

TRANS-TASMAN FOREST PRODUCTS TRADE AFTER A DECADE OF NAFTA 1966-75

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(Received for publication 12 March 1979)

ABSTRACT

General trans-Tasman trade has increased in real-term values by over 75% from Australia and 100% from New Zealand but forest products have only increased 3 and 14% respectively. Australia still supplies 15-20% of New Zealand's forest products imports, while the New Zealand share of the much larger Australian imports decreased from c. 17 to 13%. New Zealand has failed to substitute seasoned pine framing for North American softwood imports. Neither has the finger-jointed sawnwood potential of the "old-crop" plantations been exploited.

Expansion of New Zealand newsprint production ill accords with both forest supply potential in the next 15 years, and with Australian plans for increased production. Results apparent from joint forest consultations are limited, and mutual competition for forest products within Australasia appears to be increasing.

NAFTA failed to expand forest products trade in the decade. Australian forest areas appear to be large enough for export surpluses in the year 2000 and the Australasian countries will be mutually competitive on third markets. Increased afforestation will accentuate this.

INTRODUCTION

The New Zealand-Australia Free Trade Agreement — Nafta — (Commonwealth of Australia, 1965) has been operative since 1 January 1966. Details of earlier forest products trade and production have been published: up to 1965-6 (Fenton, 1968) and from 1966 to 70/71 (Fenton, 1972); these papers analysed the Agreement's potential and initial results respectively. In 1966 forest products were generally supposed to offer the best prospects for expanded New Zealand exports; the current paper presents detailed results of the second five-years' trading, and examines the decade's overall achievements in forest products trade.

Tabulated data are generally for the trade years June 1966 to June 1976; where later data are available these have been included in the tabulations, and a short section has been added on developments after June 1976, as far as published data are available.

General Economic Conditions 1966-75

These topics are reported in general economic accounts, e.g. Australian Bureau of Statistics (1976) O.E.C.D., 1976; respective Official Yearbooks of Australia and New Zealand (Department of Statistics, 1976) and are only given in outline here.

New Zealand had a relatively severe depression in 1967, and entered a deeper one from 1974; the intervening years reached a peak in prosperity in 1973. There were visible trade surpluses in five of the ten years 1966-75. The export trading base changed relatively slowly and agricultural products still comprised 72 to 78% of the value of exports in 1973-75, and the United Kingdom, though it took *ca* 22% of total exports in 1975 compared with *ca* 45% in 1966, was still the largest recipient. Trade is still relatively more important to New Zealand than Australia.

Exchange rate fluctuations are given in Table 1. Both Australia and New Zealand have experienced accelerated inflation, and changes in the Consumer Price Indexes are also given in Table 1.

TABLE 1—Consumer price indices, and exchange rates

Year	Consumer Price Index			New Zealand \$ per Australian \$(²)
	N. Zealand(¹) 31/12	30/6	Australia 30/6	
1966	100	100	100	1.2427
7	106	104.1	103.5	1.0 in November
8	110.6	109.7	106	1.0
9	116.0	115.1	109.4	1.0
1970	123.7	120.5	114.6	1.0
1	136.4	131.9	122.4(³)	0.9375 in October
2	145.9	143.6	129.8	0.9375
3	157.9	152.8	146.6	1.0 in June; currencies floated
4	175.4	167.9	171.1	0.93 in January; fluctuated each month by 2 to 3 cents
5	191.7	189.9	193.3(⁴)	0.97-0.99 till August 0.83 in August, with less than 1 cent fluctuation till December

(1) N.Z. Government Statistician, pers. comm.

(2) Reserve Bank of New Zealand, 1977

(3) Australian Year Book 1973

(4) Australian Statistician, pers. comm., 1972-1975.

Australia, aided by greatly increased mineral exports in the late 1960s, had no counterpart of the 1967 New Zealand depression, enjoyed a boom in 1973, and has subsequently experienced a severe depression. In trade ". . . despite the uneven performance of the [Australian] economy in recent years, the balance of payments has remained strong, generally because current account deficits were more than offset by inflows of capital . . . the long-standing position of a deficit on current account altered to one of surplus in the second half of 1972" (Hogan, 1976). Broadly speaking, agricultural products still comprised half of Australian exports in 1974-5, with mineral products *ca.* 27% and manufactures 23%. (Overseas Trade Part 2 1976).

