A3P) with information to support lobbying Government for increased investment in infrastructure particularly roads, more equitable road funding, improved funding of 'connector' and 'local roads' and more workable regulation of road freight. The objective is to remove current impediments and to facilitate innovative freight solutions, improved efficiencies and underpin further investment in the plantation, forest products and pulp and paper sectors in Australia.

The report documents the considerable under-investment in freight infrastructure and the opportunity that exists for government to substantially increase investment in infrastructure, particularly roads that remain under public ownership for the public good. Hypothecation of fuel tax for road funding and increased investment by State and local government is urgently required.

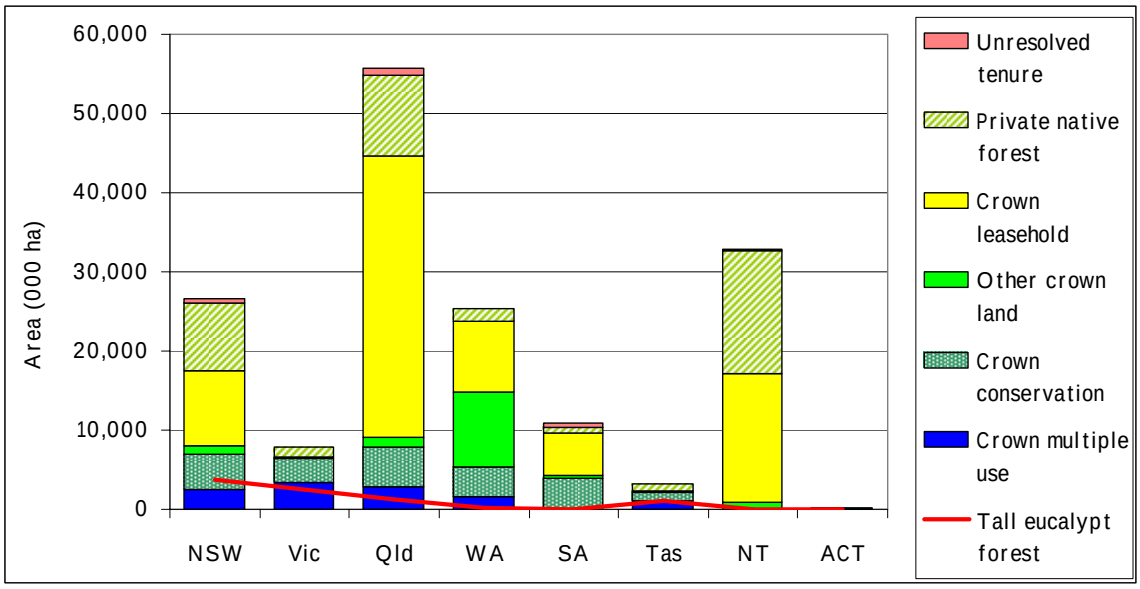
2 NATIONAL FOREST AREA & REMOVALS

2.1 AUSTRALIAN NATIVE FOREST AREA

As potentially harvestable area of Australia's native forest has been set aside for conservation, many mills have closed and the average haul distance has increased for the supply catchment of remaining mills. In Victoria the harvestable area is now down to 9% of publicly owned native forest. Mills in Gippsland are now required to haul logs from outside the region.

National native forest area is 162.7mill ha or 21% of the total area of Australia. The potentially harvestable area has declined considerably over the years and is now quite small in relation to Crown land set aside for conservation and other purposes. Of the total area of native forest about 21.3% is crown land managed for conservation and non-wood production purposes. Wood supply from Australia's native forests is predominantly from tall eucalypt forests (5.4% of native forest area) within Crown land managed for multiple uses including timber production (7.0% of native forest area). Private native forest represents 23.9% of native forest area but contributes little to wood supply with much of this private land currently contributing to public good conservation (**Figure 1**).

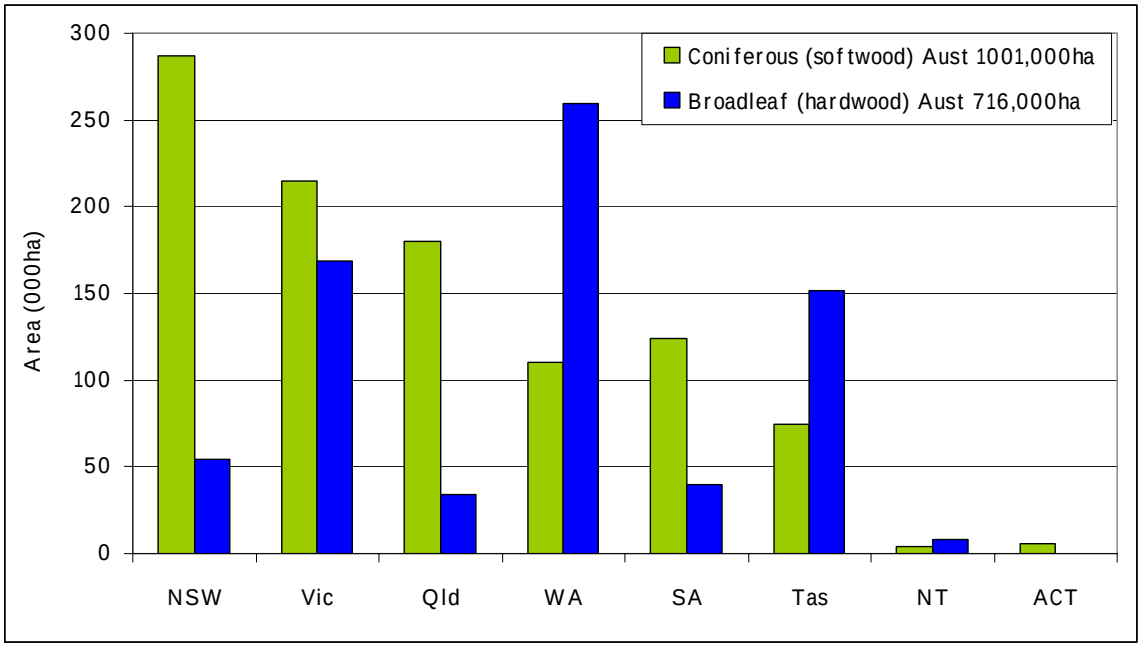
Figure 1: Native forest area at 2003 (NPI 2003)



2.2 AUSTRALIAN PLANTATION AREA

National plantation area is 1.7mill ha with 1.0 million ha of softwood and 0.7 million ha of hardwood (**Figure 2**). The softwood plantations are reasonably well situated with respect to state population and thus expected state demand, however, the hardwood plantations are not. A substantial proportion of the output from the plantations in WA and Tasmania will need to be transported in unprocessed or processed form for processing or consumption elsewhere in Australia or overseas. Plantation haulage will increase substantially as domestic processing of Australia's hardwood plantations increase.

Figure 2: Australian plantation area at December 2004 (NPI 2005)



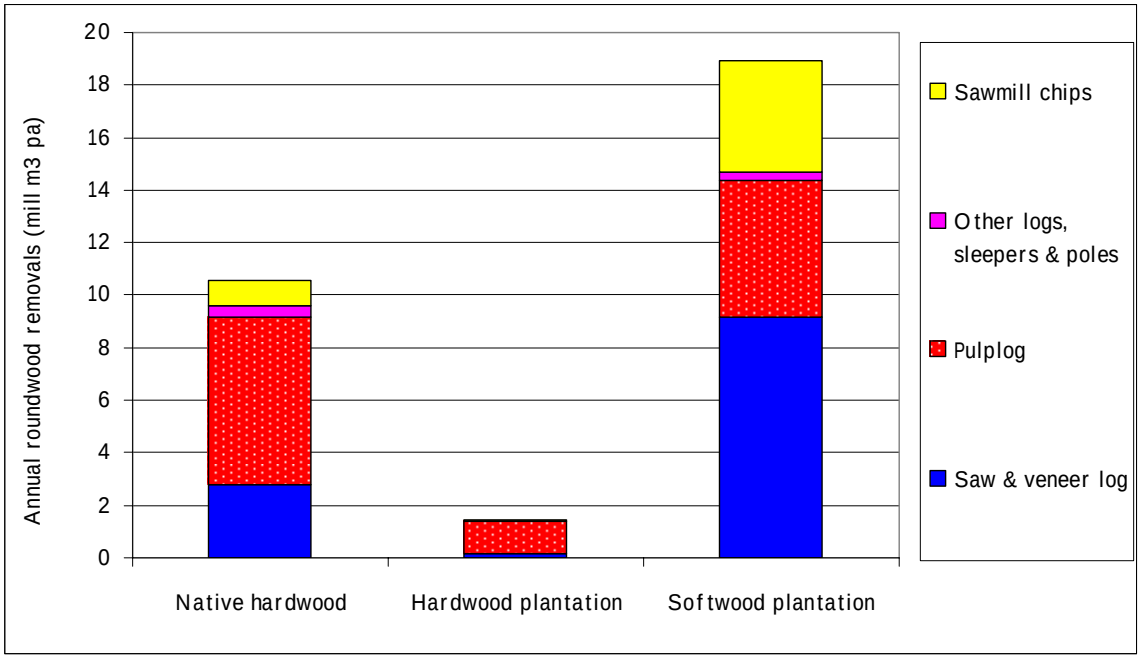
Plantation area covers only 0.2% of the area of Australia. With realisation of the 2020 vision, total plantation area will reach 3.3mill ha by 2020. This represents only 0.4% of Australia and only 0.7% of Australian agricultural land area. (Stanton 2001). The small proportion of land used for plantations is insufficient for ecologically sustainable development, arresting rural decline and realising plantations full contribution to regional development.

Most of the 60% expansion in plantations over the last decade has been the establishment of eucalypts on cleared farmland in WA, Green Triangle and Tasmania with little increase in traditional pine plantation regions (Gerrand 2003).

2.3 AUSTRALIAN WOOD PRODUCTION

Australian industrial wood production in 2003-04 was about 31 million m3 with logs (roundwood removals) accounting for 83% and chipped residues from sawmills accounting for 17%. Plantations now account for 66% of production and sawlogs represent 47% of round wood removals and 39% of all industrial wood production including chips (**Figure 3**). Total haulage is 37 to 38 million m3 pa, including about 6 to 7 million tpa of firewood.

