

Senate Rural and Regional Affairs and Transport References Committee
inquiry into plantations

Presentation by Judy Clark
Postdoctoral Fellow
Centre for Resource and Environmental Studies, Australian National
University

Parliament House, Canberra
21 February 2003

Senate Rural and Regional Affairs and Transport References Committee inquiry into plantations

Presentation by Judy Clark
ANU Centre for Resource and Environmental Studies

21 February 2003

Summary

Within three to five years, large areas of Australia's eucalypt plantations will mature. The wood volumes projected to come on stream are likely to generate a hardwood chip glut, if native forest resources remain in the supply equation.

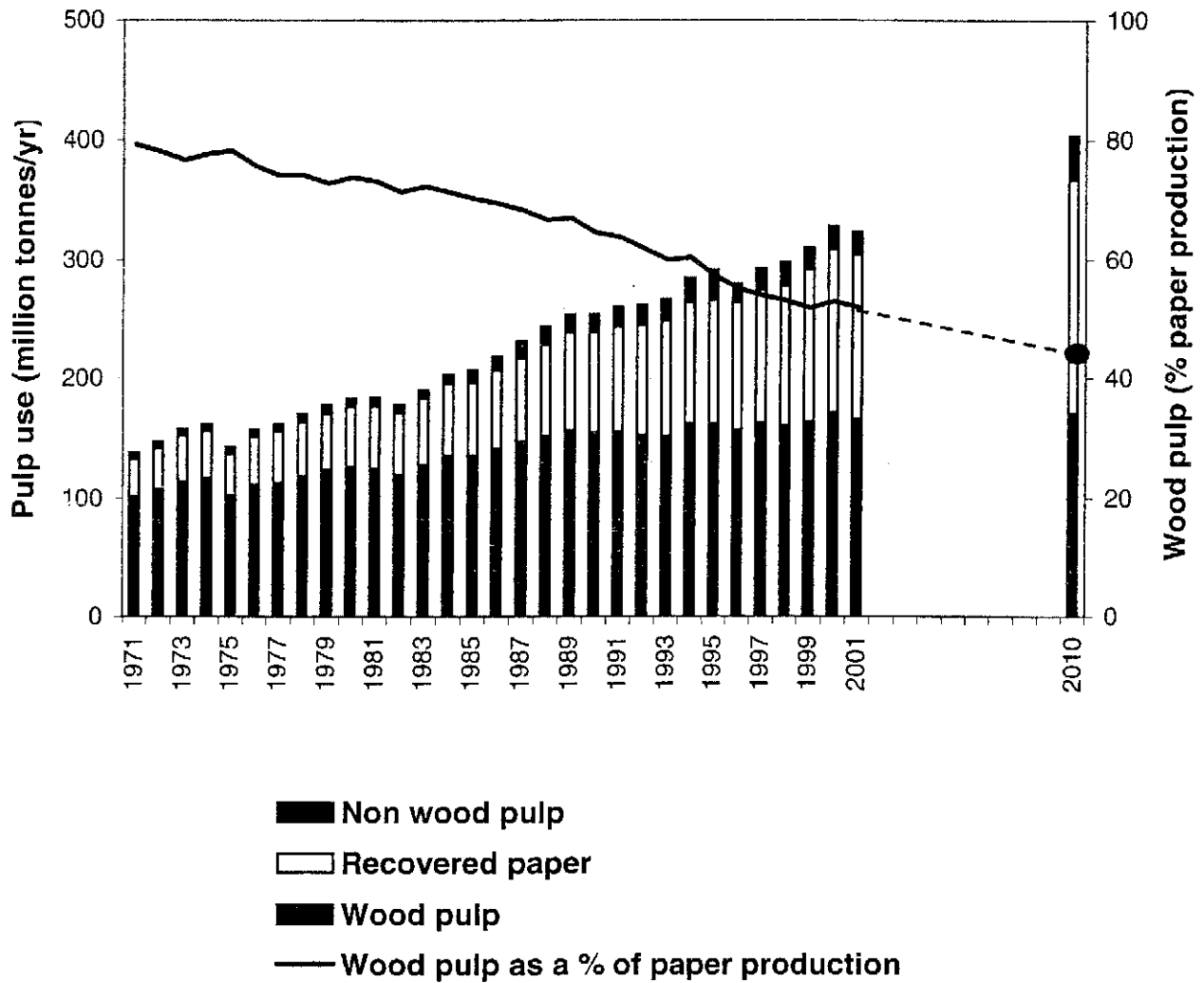
Australia's plantation processing capacity is falling seriously behind plantation wood supply. Australia is enjoying nowhere near the full rural employment, wealth and environmental benefits that existing plantations now offer.