Real GDP per capita fell 2.4% in New Zealand and rose 3.0% in Australia from 1973 to 1976. Corresponding real income changes were —14.4% and +2.0% (Anon, 1977a). Understandably emigration from New Zealand is increasing.

Population rose 17½% in the decade to 3.15 million in New Zealand and by the same percentage to 13.55 million in Australia in 1975. Unemployment was 5.4% in Australia (June 1977 — Anon, 1977b) and *ca.* 1% in New Zealand (Department of Statistics, 1977; Anon 1977c).

Trans-Tasman Trade

The values for all trans-Tasman trade from 1970-1 annually are given on a free on board (f.o.b.) or current domestic value in country of origin (c.d.v.) basis in Table 2; finding the real cost on a cost insurance and freight (c.i.f.) basis is difficult for categories of imports, because import data for c.i.f. values are not always readily available. The Australian trade data values recorded are "values for duty" figures (Overseas Trade, 1971-75).

TABLE 2—Values of trans-Tasman trade of all products (A \$ million)

Year (ending 30/6)	N.Z. exports to Australia (c.d.v.)		Australian exports to N.Z. (f.o.b.)	
	Value	% Australian imports	Value	% Australian exports
1966	46.8	1.6	171.3	6.3
7	47.3	1.6	177.4	5.9
8	61.6	1.9	155.6	5.1
9	74.4	2.2	158.8	4.7
1970	86.4	2.2	198.9	4.8
1	95.2	2.3	232.2	5.3
2	112.3	2.8	277.1	5.7
3	130.0	3.2	325.9	5.2
4	163.1	2.8	449.1	6.5
5	183.9	2.3	529.3	6.1
6	250.5	3.0	415.0	4.3

Source: Overseas Trade 1965-1976.

NOTE: New Zealand Yearbook figures differ slightly from the above.

Australasian Forest Products Trade

Forest products have comprised only 5 to 6% of the f.o.b. or c.d.v. value of Australian imports annually from 1966, and about 2% of New Zealand's. Summarised data on the values of trans-Tasman forest products trade are given in Table 3. The earlier statistical anomalies reported (Fenton, 1968; 1972) have now been reduced, though published statistics contain errors.

Details of Australian forest products imports (all sources) are given by values in Table 4; the New Zealand components are exemplified for the year 1974/5 in Table 5. (Similar annual figures for earlier years are available, they have been excluded here for lack of space.)

New Zealand forest product imports by categories, with the Australian component are given in Table 6. The volumes and unit values of Australian forest product imports from New Zealand are given in Table 7.

TABLE 3—Values of trans-Tasman forest products trade (A \$ million)

Year (ending 30/6)	N.Z. Exports to Australia (c.d.v.)			Australian Exports to N.Z. (f.o.b.)		
	24	25	64	24	63	64
		Division No.:	Total(1)		Division No.:	Total(1)
1966	2.2	6.3	18.5	1.7	0.4	1.6
7	2.3	6.7	16.0	1.8	0.5	1.4
8	3.3	5.7	18.8	1.1	0.4	1.2
9	5.4	5.9	17.1	0.9	0.5	1.3
1970	5.8	6.4	17.0	1.0	0.6	1.4
1	5.0	8.0	17.6	1.0	0.7	1.8
2	4.6	8.5	20.2	1.2	0.8	2.6
3	5.8	9.9	18.9	0.9	1.2	2.5
4	6.7	13.6	24.5	0.9	1.8	3.7
5	4.9	21.1	28.0	1.3	1.7	4.4
6	7.5	23.6	39.1	1.1	1.4	3.5

(1) Totals may not add due to rounding.

Source: 1966-76 Overseas Trade.

TABLE 4—Values of Australian forest products imports (A \$ million) f.o.b. or c.d.v.