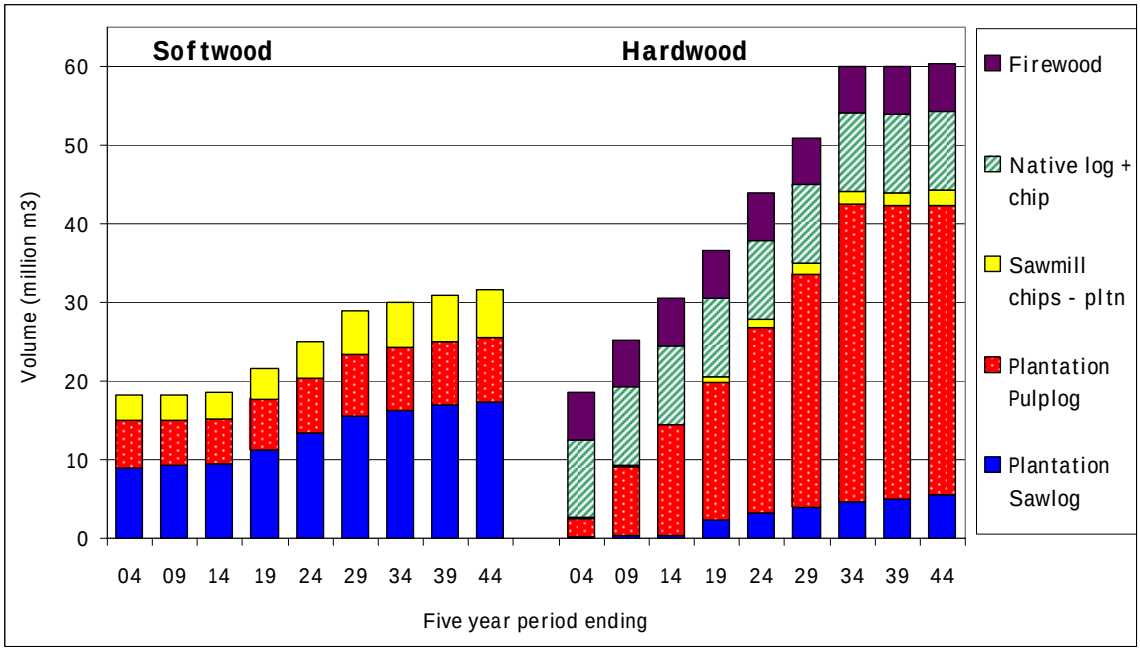
Figure 3: Australian wood production in 2004 (derived from ABARE 2005)



2.4 AUSTRALIAN PROJECTED WOOD PRODUCTION

The freight task of the Australian forest and forest products industry will increase considerably. Australian total wood production is expected to grow from about 36 million m3 pa in 2000-04 to 92 million m3 pa by 2040-44 (**Figure 4**). Australian plantation log production is expected to grow from about 17 million m3 pa in 2000-04 to 63 million m3 pa by 2040-44 (**Figure 4**). This assumes new planting of 90 000 ha pa between 2000 and 2019 under the 2020 vision. Australian native forest wood production is expected to remain at about 10 million m3 pa including 10% sawmill chips and fire wood at 6 million m3 pa.

Figure 4: National wood availability (Derived from Ferguson et al 2002 & ABARE 2005)



3 NATIONAL ROAD FREIGHT IN PERSPECTIVE

Transport contributes about 5% of GDP ($34B pa in 2001-02) providing 4.3% of employment (401,000 jobs) moving about 2,070mill tonnes of freight each year of which 24% or 507mill tonnes is exported. Road freight accounts for 29% of national transport economic activity ($9.9B in 2001-02) but a larger 52% share of employment in the sector (210,000 jobs in 2001-02). Road freight accounts for 72% of tonnes carried and 35% of all tonne-kilometres with an average haul of 106 km compared to 257 km for rail (BTRE 2003a) (**Table 1**).

Table 1: Total domestic freight and passenger task

Item	Road	Rail	Air	Sea	Services & storage	Total
Gross product ($M pa)	9,915	5,226	5,779	478	12,594	33,992
Gross product (%)	*29.2*	*15.4*	*17.0*	*1.4*	*37.0*	*100*
Tonnes carried (mill t pa)	1,482	535	0.15	52		2,069
Tonnes carried (%)	*0.1*	*0.0*	*0.0*	*0.0*		*0*
Tonnes kilometre (mill tkm)	132,422	137,700	248	104,501		374,871
Tonnes kilometre (%)	*35.3*	*36.7*	*0.1*	*27.9*		*100*
Employment ('000)	210	35	47	11	98	401
Employment (%)	*52.4*	*8.7*	*11.7*	*2.7*	*24.4*	*100*
Fatalities (No)	1,737	34	41	45		1,857
Fatalities (%)	*93.5*	*1.8*	*2.2*	*2.4*	*0.0*	*100*
Mean distance (km)	106	257	1,642	2,010		181
Passengers (000)	na	548,850	35,037	na	na	na

FOOTNOTE

A. Mean distance for road freight calculated from tonnes & tonne-kilometers is 89km (106km is from BTRE)

Source: BTRE (2003). Data are for 2001-02 apart from tonnes and tonnes-kilometre which are for 2000-01

Forest products transport makes an important contribution to socio-economic development providing regional growth from transport of logs to mills and finished goods to markets.

Freight trucks represent only 3.2% of all registered vehicles. Freight trucks also represent only 6.3% of all kilometres travelled on our roads yet move 93% of the freight in tonnes and 96% of the freight in tonne-kilometres (BTRE 2003a) (**Table 2**).

Table 2: Australian motor vehicles and road freight task at 2000-01

	All freight trucks	Other trucks	Light comm-ercial	Buses	Cars	Motor cycles	Total
Vehicles ('000)	394	19	1,720	55	9,862	349	12,399
Vehicles (%)	*3.2*	*0.2*	*13.9*	*0.4*	*79.5*	*2.8*	*100*
Distance travelled (mill km pa)	11,948	267	30,728	1,835	143,925	1,448	190,151
Distance travelled (%)	*6.3*	*0.1*	*16.2*	*1.0*	*75.7*	*0.8*	*100*
Freight (mill tonnes pa)	1,380		103				1,483
Freight (%)	*93.1*		*6.9*				*100*
Tonnes kilometre (mill tkm pa)	126,773		5,649				132,422
Tonnes kilometre (%)	*95.7*		*4.3*				*100*

FOOTNOTE

A. Mean distance for road freight calculated from tonnes & tonne-kilometers does not concure with numbers in the table from BTRE

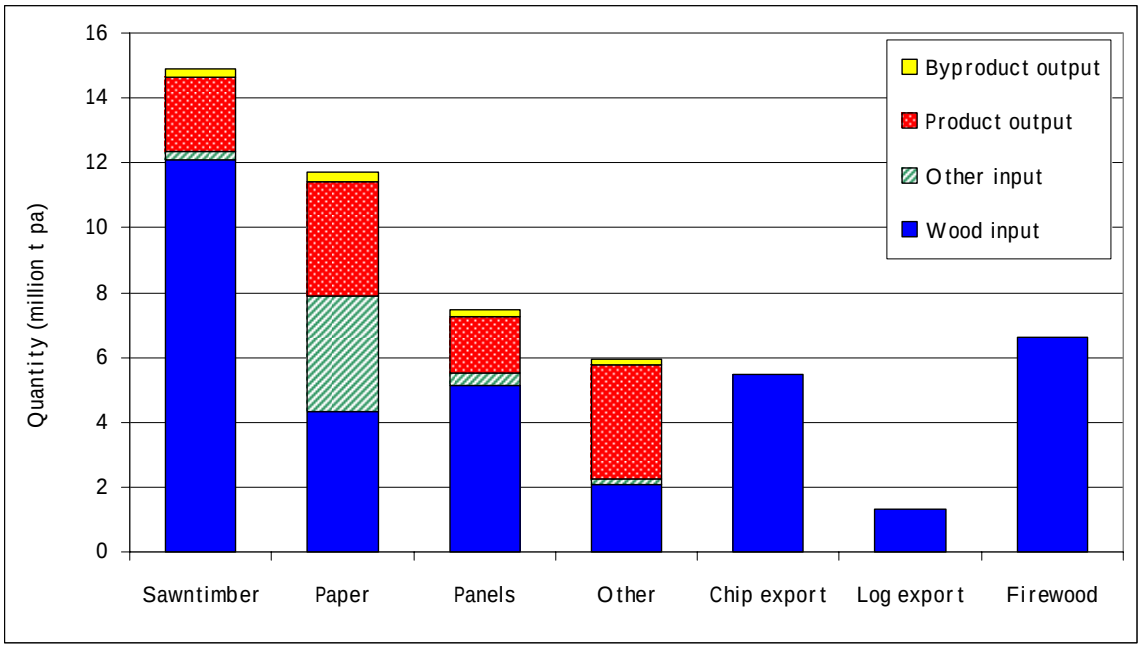
Source: BTRE (2003). Data are for 2000-01

4 NATIONAL FOREST & FOREST PRODUCTS FREIGHT

4.1 FREIGHT BY FOREST PRODUCT SECTOR

The forest and forest products industry moves about 50 million tpa with log input accounting for about 75%, other inputs 8%, product output 15% and by-product outputs 1% of volume (**Figure 5**). Log input includes 6.8 million tpa of logs and chips exported and processed overseas. Other input includes haulage of about 2.5 million tpa of recovered waste paper and 0.4 million tpa of imported pulp used in domestic paper manufacture. Log input is typically at about 50% moisture (almost half water) and processed sawntimber, panels and paper are typically hauled at 5% to 12% moisture content.

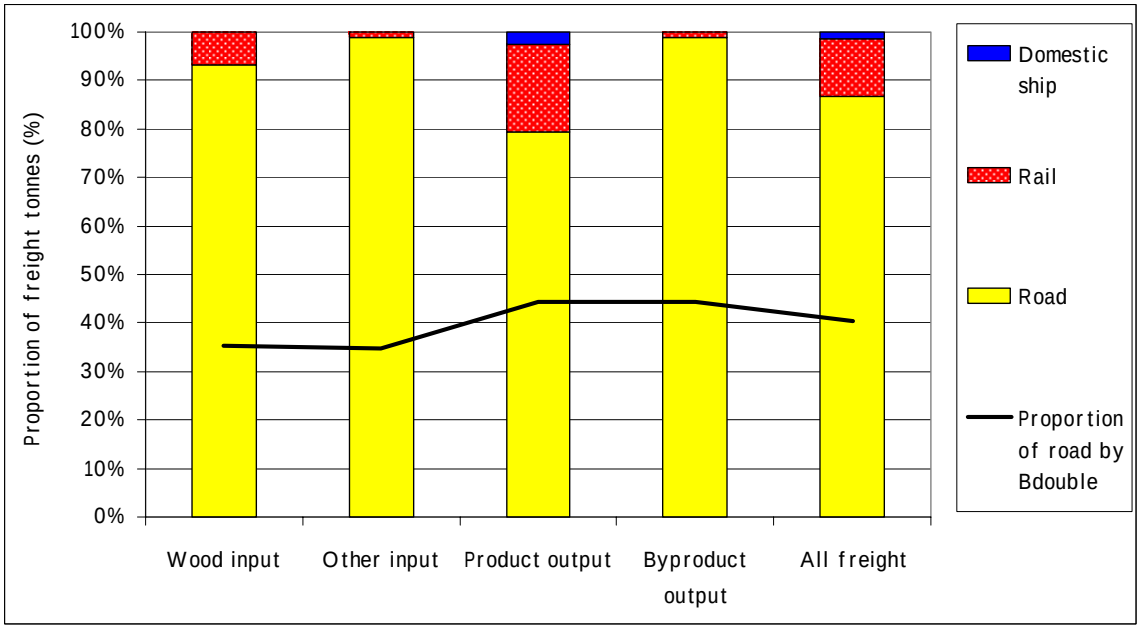
Figure 5: Input and output freight by the forest products industry



4.2 TRANSPORT MODES

The forest and forest products industry is highly dependent on road freight. About 86.6% of freight for the industry is hauled by road, with about 12.0% by train and 1.4% by coastal shipping. The proportion of rail and coastal shipping is higher for movement of finished product. For road freight the proportion moved on Bdouble averages only 40% across industry inputs and outputs. For inputs it averages only 35% and outputs 44%, lower than desirable from the perspective of efficient haul and minimal road congestion (**Figure 6**).