These problems are with us now – planting more trees without rigorous assessment of the Australian and global wood and wood products market is likely to intensify the problem.

I make three recommendations.

1. That the 2020 planting target be scrapped and replaced by a more flexible approach at the regional and national level where market trends, the existing plantation estate, manufacturing competitiveness, environmental issues and social requirements can truly and jointly be considered.
2. That the Federal Government, as a major promoter of private sector investment in hardwood plantations, ensures that this investment is not commercially undermined by state government subsidies on chiplogs supplied from public native forests.
3. That the Federal Government give priority attention to Australia's existing plantation resource and develops a manufacturing industry policy aimed at processing as much plantation wood as is commercially viable in Australia.

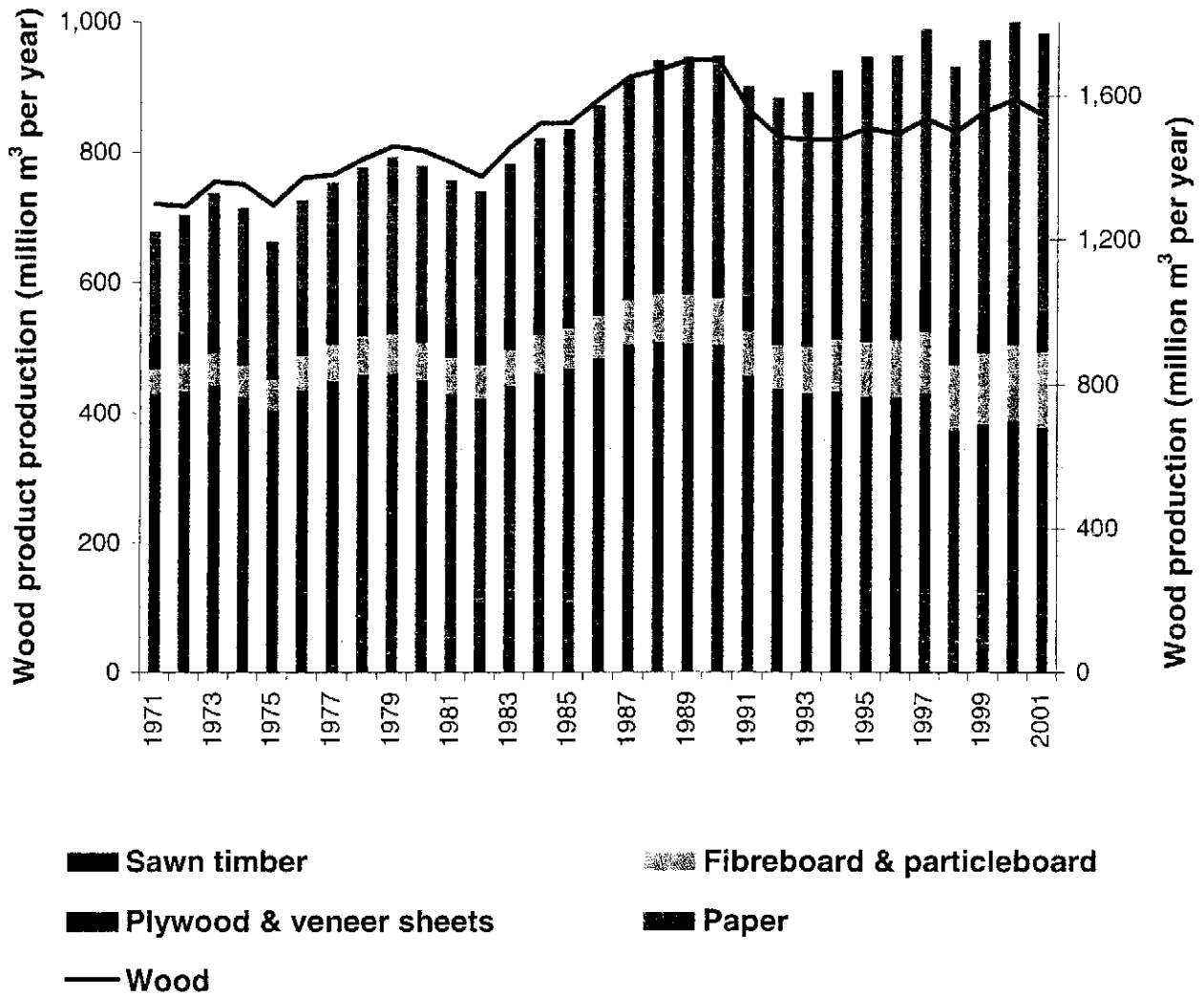
Share of wood pulp in global paper production