Categories	Year ending 30/6										
	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Logs and poles		2.9	3.7	3.3	3.7	3.2	2.8	3.2	5.0	1.8	2.2
Sawn timber											
Douglas fir	16.7	16.4	16.1	21.8	21.5	20.0	20.5	25.6	37.9	30.4	37.9
Radiata pine	2.0	2.0	1.9	2.1	2.2	2.4	1.9	2.0	2.6	3.1	3.4
Malaysian hardwoods	6.1	5.3	9.0	8.0	9.8	10.3	10.0	13.8	21.5	15.8	23.1
Total sawn timber ⁽¹⁾	32.0	31.7	37.4	44.0	49.1	49.2	48.5	64.8	110.4	82.9	99.7
“Veneers and reconstituted wood”		6.4	7.8	8.6	9.0	10.3	10.3	11.6	22.6	20.9	28.1
Wood manufactures ⁽²⁾		2.7	3.7	4.4	5.0	5.3	5.9	6.7	10.5	12.0	15.4
Pulp and waste paper	26.2	26.4	25.1	26.4	36.6	38.4	30.7	37.6	46.3	71.0 ⁽¹⁾	55.0
Newsprint	37.7	37.1	39.1	36.5	31.5	37.3	28.8	34.2	40.7	64.8	52.1
Paper and paperboard		79.8	84.8	90.1	98.0	109.0	101.7	110.9	152.7	204.0	168.3
Totals f.o.b. or c.d.v. ⁽¹⁾ ⁽³⁾		159.9	172.9	188.0	212.8	228.6	212.7	247.7	365.6	418.7	389.8
Totals c.i.f. estimates ⁽⁴⁾		192.0	208.5	234.9	266.6	284.9	264.9	312.1	461.2	519.6	N.A.
Totals ex New Zealand c.d.v. or f.o.b.		25.1	28.0	28.9	29.7	30.9	33.7	35.1	45.8	54.6	71.8
% ex New Zealand		15.7	16.2	15.3	14.0	13.5	15.8	14.2	12.5	13.1	18.4

Source: Overseas Trade, 1966-1975.

⁽¹⁾ Totals include categories not specified here⁽²⁾ Excluding furniture⁽³⁾ Totals by adding categories 242, 243, 244, 251, 631, 632, 633, 641 and 642 ex “Overseas Trade”⁽⁴⁾ Forestry and Timber Bureau Annual Reports to 1974; pers. comm. J. Lytwynsky, 1975

TABLE 5—Australian forest products imports by values 1974-75⁽¹⁾

Commodity	Total forest imports		N.Z. component	
	Value A\$000	% ⁽²⁾	Value A\$000	% ⁽³⁾
Timber (commodity 243)				
*Douglas fir	30,454	7	1,125	4
*Radiata pine	3,152	1	3,112	99
Malaysian hardwoods	15,758	4	—	—
All timber ⁽⁴⁾	82,859	20	4,946	6
Pulp (commodity 251)				
Unbleached sulphate	21,251	5	14,635	69
Bleached sulphate	33,565	8	4,350	13
All pulp ⁽⁴⁾	70,992	17	21,200	30
Paper (commodity 641)				
Newsprint (sheets and rolls)	64,752	16	19,056	29
All paper ⁽⁴⁾	204,016	49	26,377	13
Paper manufacturers (commodity 642)	20,601	5	1,571	8
Total forest products ⁽⁵⁾	413,164		54,703	13.2

(1) Overseas Trade (f.o.b. or c.d.v.) Y.E. 30/6.

(2) Percentage of imports of the Australian forest products listed.

(3) Percentage of category originating from New Zealand.

(4) Totals include other categories not given in detail here.

(5) Commodity classification nos. 242, 243, 251, 631, 632, 641, 642.

* These categories now also include some finished timber.

These figures show New Zealand supplies 12½ to 16% of Australian forest product imports, and Australia supplies 15 to 24% of the much smaller New Zealand forest products imports. In constant 1966 values, New Zealand forest products imports from Australia rose from NZ\$3.2 million to 3.8 in 1976; and (using the N.Z. Reserve Bank figures for Australian inflation) Australian forest products imports from New Zealand rose from A\$27 million to A\$31 million in 1975 (9 years). These are trivial increases in monetary terms. The lack of appreciable growth is even more striking when the forest products component is removed from overall trans-Tasman trade, and values given in 1966 terms:

	1966-75 increase	
	Trade other than forest products	Forest products
New Zealand to Australia	+ 243%	+ 14%
Australia to New Zealand	+ 80%	+ 18%

(The values of Australian forest product exports to New Zealand are very low and percentage figures are susceptible to small changes.)