Figure 6: Approximate freight mode for the forest & forest products industry



4.3 FOREST AND FOREST PRODUCTS ROAD FREIGHT TASK

On a national basis relative use of public roads by trucks for the forest and forest products industry is extremely low. The ca 6 650 trucks hauling wood, other inputs, finished product and by-products represent only about 0.05% of all registered vehicles and only about 1.7% of all freight trucks (**Table 3**).

Table 3: Australian forest and forest products road freight vehicles and freight task

	Wood input	Other input	Product output	Byproduct output	**Forest & products**
Vehicles ('000)	2,667	1,123	2,761	96	**6,646**
Proportion of all vehicles (%)	*0.02*	*0.01*	*0.02*	*0.00*	***0.05***
Distance travelled (mill km pa)	90	525	645	215	**243**
Proportion of all distance (%)	*0.05*	*0.28*	*0.34*	*0.11*	***0.13***
Freight (mill tonnes pa)	37	4	11	1	**53**
Proprtion of all freight (%)	*2.5*	*0.3*	*0.7*	*0.1*	***3.6***
Tonnes kilometre (mill tkm pa)	3,334	2,268	7,151	193	**12,947**
Proportion of all tonnes kilometre (%)	*2.5*	*1.7*	*5.4*	*0.1*	***9.8***

FOOTNOTE

A. Data for forest and forest prooducts is 2003-04.

B. Proportions are based on the total of all vehicles in table 2. Data for all vehicles and freight in table 2 is for 2000-01.

Source: Derived from BTRE (2003).

The ca 2 670 trucks hauling wood, most of which are log trucks, represent only about 0.02% of all registered vehicles and only about 0.68% of all freight trucks. This low proportion of vehicles and low proportion of the national freight task does not warrant the singling out of plantation log trucks for additional contributions to road funding. By 2040 the number of trucks hauling wood will grow by at most 2.4 times assuming no change in native forest and firewood supply and an increase in plantation supply in accordance with the 2020 vision (**Figure 4**). The growth in the number of trucks hauling wood will be substantially less than this if governments invest more in roads and bridges to allow greater uptake of haul efficiencies including Bdoubles and higher payloads under mass management.

Plantation establishment and maintenance operations involve negligible use of roads by freight vehicles and have no detectible impact on roads. These operations primarily involve little use of roads and most of the limited use is by light vehicles.

4.4 ROAD HAULAGE OF WOOD

Haulage of logs, chips and firewood represents about 2.3% of the national road freight task for 2003-04 (**Table 4**). This is insufficient for the forest and forest sector to have a noticeable effect on road damage at a national or state level. The plantation log haulage includes about 10% use of private roads within the plantation estates and the native forest log haulage includes around 20% use of State Forest roads for which road tolls of about $30-$50M pa are paid to the State Forest services.

Table 4: Wood haulage share of the national road freight task in 2003-04

Item	Plantation log haulage	Native log haulage	Sawmill chips haulage	Firewood haulage	**All forest log haulage**	Other road freight	**National road freight**
Gross product ($M pa)	127	143	51	71	**393**	10,332	**10,724**
Gross product (%)	*1.2*	*1.3*	*0.5*	*0.7*	***3.7***	*96.3*	***100.0***
Tonnes carried ('000t pa)	15,038	8,975	4,249	6,600	**34,862**	1,568,069	**1,602,931**
Tonnes carried (%)	*0.9*	*0.6*	*0.3*	*0.4*	***2.2***	*97.8*	***100.0***
Tonnes kilometre (mill tkm)	1,058	1,194	425	594	**3,271**	139,956	**143,228**
Tonnes kilometre (%)	*0.7*	*0.8*	*0.3*	*0.4*	***2.3***	*97.7*	***100.0***
Mean distance (km)	70	133	100	90	**94**	89	**89**

FOOTNOTES

A. Total road haul for 2003-04 is 2001-02 grown on at 4% pa.

B. Log and chip haul gross product assumes haulage at 12c/t/km

C. Assumes removals of 16.1 mill m3 of plantation logs, 9.6 mill m3 native forest logs & 4.2 mill m3 of sawmill chips

D. Assumes plantation and native log haul is 94% by road (balance rail) & sawmill chips haul 100% by road

E. Forest tonnes carried assumes mean green density of 1t/m3

Source: Derived from ABARE (2003), ABARE (2004), ABARE (2005) & BTRE (2003)

5 FUEL TAXATION OF THE ROAD FREIGHT SECTOR

5.1 HISTORY OF FUEL TAX

The road freight sector including log transport is subjected to a heavy tax burden because of the skewed impact of government taxes. The largest tax impost on the road freight sector is fuel taxes. The industry is also subjected to registration charges ($39M) which help fund road regulations, other normal business taxes and rates which contribute to consolidated revenue of Federal, State and Local governments.

From 1929 excise was introduced on domestically produced petrol specifically to finance road funding with the excise revenue hypothecated specifically for road funding until 1959. Excise was first introduced on imported petroleum products in 1901 to raise government revenue.

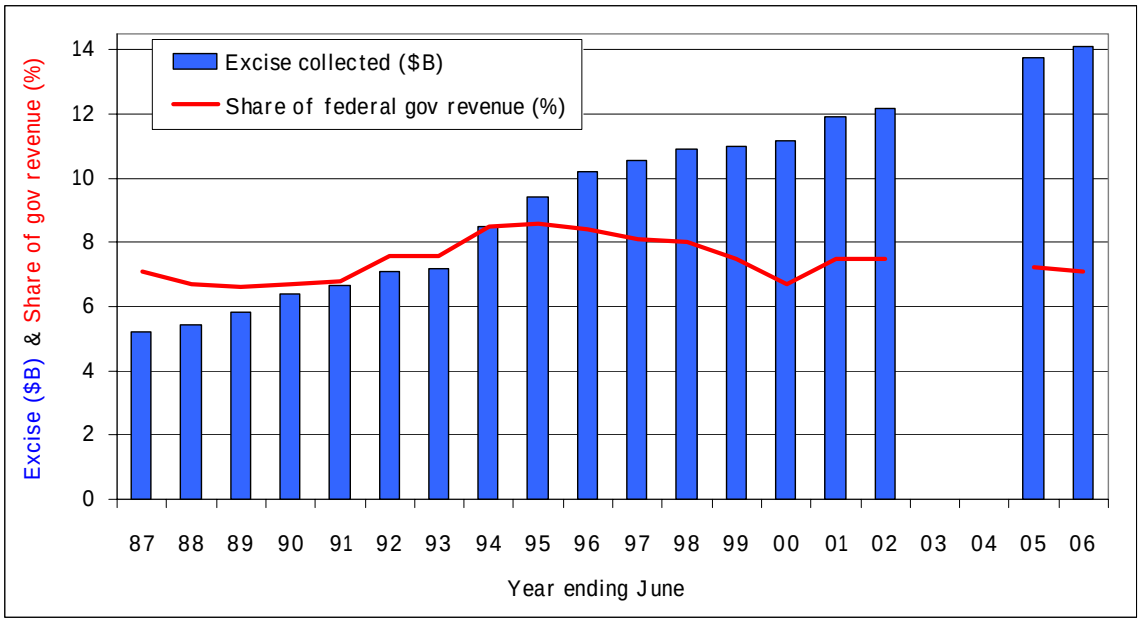
When hypothecation was abolished in 1959 this allowed governments to spend excise revenue on programs other than roads, breaking the user-pays principle. From 1957 excise was also levied on diesel, but an exemption applied to off-road diesel use consistent with off-road use not impacting on public roads. From 1982 the Diesel Fuel Rebate Scheme replaced the off-road exemption whereby fuel users paid the full excise but were required to claim a rebate for their off-road use (Anon 2001a).

The diesel rebate is not a subsidy or grant but a legitimate rebate reflecting the fact that off-road diesel use does not impact on public roads and therefore off-road users should not pay the fuel levy. The rebate applies to fuel used in plantation harvesters and farm tractors.

5.2 REVENUE RAISED FROM FUEL EXCISE

Over the years fuel excise increased particularly following the introduction of CPI indexation in 1983 (Anon 2001b) and represents 7 to 8% of revenue raised by the federal government (**Figure 7**). The fuel excise excludes crude oil production excise introduced in 1975 and the Petroleum Resource Rent Tax introduced in 1987 (Anon 2001a).

Figure 7: Growth in fuel excise collections



5.3 TOTAL REVENUE RAISED FROM FUEL TAXES

The Federal government collects ca $16B in fuel taxes (Anon 2001a & Anon 2001b), about twice total government funding on roads and about seven times the direct Federal Government funding of roads. The total fuel tax represents almost 10% of Federal government revenue (**Table 5**). This excludes freight truck registration fees of $39M and additional road levies paid by the industry to State Forest Services for use of forest roads.

Table 5: Total government collections from fuel taxes in 2000-01

Type of fuel tax	00/01	04/05	05/06
a) Excise collected ($B)			
Fuel excise on refined products	11.9	13.8	14.1
Excise on crude oil production (A)	0.5	0.5	0.5
Petroleum Resource Rent Tax	2.7	1.5	1.4
Total fuel taxes on transport industry	**15.1**	**15.7**	**16.0**
b) Share of Commonwealth revenue (%)			
Fuel excise on refined products	7.5	7.2	7.1
Excise on crude oil production	0.3	0.3	0.3
Petroleum Resource Rent Tax	1.7	0.8	0.7
Total fuel taxes on transport industry	**9.5**	**8.3**	**8.0**

FOOTNOTE

A. Excise on crude oil production assumed to be $0.5B for 04/05 & 05/06

5.4 SKEWED IMPACT ON THE FOREST PRODUCTS SECTOR

Taxing transport fuel is inappropriate. Taxing intermediate products leads to inequity and economic inefficiency and is harming Australia's forest and forest products export and import replacement businesses as they compete on international markets.

The fuel taxes adversely impact more heavily on the forest industry than many other sectors. The industry pays considerable excise but is less exposed to the benefits of government road funding. This is because haulage of logs and finished product represent a high proportion of the cost of getting product to market, the industry is more exposed to rural roads with the least government investment, and the industry is often forced to make ex-gratia payments to ensure some public roads can be used. Also lower cost rail freight is generally infeasible.