Source: FAOSTAT; Zue et al 1998.

Prepared by Judy Clark, CRES Australian National University for the Senate Rural and Regional Affairs and Transport References Committee inquiry into plantations, February 2003.

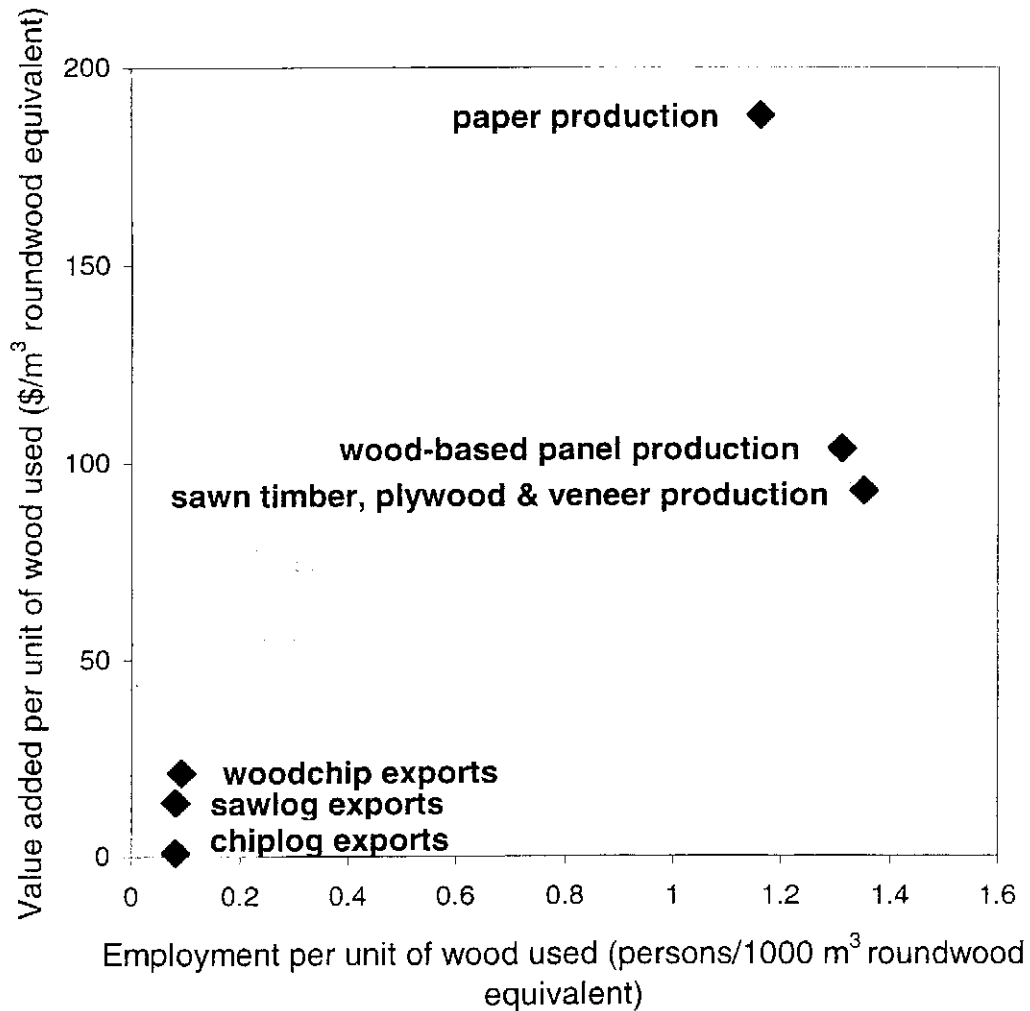
Wood saving in the global wood products industry