Australasian Production

Categorised production for the period 1966 to 1976 is given in Table 8, which also includes total production and consumption in round wood (log) equivalents. Total log

TABLE 6—New Zealand imports of forest produce (Values in N.Z. \$ million, c.d.v.)

Year (ending 31/12)	All timber*			Paper & paperboard			Miscellaneous ⁽²⁾			Total			
	Volume m ³ × 10 ³		Value	Volume tonnes × 10 ³		Value ⁽¹⁾	Value		Value ⁽³⁾	% ex A			
	A	All		A	All		A	All		A	All		
1966	38	118	1.4	5.1	4.0	29.6	1.3	9.9	0.5	2.9	3.2	17.9	18
1967	33	108	1.5	4.5	3.3	24.2	1.1	8.9	0.6	3.1	3.1	16.5	19
1968	21	55	1.0	2.7	3.1	23.0	1.1	7.5	0.5	2.8	2.6	13.0	20
1969	16	50	0.9	3.0	3.0	22.2	1.3	9.5	0.6	3.3	2.9	15.9	18
1970	19	65	1.1	4.8	3.0	23.6	1.3	10.9	0.9	4.1	3.2	19.8	16
1971	19	52	1.1	3.7	3.9	24.8	1.6	12.5	1.1	4.5	3.9	20.7	19
1972	16	41	1.1	3.0	4.5	27.7	2.3	11.2	1.3	4.6	4.6	18.8	24
1973†	13	48	0.9	4.2	4.2	33.3	2.3	13.9	2.3	9.1	5.6	27.3	21
1974†	12	75	0.9	9.3	6.1	46.1	3.3	21.2	3.7	12.9	7.9	43.4	18
1975†	11	60	1.3	7.7	5.0	58.5	3.8	32.4	2.9	13.2	8.0	53.4	15
1976	5	25	0.9	4.2	2.9	25.7	3.9	19.9	3.7	10.9	8.5	35.0	24

A = Australian origin

All = From all sources

(1) Values include pulp

(2) Includes panel products, all wood and paper manufactures

(3) Totals include further categories

* Includes logs

† Provisional from 1973

Source: NZFS, 1975a, 1975 & 1976 NZFS pers. comm.

TABLE 7—Volumes and unit values of Australian forest products imports from New Zealand

Year (ending 30/6)	Radiata pine ⁽¹⁾		Douglas fir ⁽²⁾		Major pulp categories ⁽¹⁾		Unbleached sulphate pulp ⁽¹⁾		Newsprint	
	Volume m ³ × 10 ³	Unit value A\$/m ³	Volume m ³ × 10 ³	Unit value A\$/m ³	Volume tonnes × 10 ³	Unit value A\$/tonne	Volume ⁽¹⁾ tonnes × 10 ³	Unit value A\$/tonne	Volume ⁽¹⁾ tonnes × 10 ³	Unit value A\$/tonne
1966	61.2	31.78	4.6	38.98	57.5	109.7	112.6	166.3		
1967	62.6	31.78	5.3	40.68	63.3	111.5	96.5	166.1		
1968	58.6	31.78	20.9	44.91	57.6	95.5	122.7	151.4		
1969	69.3	30.51	47.0	46.61	64.3	92.0	121.8	135.1		
1970	70.0	33.05	48.4	49.15	65.1	96.1	118.7	134.1		
1971	69.6	34.32	29.6	47.88	73.0	103.3	111.4	132.5		
1972	51.1	36.33	32.9	50.32	80.5	105.8	107.6	131.6		
1973	53.3	37.93	31.4	59.59	92.3	107.7	105.6	132.9		
1974	49.9	50.79	24.1	77.81	101.8	128.1	95.0	140.1		
1975	38.7 ⁽³⁾	66.6	9.8	81.94		150.2	108.5	175.6		
	4.2 ⁽⁴⁾	126.5	3.7	88.28	N.A.					