The fuel excise burden is born almost exclusively by the road sector given the rebates that apply for off-road use and the very low excise on aircraft fuel. Excise on aircraft fuel is 2.808cents/L compared with 38.143cents/L applied to diesel and unleaded petrol (40.516cents/L for leaded petrol) (Anon 2001b).

The road freight sector bears more than its fair share of the fuel excise burden. Of the $12.2B raised in fuel excise in 2001-02, $5.0B or 41% was from diesel and $7.0B or 58% from petrol (Anon 2001b). Most of the diesel is used by freight vehicles and most of the petrol by cars. This indicates the 3.2% of freight vehicles are contributing a much higher proportion and the 79.5% of cars are contributing a much lower proportion of excise, if excise collection was based on registrations.

Excise based on vehicle registrations would simply reflect a 'right to use' rather than currently where the excise is heavily based on use (distance travelled) and fuel consumption. This heavily skews the tax burden on road freight which is surprising given that only 45% on national road expenditure is spent on maintenance (and regulation) and directly related to

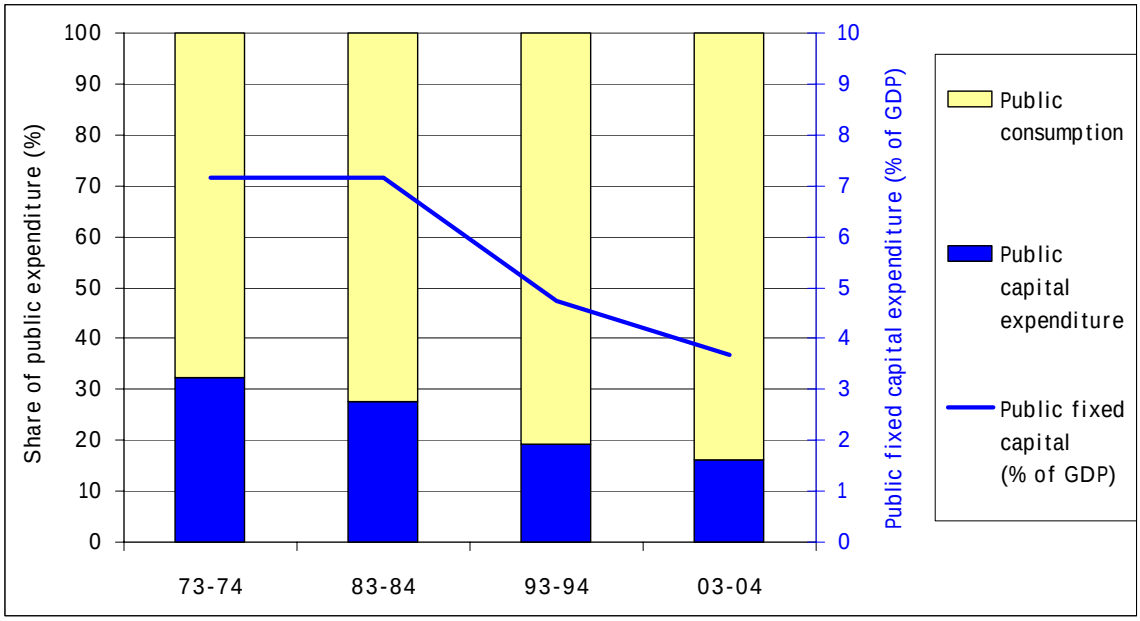
intensity of road use. About 55% of road funding is spent on road construction which benefits not only users but potential road users.

6 TRANSPORT INFRASTRUCTURE FUNDING

6.1 PUBLIC INVESTMENT VERSUS PUBLIC CONSUMPTION

Infrastructure expenditure has declined as a share of government expenditure as Australian Commonwealth and State governments increased share of expenditure on consumption. The alarming trend has continued despite concerns raised by the Business Council of Australia in 1994 (CEDA 2005) (**Figure 8**).

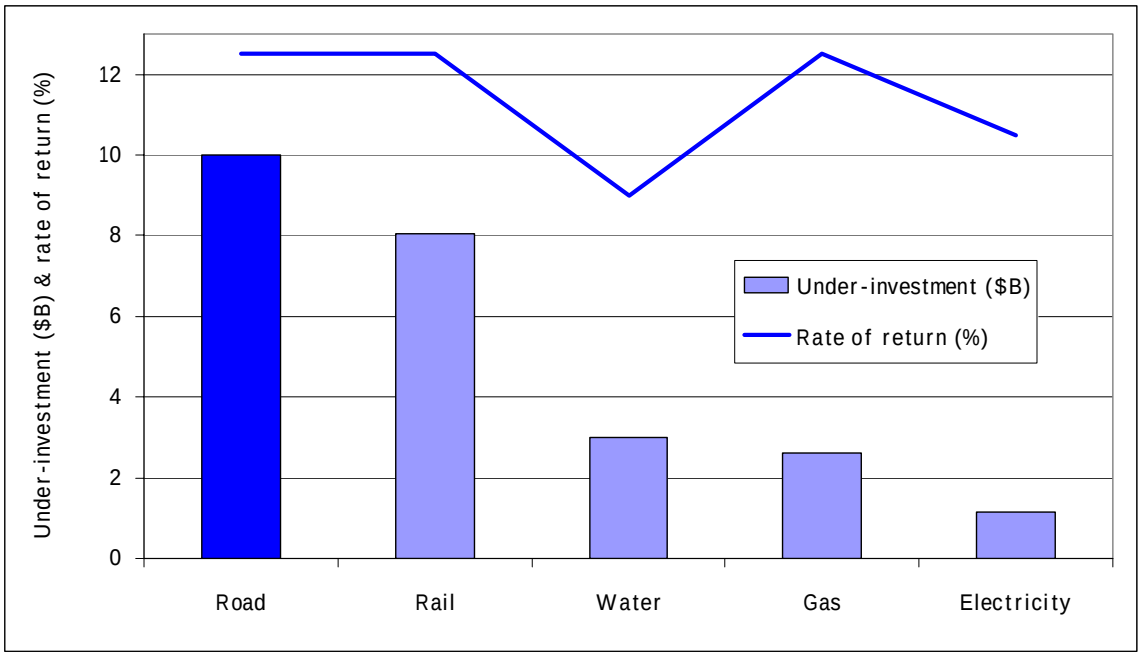
Figure 8: Public capital expenditure & consumption and fixed capex share of GDP



6.2 UNDER INVESTMENT IN INFRASTRUCTURE

The level of under-investment for current and future requirements is as high as $150B (CEDA 2005). Urgent under-investment to meet 'current deficiencies' is $25B of which roads account for 40% and correcting this with an immediate additional investment of $10B would deliver an attractive return on investment (**Figure 9**). Annual investment under Auslink is only $2.4B pa.

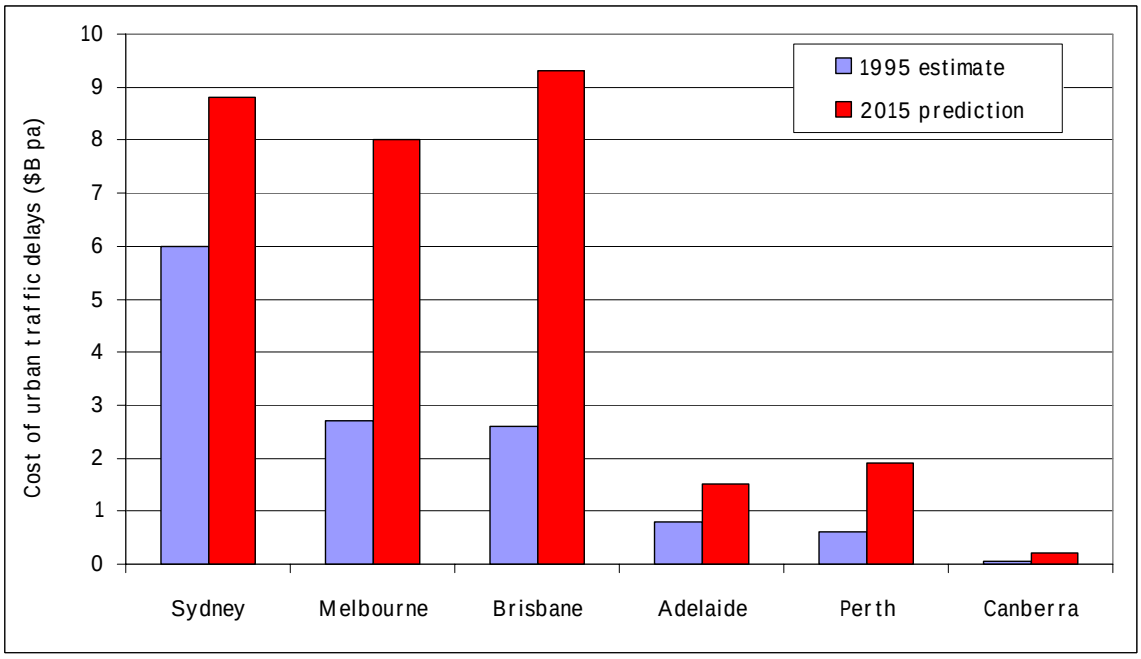
Figure 9: Urgent under-investment and rate of return just to meet current demand



6.3 COST OF UNDER-INVESTMENT IN URBAN ROADS

The cost to the Australian economy of urban traffic delays is expected to grow from $12.8B in 1995 to 29.7B in 2015 (DOTARS 2004) (**Figure 10**). These congestion costs are well in excess of the urgent under-investment in roads of $10B (**Figure 9**).

Figure 10: Cost of urban traffic delays (congestion cost)



6.4 RECENT INVESTMENT IN NEW INFRASTRUCTURE

The private sector already makes a significant investment in transport infrastructure despite the 'public good' nature of the transport sector, particularly roads. Investment in new transport infrastructure was $8.4B in 2000-01 of which 34% was provided by the private sector and 66% by government. Investment in roads accounting for $5.2B (excluding maintenance) with $0.9B or 17% coming from private sources and only 17% from the federal government. Total government (federal, state plus local government) investment in roads was $4.3B or 78% of government investment in transport infrastructure (BTRE 2003a) (**Table 6**). This amount and proportion of infrastructure investment on roads is inadequate for a large country with many regions without access to rail, air or port facilities,

Table 6: Total funding of new fixed assets in the transport sector in 2000-01

Source	Road ($M)	Rail ($M)	Air ($M)	Marine ($M)	Other ($M)	Service terminals etc ($M)	Total ($M)	Road by source (%)
Federal	883	40	150	0	22	0	1,095	17.0
State	1,953	223	1	249	493	0	2,919	37.6
Local	1,486	0	2	2	4	0	1,494	28.6
Private	870	46	1,249	131	49	503	2,848	16.8
Total	**5,192**	**309**	**1,402**	**382**	**568**	**503**	**8,356**	**100**
Private (%)	*16.8*	*14.9*	*89.1*	*34.3*	*8.6*	*100.0*	*34.1*	

Source: Derived from BTRE (2003). Data are for 2000-01

6.5 INFRASTRUCTURE INVESTMENT AND THE TASK

Government investment on roads is inadequate when related to indicators of relative usage, transport employment and transport safety. Government investment on roads was lower on a $/t basis than government investment in air and marine transport; lower on a $/tkm basis than government investment in air transport; lower on a $/employee basis than government investment in marine transport; and lower than all sectors on a $/fatality basis (**Table 7**).