Source: FAOSTAT.

Paper production data measured in tonnes have been converted to m^3 assuming $1 m^3$ of paper weighs on average 0.75 tonnes.
 Prepared by Judy Clark, CRES Australian National University for the Senate Rural and Regional Affairs and Transport References Committee inquiry into plantations, February 2003.

Value added and employment per unit of wood used in the Australian wood & wood products industry



Source: Clark 2002, Value added and employment per unit of wood used in the Australian wood and wood products industry (attached).
 Prepared by Judy Clark, CRES Australian National University for the Senate Rural and Regional Affairs and Transport References Committee inquiry into plantations, February 2003.

Export woodchip volume and price movements since first RFA signing

Prepared by Judy Clark, CRES, Australian National University
for Senate Rural and Regional Affairs and Transport References Committee inquiry into
plantations, February 2003

Since the first RFA was signed (1996/97 to 2000/01):

1. Australia's annual exports of native forest wood chips have increased by an estimated 1.6 million m³.
2. The real (inflation adjusted) price for hardwood chip exports has declined by 10.5%.

	1996/97	2000/01	Source/assumption
Hardwood chip exports	2 470.9 (000 BDU)	3 903.7 (000 BDT)	ABARE Australian Forest Products Statistics MQ 2001 & Australian Forest and Wood Products Statistics S & DQ 2001
• Conversion to BDT	2 689.8 (000 BDT)	3 903.7 (000 BDT)	
• Conversion to m ³	4 518.9 (000 m ³)	6 558.2 (000 m ³)	Japanese Finance Ministry conversion factors reported in Neilson & Flynn 1998
Estimated native forest component - plantations netted out	4 518.9 (000 m ³)	6 099.1 (000 m ³)	Assuming plantations accounted for 7% of exported volume in 2000/01.
FOB value	400 231 (\$ 000)	571 411 (\$ 000)	ABARE Australian Forest Products Statistics MQ 2001 & Australian Forest and Wood Products Statistics S & DQ 2001
\$/BDT	148.80	146.38	
	120.3	132.2	
Real (inflation adjusted) hardwood chip export price (\$/BDT)	123.7	110.7	ABS CPI (1989/90 = 100)

Value added and employment per unit of wood used in the Australian wood and wood products industry

Judy Clark
Centre for Resource and Environmental Studies
Australian National University

September 2002

Processing wood into sawn timber and paper generates around 15 times more jobs in Australia than exporting the same volume of wood unprocessed as whole logs. These jobs are in manufacturing and most are in rural Australia. The figure is calculated from the information presented below.

The ratios of value added and employment per unit of wood input were calculated for 1998/99 using Australian Bureau of Statistics (ABS) value added and employment data for each of the main industry groups in Australia. Wood and wood products volume data were sourced from the Australian Bureau of Agricultural and Resource Economics (ABARE) and the Pulp and Paper Manufacturers Federation of Australia (PPMFA). The information and assumptions used to calculate the ratios are presented in table 1.