Table 7: Government funding of new fixed assets in the transport sector in 2000-01

Source	Road	Rail	Air	Marine	Other	Service terminals etc	Total
Government funding ($M)	4,322	263	153	251	519	0	5,508
Proportion (%)	*78.5*	*4.8*	*2.8*	*4.6*	*9.4*	*0.0*	*100*
Gov funding ($/t)	2.92	0.49	1,013.25	4.83			2.66
Gov funding ($/tkm)	0.033	0.002	0.617	0.002			0.015
Gov funding ($/employee)	20,581	7,514	3,255	22,818	5,296		13,736
Gov funding ($M/fatality)	**2.5**	**7.7**	**3.7**	**5.6**			**3.0**

Source: Derived from BTRE (2003). Data are for 2000-01

7 NATIONAL ROAD FUNDING

7.1 FUNDING BY THE THREE TIERS OF GOVERNMENT

Total government funding in 2000-01 on roads was only $7.8B or 52% of the fuel tax collected from road users. Expenditure equates to $9,669/km of which 45% was spent on maintenance and regulation despite almost 60% of Australia's 808,292km of roads being unsealed (BTRE 2003a) (**Table 8**).

Table 8: Government road funding in 2000-01

Source	New fixed assets ($M)	Other road costs ($M)	Total road funding ($M)	Total road funding ($/km)	Road Funding by source (%)	Funding as proportion of fuel tax (%)
Federal	883	576	1,459	1,805	18.7	9.7
State	1,953	2,361	4,314	5,337	55.2	28.5
Local	1,486	556	2,042	2,526	26.1	13.5
Total	**4,322**	**3,493**	**7,815**	**9,669**	**100**	**51.7**
Proportion (%)	*55*	*45*	*100*			

FOOTNOTE

A. Other road costs include road maintenance, administration, regulation, planning and subsidies

B. National road length is 808,294km of which only 329,045km is sealed and 479,249km unsealed.

Source: BTRE (2003) Data are for 2000-01

Growth in government road funding of 3.7% pa has not kept pace with growth in GDP and the road freight task in rural areas (BTRE 2003b). Inter-capital non-bulk freight grew 1.5times faster than GDP between 1990 and 2000 (BTRE 2003c). Growth in government funding of roads should exceed GDP because of the favourable impact on economic growth, regional development and improved safety. Federal funding actually declined 7.3% pa over the three years to 2000-01 (table 5). Federal funding increased to $1,820M in 2001-02 but this represents funding growth of only 2.2% pa since 1998-99 (BTRE 2003a) (**Table 9**).

Table 9: Change in road funding over three years to 2000-01

Source	98-99		99-00		00-01		Growth
	($M)	(%)	($M)	(%)	($M)	(%)	(% pa)
Federal	1,707	23.5	1,675	21.5	1,459	18.7	-7.26
State	3,662	50.4	3,848	49.4	4,314	55.2	8.90
Local	1,902	26.2	2,265	29.1	2,042	26.1	3.68
Total	**7,271**	**100**	**7,788**	**100**	**7,815**	**100**	**3.74**
Increase (% pa)			7.1		0.3		

Source: BTRE (2003)

7.2 FEDERAL GOVERNMENT FUNDING UNDER AUSLINK

Even with Auslink federal governments funding of roads only increases from $1.5B pa in 2000-01 to $2.2B pa over the years 2004-05 to 2008-09 (**Table 10**). This represents only 14% of the money the government expects to receive from the three 'fuel' taxes. Under the 2005 Budget, the federal government will raise $16B in 'fuel' taxes yet only spend only $2.8B on transport and communications for 2005-06. Excise on refined products essentially collected from road users is expected to be $14B in 2005-06 ($2B raised from excise on crude oil and resource rent tax make up the balance of the 'fuel' tax).

Table 10: Auslink road and rail funding by program

Component	Five year Funding ($B)	Mean annual Funding ($B pa)
Auslink rail funding - National Network	**1.80**	**0.36**
Auslink National Network - road	6.70	1.34
Roads to Recovery	1.50	0.30
Financial Assistance Grants identified for roads	2.60	0.52
National Black Spot program	0.09	0.02
Auslink road funding	**10.89**	**2.18**
Total Auslink funding	**12.69**	**2.54**

FOOTNOTE

A. National Network Funding includes initial Auslink $7.79B plus $0.81B redirected as a result of abolishing the Fuel Sales Grants Scheme

Source: Derived from DOTARS (2004)

The low spend on regional roads of $291M pa (12%) and local roads of $510M (23%) is a serious concern to the forest and forest products industry (**Table 11**). About 75% of the forest and forest products industry freight volume and 78% of the industry's freight cost, is for haulage of logs, sawmill chips and firewood involving a high proportion of travel on regional and local roads.

Table 11: Annual Auslink road and rail funding over five years by state and situation

State	National Network ($M pa)	Urban roads ($M pa)	Regional roads ($M pa)	Local roads ($M pa)	Maintenance & Other ($M pa)	Black spot ($M pa)	**Total ($M pa)**
NSW	416.6	45.8			38.6		**501.0**
Vic	157.8	30.0			97.8		**285.6**
Qld	135.8	125.4			31.4		**292.6**
WA	77.6	9.0			6.0		**92.6**
SA	15.2	27.4			5.2		**47.8**
Tas	25.4				2.8		**28.2**
NT	13.8				4.6		**18.4**
ACT					0.5		**0.5**
Aust-wide	37.0		290.6	510.0	240.0	18.0	**1095.6**
Total (A)	**879**	**238**	**291**	**510**	**427**	**18**	**2,362**
Proportion (%)	**37.2%**	**10.1%**	**12.3%**	**21.6%**	**18.1%**	**0.8%**	**100.0%**

FOOTNOTE

A. Excludes $810M redirected as a result of abolishing the Fuel Sales Grants Scheme

Source: Derived from DOTARS (2004)

8 GOVERNMENT FUNDING OF ROADS

8.1 CASE FOR INCREASED GOVERNMENT ROAD FUNDING

Total government funding of public roads should be increased based on return on investment, demand, the favourable impact on regional development, high proportion of unsealed roads, low proportional spend on maintenance and substantial opportunities to improve road safety.

Globalisation of the Australian economy has lead to an increase in the distance between production and consumption and demand on the transport sector particularly roads.

Road freight has increased in importance from 19% to 36% of the national freight task between 1971 and 2000, with most of the growth at the expense of marine freight which declined from 52% to 30% of the national road freight task, measured in billion tonne kilometres (BTRE 2003b).

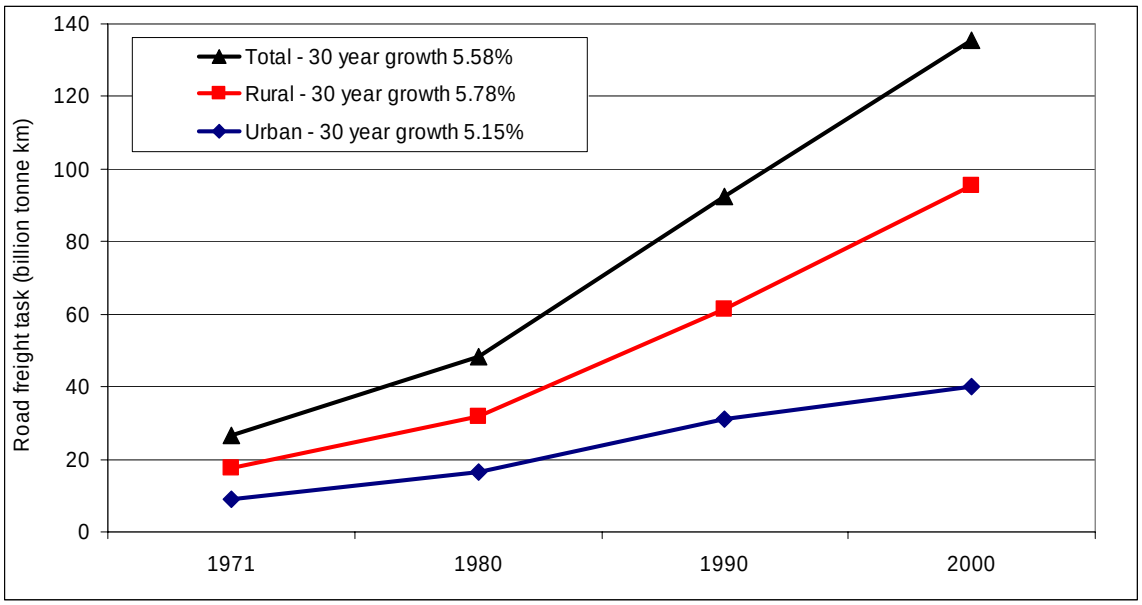
Non-bulk sea freight declined on most corridors but since the mid 1990's has replaced some road haul on the eastern capitals to Perth route (BTRE 2003c). Inter-capital non-bulk rail freight has not grown as fast as road freight (BTRE 2003c).

Productivity has slowed in road freight and real road freight rates have flattened since 1986, whereas rail freight rates have halved in real terms since 1986. Growth in road freight intensity has declined as a ratio of GDP growth from 2.3times GDP in 1971-85 to only 1.13 times GDP in 1994-2000 (BTRE 2003b). Slow upgrading of rural roads and regulatory reform has impacted adversely on road freight efficiencies and the forest and forest products industry which rely heavily on road freight. The forest and forest products industry generally cannot make use of rail transport for most log haulage because of a lack of rail networks between forest and mill and the cost penalties associated with "split" hauls.

Rail is also unavailable for freight of finished product from many mills because of lack of a nearby rail line, poor connectivity to customer destinations, lack of standard rail gauge requiring transfers, double handling, higher product damage than road haul, slower delivery times, higher cost than road haul in some cases, and limited windows under which freight can be railed due to higher priority given to passenger train access to rail.

There would appear to be a strong case for increased government road funding particularly on rural roads. Rural or non-urban road freight has grown faster than urban road freight and now represents 70% of the national road freight task following growth of 5.8% over the last three decades (**Figure 11**). Non-bulk freight is forecast to double between 2000 and 2020 with growth in road freight to be even greater (2.2 times) (BTRE 2003c).

Figure 11: Growth in the national road freight task from 1971 to 2000



Funding of only $90M over five years for the Black Spot program is an inadequate response to a public road network riddled with unsafe conditions. Many of our roads contain known safety hazards due to poor road construction and design. Improved road design and condition can have a marked impact on road safety. The Black Spot program is designed to rectify road conditions known to have resulted in many accidents and fatalities in the past. The fact that the action is prompted by many prior accidents is evidence of the chronic under-investment in roads and government lethargy with respect to improving road condition as a key driver of road safety. Substantially increased investment in better road condition is required to compliment improved car design, improved driver awareness and road transport safety initiatives under NHVAS (such as mass, maintenance and fatigue management) and TruckSafe.

8.2 CASE AGAINST ADDITIONAL ROAD TAX (TOLLS)

Local governments have singled out the forest and forest products industry particularly the plantation sector for restitution of any road damage caused by log haulage. They are probably driven by road funding shortfalls possibly caused by increased government spending on consumption as apposed to investment in infrastructure, and administrative inefficiency.

In Victoria local government can seek restitution of road damage via VPP clause 52.18-4 and Section 112 of the *Road Management Act 2004.* Singling out the plantation industry for additional contributions to public road maintenance is not justified.

The industry already contributes about twice as much in haulage fuel tax as is ploughed back by government funding of roads. The first call for additional funding of rural roads should be the other half of fuel taxes ($7B pa) that is currently not spent on roads.

Plantation log haulage represents less than 1% of road freight nationally and a smaller proportion of all road use. Singling out the plantation industry for special contribution to road funding in those regions where its road use may be higher is inequitable. The call for special private funding of public roads is symptomatic of failure with respect to equitable distribution of funding for local roads.

The plantation sector probably has roughly the same overall long term impact on roads as other agricultural sectors. The plantation sector should not be singled out because its impact on roads is acute while the impact of other sectors is chronic but the overall long term impact is similar. Road damage is unfairly attributed to plantation log haulage because use of local roads is often concentrated to one or a few years every 25 to 30 years at harvest age, unlike other rural enterprises involving more consistent use such as annual haulage of crops or daily haulage of dairy produce.

The forest sector currently does not have full access to the public road network. Restricted access roads, bridge mass limits and or council road restrictions, preclude the use of Bdoubles or all log trucks on many roads. The industry is characterised by the hauling of heavy produce requiring higher payloads than other sectors.

The log haul sector is more highly exposed to haulage on B and C class roads which involve longer travel times and higher costs than other sectors of the road freight industry. Other sectors enjoy almost exclusively A class roads and derive a greater benefit from their fuel taxes leading to inequity with respect to the log haul sector.

It is generally infeasible for the plantation sector to use rail to haul logs from plantation to mill. Thus efficient road haulage with high payloads is critical for industry efficiency.

Local government can also impede efficient freight by restricting access to roads that are important to the industry. For example in Victoria the *Local government Act 1989* provides LGA's with the power to discontinue roads, close roads on a seasonal basis, apply weight or speed restrictions and prohibit traffic on unsafe roads (Schedule 10 and 11). Some safeguards are required to ensure this power is not used unreasonably.

8.3 INDUSTRY CONTRIBUTION TO ROAD FUNDING

The timber industry, already contributes substantially to road funding through:

- Company income tax and GST paid into consolidated revenue, some of which could justifiably be channelled back into regional roads under assistance programs for regional socio-economic development. This is particularly relevant in regions over reliant on a farm sector experiencing decline in the terms of trade.
- Fuel taxes paid to the Federal government of which only about 50% is currently channelled back into road funding. Growth in road funding has lagged growth in the freight task on rural roads.
- Vehicle registration fees and other state government taxes.
- Local government rates. The forest sector tends to make lower demands on local government services than other landholders. Our sector has been disadvantaged by government's trend towards increased spending on consumption and decreased investment in infrastructure.
- Roading levies paid to State Forest Services for wood sourced from State Forests. These levies are essentially an earmarked component of the royalties in line with roading costs and help ensure an appropriate proportion of log royalties are channelled back into roads rather than consolidated revenue.
- Ex gratia works or funding provided by the plantation industry over the years. The industry has a track record of cooperating with local government to ensure efficient log haulage over critical routes as the need arises.

9 HAUL COST AND INDUSTRY COMPETITIVENESS

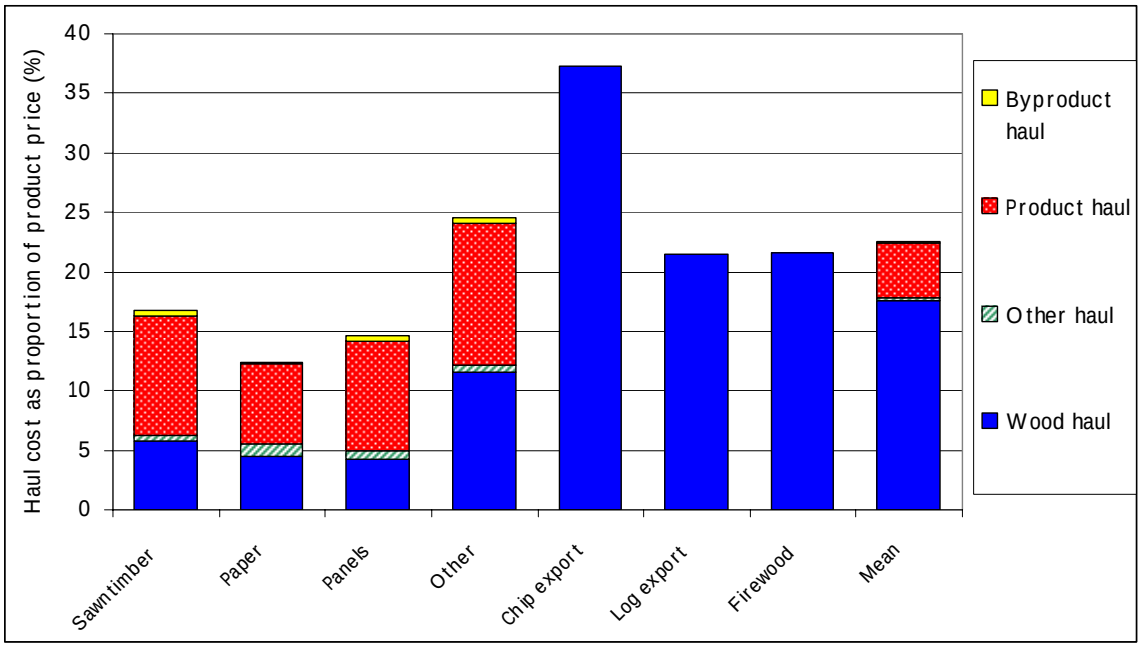
9.1 HAULAGE COST AS PROPORTION OF PRICE

The forest and forest products industry has a high component of material handling and movement of raw materials and finished products long distances over a vast continent. To minimise haul distance for wood input, most mills are located in regional areas close to the forests, but relatively longer distances from major domestic markets and export ports. Wood haulage averages about 90 km but haulage of paper, panels and sawntimber averages about 645 km.

Many paper, panel and saw mills run more efficiently on long runs producing a narrow product range. This is driven variously by resource limitations, economies of scale and economies of scope. It reduces the ability to market mill output solely within the region or even the state and leads to the need for much interstate freight of finished product. Efficient road freight, rail freight and wharves are therefore vital with roads being the most important.

Haul cost across inputs and outputs averages about 23% of product price for the forest and forest product sector in Australia and ranges from 12% for paper to 37% for chip export. On average across all product segments log haul accounts for about 78% of all freight cost and about 18% of final selling price (**Figure 12**).

Figure 12: Haulage cost as a proportion of selling price for forest products



9.2 HAULAGE IS A KEY COST AND PROFIT DRIVER

Road freight is a key cost and profit driver of the forest and forest products sector. Relatively small reductions in log haul costs can have profound impacts by delivering collectively the following economic benefits:

- Lower milldoor wood costs which enhances the international competitiveness of regional mills and or enhanced farmgate prices for plantation growers.
- Larger wood supply catchments within economic haul of existing mills.
- This can facilitate investment in further upgrading of brownfield mills, more readily justified on both increased economies of scale (increased wood supply within economic haul) and lower cost to market.
- It can also facilitate investment in new Greenfield mills which become more readily justified based on increased economies of scale and lower milldoor wood cost.
- Expanded plantation development can proceed based on a more internationally competitive processing sector leveraged off increased economies of scale and lower cost.
- The expanded plantation and processing sectors can lead to considerable economic development with regional growth in gross product, jobs, import replacement and spin-off environmental benefits.

9.3 KEY DRIVERS OF HAUL COST

The key drivers of haul cost are higher payloads, quicker journeys and increased utilisation of fleet assets. Increased payloads can come from replacing 6 axle triaxle semi-trailers with 7 axle MiniB's, 7 or 8 axle quaddog rigs or with 9 axle Bdouble trucks where roads permit; and regulatory reform that allows log trucks to cart at their safe mass limits. The mass limits of some rigs such as the quaddog are unreasonably constrained in Victoria and NSW

but not in Tasmania and WA where an increase in payload of about 5 tonne is possible under permit.

Roads capable of Bdouble haulage offer maximum savings in haul cost and insure fewer trucks on the road. Discounts for Bdouble are available providing savings of ca 10% to 20% relative to triaxle semi-trailers.

Most rural roads are built to a better standard than in-forest roads and are suitable for log transport. However, upgrading would improve efficiency and reduce haul cost by reducing wear and tear on trucks, reducing journey time and permitting increased payloads. Currently log transport is precluded on some rural roads, not because of the condition of the road or potential damage to the road, but just because the mass limit on a single bridge is too low.

Log haul costs are about 30% more expensive on narrow B class bitumen roads and 85% more expensive for gravel C class roads relative to sealed A class roads.