The ratios could not be calculated separately for the plantation and native forest sectors because the ABS does not disaggregate industry data by wood-growing regime. Using ABS value added and employment data for South Australia – virtually all plantation based – is not a viable alternative because of the high aggregation across products to satisfy confidentiality requirements. Incorporating native forest based production in the exercise will not distort the ratios significantly except for the sawn timber employment to wood input ratio. This ratio is expected to decline as sawn timber produced in more capital intensive plantation mills continues to displace native forest sawn timber.

Employment is that generated inside the mill gate or port; i.e. it excludes employment that is general to all sectors of the industry, namely wood growing, logging and haulage.

Table 1 Value added and employment to wood input ratios for the Australian wood and wood products industry 1998/99. Source: Australian Forest Growers (1996); Australian Bureau of Agricultural and Resource Economics (2001); Australian Bureau of Statistics (2000); Dart Radiata Services (1997); New Zealand Ministry of Agriculture and Forestry (2001); Pulp and Paper Manufacturers Federation of Australia (1999); Ian Sedger pers. comm. 2001, with adjustments as specified.

ANZSIC product number	Product	Value added (\$ million)	Roundwood equivalent (000 m ³)	Value added per unit of wood (\$ per m ³ roundwood equivalent)	Employment (persons)	Employment per unit of wood (persons per 000 m ³ roundwood equivalent)
	Softwood plantation A grade sawlog exports			13.74 ^a		0.08 ^b
	Softwood plantation chiplog exports			0.96 ^c		0.08 ^b
2312	Wood chip exports ^d	168.2	7 896 ^e	21.30	737	0.09
2311 2313 2321	Sawn timber, plywood and veneer	914.8	9 859	92.79	13 309	1.35
2322	Wood-based panels	278.9	2 695 ^f	103.49	3 522	1.31
2331	Paper	711.0	3 783 ^g	187.95	4 382	1.16

- a. ABS does not report on value added for log exports. Value added was estimated for A grade softwood sawlogs by deducting from the New Zealand fob A grade sawlog price per m³ (New Zealand Ministry of Forestry and Agriculture, 2001) in 1996 converted to \$A (\$A100.89), costs of \$A35.25 for stevedoring, wharfage, loading, storage, wharf holding, cartage over 100 km and harvesting (using Australian Forest Growers (1996) for unit cost data) and stumpage of \$A51.90 (NSW Government rates reported by DART Radiata Services, 1997) to give an estimated value added per m³ of \$A13.74. Nominal log prices have remained stable between 1996 and 1999.
- b. Employment in log handling, weighing and storage, quality assurance and administration per unit of wood (Ian Sedger pers. comm. 2001).
- c. Value added calculated using same data sources and method as for A grade sawlogs (note a) but with fob log price of \$A48.21/m³ and costs including stumpage of \$A47.25/m³.
- d. Includes native forest and plantation chip exports to be consistent with ABS value added and employment data.
- e. ABARE reported exports of 1 033 200 bone dry tonnes (bdt) of softwood chips converted to m³ by multiplying by 2.47 and allowing for 7% loss from chipping and chip handling = 2 744 000 m³ roundwood equivalent. ABARE reported exports of 2 851 800 bdt of hardwood chips converted to m³ by multiplying by 1.68 and allowing for 7% loss from chipping and chip handling = 5 152 000 m³. These conversion figures are averages - whole log chipping has lower conversions than residue chips from sawmills.
- f. To the ABARE estimate of particleboard and medium density fibreboard production in Australia of 1 397 000 m³ was added an estimated 100 000 m³ of hardboard production. This combined estimate was then converted to roundwood equivalent by multiplying by 1.8.
- g. Pulp and Paper Manufacturers Federation of Australia reported wood usage of 1 730 000 tonnes of softwood (assuming 1:1 for tonne: m³ conversion) and 1 007 000 tonnes of hardwood converted to m³ by multiplying by 0.85 and adding 310 000 tonnes of imported pulp (90% chemical) converted to roundwood equivalent by multiplying by 3.7.