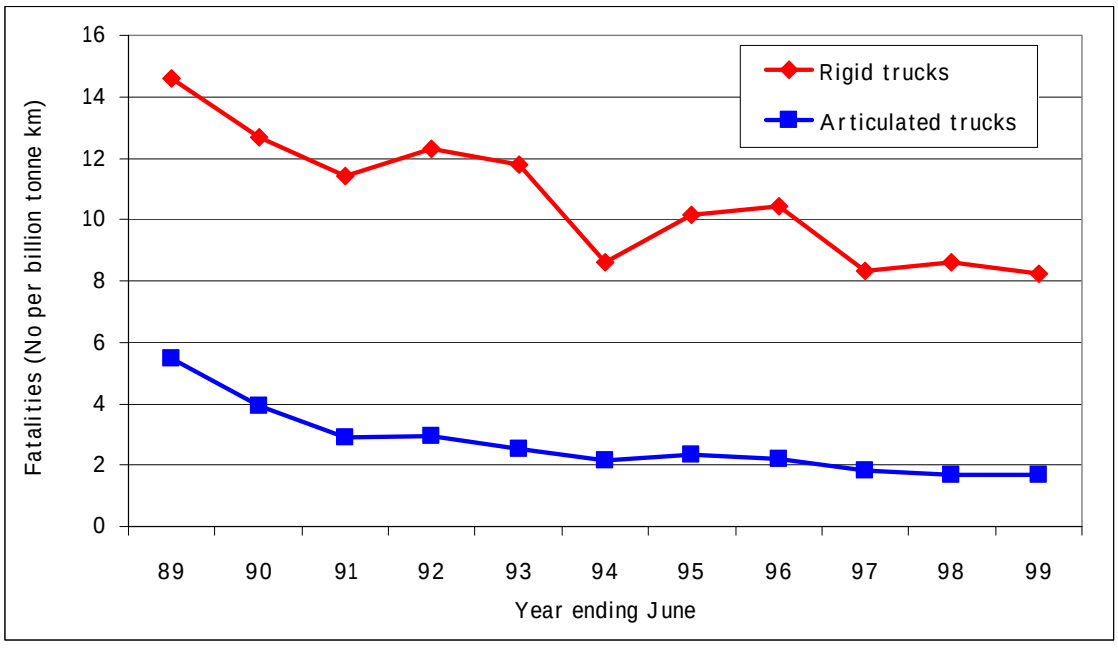
The key constraints to improved haul efficiency in the forest and forest products industry are poor road condition, insufficient Bdouble access, inability to take full advantage of higher mass limits under mass management and slow regulatory reform.

9.4 INDUSTRY'S INNOVATIVE & RESPONSIBLE ROAD USE

The forest and forest haul sector has a long history of innovative uptake of new developments and responsible road use.

The log haul industry exclusively use articulated trucks which deliver fewer fatalities per tonne kilometre than rigid trucks (BTRE 2003b) (**Figure 13**).

Figure 13: Fatality rates involving trucks



The haulage sector has experienced strong uptake of Bdoubles and other more efficient, road friendly and safer rigs. Other rigs include the Quaddog and MiniB which permit higher

payload than a conventional triaxle semi-trailer where roads do not permit Bdoubles. The Bdoubles, MiniB's and Quaddogs deliver:

- Higher payloads and lower costs improving the economic efficiency of the plantation industry so that it can make a more substantial contribution to regional socio-economic development.
- Improved safety as a result of newer and fewer trucks on the road.
- Improved environmental outcomes because the trucks with higher payloads consume less fuel and produce lower emissions per tonne hauled.
- The Quaddogs have lower off-tracking (swept path) and better load transfer ratio and static roll stability at current approved mass limits than standard triaxle semitrailers. They are an efficient alternative where Bdoubles are infeasible.

The forest and forest products industry has embraced innovation in road freight including new mass limits with accompanying accreditation under mass, maintenance and fatigue management, road friendly suspensions and fatigue management, delivering improvements in efficiency, safety and environmental outcomes:

- The new mass limits available to all freight sectors but restricted to gazetted roads or roads under permit, allow an increase in payloads, further lowering costs, improving efficiency and socio-economic outcomes.
- Operation at the new mass limits requires stringent accreditation under The National Heavy Vehicle Accreditation Scheme which delivers improved safety through reducing overloading. Mass management requires operators to measure and record weights and imposes substantial deterrents for breaches (Vicroads 1999, Vicroads 2004). Fatigue management is also being embraced by the industry.
- Mass management also requires approved road friendly suspensions which reduce road damage. They reduce the impact of wheels on road pavements and bridges by ensuring the load is more evenly distributed and reducing the dynamic movement of the axles (Vicroads 1999, Vicroads 2004).

The various State codes of forest practise imposes stringent conditions on the use of gravel roads. Log haulage is precluded under very wet conditions where there is a likelihood of road damage or increased erosion of the road surface and stream sedimentation.

10 REGULATORY REFORM

10.1 OVERLY PRESCRIPTIVE ROAD REGULATION

Road regulation has tended to be prescriptive, specifying precisely attributes vehicles must have to comply. Axle load limits and vehicle dimensions are fixed under nationally consistent regulation to ensure road safety and protect the road system. State and Territory governments have provided some flexibility for non-standard vehicles through permits and the 'Gazettal system'. However, rail operators have much more flexibility to vary mass, dimensions, speed and load height (eg double stacking containers).

The differences between rail and road regulation have created some intermodal inefficiency such as the inability to transport 30 t containers by road within legal axle weight limits in the past. There is scope for improvements in efficiency through replacing overly

prescriptive mass, length and height limits particularly for road haul with a performance based standards approach. The NTC are progressing a performance-based standards approach in partnership with the 'road jurisdictions' and the industry, as a national alternative to the 'one size fits all' approach currently applied (NTC 2004b).

A threat to this potentially favourable initiative is the need to get 'signoff' from all the States, Territories and Local Governments who may make approval conditional on resolution of funding disputes or other political decisions.

10.2 NEED FOR REGULATORY RESPOSE TO INNOVATION

Regulators have been slow to approve appropriate mass limits and length limits for innovative rigs potentially stifling the development of more efficient and safer alternatives. The States differ in their response to industry initiatives with some states such as Victoria showing reluctance to depart from a unified national approach, others such as NSW making reform conditional on additional Federal government funding and other states such as Tasmania allowing the use of novel rigs at appropriate mass limits under permit. For example Quaddogs (seven axles) are capped at 50t in Victoria whereas seven-axle Quaddog and Mini B's commonly operate at 57t under permit in Tasmania. WA are believed to enjoy higher mass limits on log haulage for some rigs (eg twin steer Quaddogs).

NSW recently withdrew from the mass management pilot limiting the ability of the industry to benefit from higher mass limits (increased efficiency and lower cost) and other road users to benefit also (lower congestion).

There is a strong case for speeder application of increased mass or length limits available in one jurisdiction to become available in other jurisdictions to ensure a level playing field. An encouraging recent development is expected increase in Bdouble length from 25m to 26m subject to Ministerial approval in June 2005 (NTC 2005a).

10.3 PERFORMANCED BASED REGULATION

Traditionally road freight has been regulated by tightly defined limits on mass and dimensions that are under pressure from demands for increased efficiency given the doubling of the freight task over the next two decades. Performance based standards (PBS) will govern what a vehicle 'can do' rather than what it should 'look like'. The scheme allows flexibility provided the vehicle or operation comply with safety, infrastructure protection noise and emission standards developed by the NTC. Mutual recognition of PBS will provide a national alternative to permit and exemption based systems currently available. A serious constraint to uptake of PBS is that 80% of the road transport fleet is run by small operators with one or two trucks. Implementation of PBS is expected some time after completion in 2005-06 and a 10% uptake of PBS is expected to provide benefits of $500M (NTC 2004g).

10.4 NEW LOAD RESTRAINT GUIDELINES

The new load restraint guidelines (NTC 2004j) are a cause for concern, particularly in log transport where some aspects of the new guidelines appear to require significant change to traditional load restraint methods and thus difficulties with implementation.

10.5 MODEL ROAD TRANSPORT REFORM BILLS

A model bill *Road Transport Reform (Compliance and Enforcement) Bill* has been developed to provide a basis for nationally consistent legislation to be introduced by the States, Territories and the Commonwealth during 2005. The bill is designed to improve compliance and strengthen 'chain of responsibility' by imposing legal liability on those involved in consigning, packing, loading, handling, carrying, driving and receiving loads relative to their influence. Chain of responsibility is extended from transport of dangerous goods and driving hours to cover mass, dimension and load restraint and penalties for breaches are substantially strengthened (NTC 2004h, Austroads 2005).

The NRC is working on a model Bill to accommodate the use of an Intelligent Access Program (IAP) system in managing compliance. IAP based on vehicle telematics can remotely monitor vehicle position, speed and load security to monitor compliance of heavy vehicles with agreed operating conditions such as under permits (NTC 2005b).

The NTC is also currently reviewing the rail regulatory framework that will result in model legislation (NTC 2004i).

10.6 ALTERNATIVE COMPLIANCE WITH ROAD REGULATIONS

'Alternative' compliance is to cover voluntary alternatives to conventional methods of enforcement of road transport legislation. Alternatives include uniform national schemes (The National Heavy Vehicle Accreditation Scheme) or schemes tailored to local or regional jurisdictions or specific types of transport operation (NTC 2002). Sanctions are to range from increased frequency of audit to cancellation of accreditation for serious breaches. Ministers approve business rules to apply to NHVAS, and the Mass Management module including standards and audit framework (NRTC 200) and national mass limits applicable to accredited operators inclusive of tolerances and a Maintenance Management Module.

Alternative compliance has not delivered the benefits potentially available due to slow change to higher mass limits, under-investment in roads limiting 'local' application of non-national schemes and duplication in accreditation process. The principle incentive for alternative compliance is reduced impact of conventional enforcement such as annual vehicle inspections (NRTC 2000). There has been insufficient application of the non-national schemes and insufficient delivery of concessional loadings.

There is currently a proliferation of accreditation schemes operating in Australia with potential for inconsistent practises and duplication and the NTC plans to review the National Heavy Vehicle Accreditation Scheme (NHVAS) with a view to removing unnecessary cost and limitations to uptake of these schemes (NTC 2004b). For example the NHVAS Mass Management, Maintenance Management and Fatigue Management modules overlap with; the RTF's TruckSafe Management, Driver Health, Driver Safety and Maintenance Modules; ISO 9002 Quality System Guidelines for the Road Freight Industry; VTA and WorkCover endorsed Transcare; Transitional Fatigue Management Scheme; and the WA heavy Vehicle Accreditation Scheme.

The Australian Road Transport Reform (Vehicle Standards) Regulations 1999 (Australian Government 1999a & 1999b) have been amended with new clauses on emission controls (Australian Government 2001) and measurement of noise (Australian Government 2002). The

Land Transport Environment Committee established under the NTC and the National Environment Protection Council have recommended the adoption of new *Euro 4* emission standards for light vehicles from 2008 and *Euro 5* emission standards for heavy diesel vehicles at a reasonable date to be determined. The most likely technology for reducing NOx to *Euro 5* limit is to use Selective Catalytic Reduction based on feeding urea to control NOx in exhaust gases (NTC 2004c).

10.7 INCREAMENTAL PRICING FOR HEAVY VEAHICLES

The potential 'incremental pricing' reform poses an opportunity for increased efficiency for the forest and wood products industry but also serious threats of double taxation, overcharging and under-servicing. The NTC has been examining changes in structure and scope leading to a more direct and user-pays based pricing mechanism (NTC 2004d, NTC 2004e and NTC 2004f). The NTC is of the view that an incremental pricing system should be introduced involving additional fees over and above current base registration fees for higher mass above current mass limits to cover road where and tear (NTC 2004f).

At present, infrastructure costs incurred by road agencies that are attributed to heavy vehicles are recovered indirectly through the two part National Heavy Vehicle charges - fuel excise collected by the Commonwealth and registration charges collected by the State and Territory Governments. The NTC is working on the Third Heavy Vehicle Road Pricing Determination that will set new charges for heavy vehicles to be implemented by the end of 2006.

Incremental pricing presents an opportunity to achieve net benefits of higher mass (**Table 12**) on more routes if the incremental charges for higher mass are used by road managers efficiently to upgrade more roads to higher mass limits.

Table 12: Preliminary net benefit of potential incremental pricing for mass (2002 dollars)

Truck rig	Axles (No)	Mass limit (t)	Payload at mass limit (A) (t)	Estimated mass' benefit (B) (c/km)	Indicative incremental cost (C) (c/km)	Net benefit (c/km)	Net benefit (c/t/km)
Truck at standard mass	3	22.5	10				
Truck at 2 t extra	3	24.5	12	14	9	5	2.5
Truck at 4 t extra	3	26.5	14	24	18	6	1.5
Semi trailer at standard mass	6	42.5	28				
Semi trailer at 2 t extra	6	44.5	30	14	6	8	4.0
Semi trailer at 4 t extra	6	46.5	32	23	11	12	3.0
Bdouble at standard mass	9	62.5	40				
Bdoubleat 2 t extra	9	64.5	42	11	5	6	3.0
Bdouble at 4 t extra	9	66.5	44	19	9	10	2.5
Bdouble at 6 t extra	9	68.5	46	26	13	13	2.2

FOOTNOTES

A. Approximate payload for log trucks. Payloads may be lower for rigs with higher tare weight.

B. Benefit of savings in road user costs attributed to increased mass

C. Incremental cost based on road wear (excluding bridge wear) and prior to determining base charges for the Third Determination

Source: Derived from NTC 2004f

The threat of incremental pricing is demonstrated in the history of fuel excise. Fuel excise was originally hypothecated to expenditure in roads but now the Federal government only spends a small fraction on roads. Until all fuel excise is spent on road funding, the introduction of incremental pricing for extra mass would involve 'double taxation'. The fuel excise system also incorporates an element of incremental pricing for extra mass due to increased fuel consumption and thus excise collected under higher mass limits.

10.8 RAIL, SEA AND INTERMODAL REGULATIONS

One of the major impediments to use of rail to haul finished goods in the forest and forest products sector in Australia is the poor connectivity to mills and markets exacerbated by lack of standard gauge. Queensland, WA and parts of SA are narrow gauge, Victoria and parts of SA are board gauge and only NSW and the interstate track is standard gauge. Many mills also do not have a rail line nearby.

On-track competition in rail, particularly bulk freight has not materialised. The threat of competition (contestability) has had little impact because the time and cost of third parties seeking access under the regulations provides incumbents substantial protection (NTC 2004b).

A general concern raised is the potential for restricted access to monopoly controlled infrastructure (roads, rail, ports and terminals) limiting the ability to compete in upstream or downstream markets. Part IIIA of the Trades Practises Act 1974 can provide access to essential facilities by third parties on reasonable terms. However, it can prove to be time consuming and costly for third parties to seek protection ('declaration' of a facility) under Part IIIA of the Act. Even when facilities are 'declared', there is often dissatisfaction with the level of access. The process for seeking an access determination is also slow and costly. GrainCorp took 20 months to secure access from Freight Australia at a cost measured in dollars per tonne not cents per tonne, of the freight task in dispute. The ACCC in its decision on the takeover of freight Australia by Pacific National noted concerns about access to rail infrastructure that needs to be addressed by State Governments that own most of the infrastructure (NTC 2004b). A more workable system of forcing vertically integrated rail providers to accept new terminals is required.

Land use regulations pose a significant threat to efficient freight. Intermodal terminals (seaports, airports, road and rail terminals) are generally seven day week twenty-four hour operations with traffic, noise, light glare, dust and dangerous goods issues. Residential encroachment of terminals, roads and railways is causing operators to refrain from using certain roads and rail infrastructure or limit hours of operation. Residential development is a concern at Darling Harbour and Gore Hill in Sydney and Port Melbourne and Docklands in Victoria.

Some innovative intermodal solutions to intermodal freight have been developed including MaxiTrans, Autotainer, Maxibox (NTC 2004b) and it is vital that regulators support and foster continuing developments.

11 TRANSPORT ISSUES FOR A3P

This issues section is based on extensive discussions with key people in the industry. An overriding issue will be ensuring A3P has adequate input into a range of regulatory reforms underway in road rail and sea freight.

11.1 ROAD FUNDING ISSUES

Some road funding issues likely to be impacting adversely on A3P are:

- There is substantial under-investment in infrastructure in Australia and investment of $25B is urgently required to address current needs and $150B required to meet future needs, with a substantial proportion required on road and rail.
- Recently increased road funding under Auslink is insufficient to address past under-investment, let alone meet the current and future needs.
- Auslink funding for regional and local roads is far too low and will not allow roading priorities of the forest and forest products industry to be addressed.
- Poor condition of regional connector roads constrains efficient haulage of logs and finished product.
- Poor condition of some local government roads and bridges also constrain efficient log haulage.
- Discriminatory local government planning provisions driven by inadequate road funds. For example the inequitable Road Management Act and planning provisions in Victoria. These provisions single out timber traffic for restitution of road damage but not other road users.
- Potential for the introduction of road tolls and threat of poorly implemented incremental pricing leading to unfair and inequitable 'double taxation' given the substantial contribution of the industry to road funding through fuel excise and registration charges.

11.2 ACESS TO HIGHER ROAD MASS LIMITS

Access to potentially higher mass limits is severely constrained because too few approved routes are gazetted or permitted for Bdouble or higher mass:

- There are insufficient routes approved for B-double or higher mass limits. The inability to use higher mass limits under the National Heavy Vehicle Accreditation Scheme (NHVAS) along major highways and connector roads between mills and highways to the forest or markets is severely constraining the uptake of haulage efficiencies, potentially available under either Bdouble haul and/or higher approved mass limits. Under the mass management module of NHVAS, vehicle mass limit may be increased from 42.5 t to 45.5 t for semi trailers (6 axle rigs) and from 62.5 t to 68 t for Bdoubles (9 axle rigs) delivering an additional 7% to 11% in payload.
- The use of Bdoubles for freight of finished product averages only 44% due to insufficient gazetting of many regional roads connecting to mills and urban roads connecting to customer depots.

- The use of Bdoubles for log haulage averages only 35% due to insufficient gazetting of regional roads and local roads.
- NSW poses serious issues to uptake of haulage efficiencies due to the restrictions under the pilot program on mass management (restricted to initial operators and designated number of trucks and recently scrapped) and inability to take advantage of extra mass limits under NHVAS. NSW is understood to have only four route approved for higher mass limits under NHVAS (Goondiwindi – Tocumwal, Albury – Coolac, Tenterfield – Warwick and Mildura – Tarcutta). The inability to use higher mass limits along the entire Hume Highway is a major constraint on efficient haulage.

11.3 OTHER ROAD ISSUES

One of the principle issues is congestion leading to increased journey time and haul cost

- Bypass roads, road duplication, passing lanes and extra lanes are urgently required to overcome congestion.
- The delay to the commencement of the Pakenham bypass is already causing considerable increase in time to haul export logs and finished product from Gippsland to the ports of Melbourne and Geelong.
- Road sharing with tourist traffic is becoming an issue in some regions particularly in South East Queensland.
- Local government are imposing low mass limits or time curfews on roads to preclude timber traffic for a host of reasons including funding issues and community concern over sharing roads with log traffic. This is resulting in increased haul via alternate routes.
- Non-uniform regulation across state borders posses efficiency and compliance issues for some operators (eg in the Green Triangle).
- Heavy vehicle emission controls under *Euro 5* need to be monitored to ensure they are practical.

11.4 RAIL FREIGHT ISSUES

Rail freight has the potential to be cheaper than road freight but suffers from a number of issues. Key issues with respect to rail freight are:

- Lack of standard gauge rail throughout the country resulting in the need to transfer loads. For example rail between Maryvale and Melbourne is still broad gauge requiring a boggy change in Melbourne for product railed to Sydney or Brisbane
- Inability to achieve door-to-door resulting in split haul penalty, double handling costs, and increased product damage. Many of Australia's processing mills do not have a rail siding.
- There are too few rail lines on some routes or windows of time under which freight can be moved, increasing time to market by one to two days relative to road freight in an industry where customers are demanding 'just-in-time'.
- Rail is more expensive than rail freight in some situations.

11.5 SEA FREIGHT ISSUES

Currently sea freight is little used by the forest and forest sector but is under close examination for interstate haul because of cost advantages. Coastal shipping rates are potentially cheaper than road or rail for some interstate freight. Access to ports for export is also important. Some key issues are:

- Ensuring ports remain capable of accepting world scale shipping and the cost advantages that scale economies deliver. Dredging has been identified as necessary to ensure Melbourne can accommodate world scale ships but is subject to public concern over environmental impacts.
- Sufficient port capacity including births and loading facilities to permit rapid turnaround of ships. This is a particular concern with bulk freight.
- Land is restricted at some ports to create additional births.
- Insufficient land at some ports requires storage or final processing at separate locations and thus cost penalties associated with split haul.
- Road congestion is an issue at ports particularly in the major cities.

12 TRANSPORT OPPORTUNITIES FOR A3P

12.1 ROAD FREIGHT OPPORTUNITIES

Some potential opportunities for A3P to consider lobbying Government for or supporting other industry lobby groups are:

- To lobby for a substantial increase in government investment in roads and the urgent commencement of roads impacting adversely on the industry (eg the Pakenham bypass and many others).
- Seek to avoid potential double taxation under incremental pricing of higher mass limits and instead lobby for some form of return to hypothecation of fuel excise.
- Lobby the commonwealth government for some form of hypothecation of fuel tax.
- Influencing government and regulators to insure a greater share of road funding is spent on roads that are a priority for the timber industry.
- Seek an increase in the number of roads where B-doubles and higher mass limits apply.
- Seek funding for some new purpose built log haulage roads (eg potential B-double road in Green Triangle).
- Seek higher national (or local) mass limits for innovative rigs where B-doubles are infeasible (eg Quaddogs and MiniB's).
- Seek sufficiently flexible vehicle standards to permit novel rigs for greater back-loading opportunities (eg chip haul + log backload, finished good haul + log backload).
- Try to redefine length limits for trucks to allow efficient haulage of freight in lengths preferred by customers (eg accommodate ideal container or pallet lengths and 6.1 m softwood sawlogs).

12.2 OTHER FREIGHT OPPORTUNITIES

Some other areas for further consideration by A3P are:

- Seek standard gauge rail in strategic situations.
- Ensure regulation of access to rail networks allows competitive rail freight.
- Lobby to ensure land use regulation does not unduly limit efficient freight operations through urban encroachment or in other ways.
- Seek increased government investment in infrastructure associated with freight hubs, terminals and ports to improve intermodal efficiency.
- Lobby for increased investment in strategic export ports to ensure capacity matches anticipated demand and access to ports by larger lower-cost ships (eg Dredging of Port Phillip Bay).

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