(1) From Overseas Trade

(2) From N.Z. Forest Service. Values based on a calendar year (not altered for devaluation in mid-November of 1967 for the 1967-68 data)

(3) Sawm timber only. 1975 figures pers. comm. from Australian Statistician

(4) Timber sawn and at least partly dressed

TABLE 8—Scale of forest production in Australasia

	1966 ⁽¹⁾		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		
	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	NZ	Aust	
Sawn timber (million m ³)																							
Hardwood	0.08	2.52	0.08	2.45	0.05	2.51	0.06	2.45	0.06	2.48	0.05	2.44	0.05	2.45	0.05	2.42	0.05	2.49	0.04	2.45	0.06	2.38	
Softwood	1.71	0.79	1.67	0.77	1.54	0.74	1.67	0.72	1.75	0.75	1.80	0.77	1.70	0.78	1.74	0.85	2.01	0.84	2.04	0.88	1.95	0.90	
Plywood (000 m ³)	25	42	25	88	18	101	23	96	24	115	26	104	29	103	27	116	30	111	27	76	19	78	
Particleboard (000 m ³)	9	134	15	163	16	204	25	237	39	264	52	281	55	256	72	343	101	427	118	380	128	480	
Pulp (000 tonnes)	417	336	436	365	481	373	494	409	561	497	576	555	581	530	600	538	816	595	893	571	953	510	
Paper (000 tonnes)																							
Newsprint	199	95	187	99	199	94	203	126	207	174	214	179	218	181	213	199	218	201	209	196	219	210	
Paperboard	156	323	173	334	179	339	193	347	239	394	248	385	251	382	240	407	316	437	338	373	336	380	
Other paper ⁽²⁾	357		357		390		447		477		508		529		546		648		571		540		
Log exports (million m ³)	0.5	N	0.5	N	1.1	N	1.4	N	1.8	N	1.8	N	1.9	N	1.8	N	1.2	N	0.5	N	0.7	—	
Chip exports ⁽³⁾	—	—	—	—	—	—	—	—	76	—	93	—	97	0.8	105	1.0	162	2.7	149	2.6	138	2.3	
Total roundwood equivalent (million m ³)																							
Produced	5.9	11.7	6.0	11.3	6.3	11.5	6.9	11.5	7.8	11.6	8.2	11.8	8.0	11.7	8.2	12.5	8.6	13.1	8.4	13.2	8.3	12.5	
Consumed	4.6	15.5	5.0	15.0	4.4	15.8	4.4	15.8	4.9	16.1	4.9	16.4	4.5	15.8	4.6	16.4	5.6	15.2	6.1	15.5	4.5	14.4	

(1) NZ = New Zealand; Aust = Australia. NZ Year ending 31/3; Australia year ending 30/6. N = Negligible.

(2) NZ figures for paperboard and other paper combined.

(3) NZ; 000 Bone dry units; Aust; million green tonnes.

Source: New Zealand Forest Service 1974; pers. comm. Economics Division. Australia: Forestry and Timber Bureau 1966-72, 1977; 1974-76 data — pers. comm. J. Lytwynsky.

production rose by about 40% in New Zealand and 20% in Australia during the decade. Sawn timber production increased moderately in New Zealand; hardwoods still dominate Australian production.

Panel production data before 1971 have been converted to cubic metres, and are approximations; plywood production has continued to be small scale in New Zealand, and Australian production has been variable. Particle board production increased in both countries, following international trends, though well behind countries of similar levels of prosperity.

Pulp production has doubled in New Zealand, and increased 50% in Australia. Considerable electrical power is used to dry sulphate pulp, and more again in reslushing it (drying being *ca* 19% of the gross power usage for unbleached and 12% for bleached pulp — T. Fraser, pers. comm.).

Newsprint production was static in New Zealand, while Australian production rose to about New Zealand levels. The commissioning of a third machine in New Zealand was delayed by labour troubles until late 1975. There have been fundamental changes in the unit weights of newsprint produced. New Zealand newsprint weights were reduced from 52 g/m² to 48.8 g/m² in the last quarter of 1975; Tasman Pulp and Paper Co. advise that a small quantity of 45 g/m² newsprint is also produced and exported to Australia. The company advise there is some movement to both 45 and 40 g/m² newsprint for specific purposes. Australian newsprint production changed from 52 g/m² to 49 g/m² after March, 1974 (A. B. Lytwynsky — pers. comm.). These changes are in line with international trends.

Production of other paper and paperboard remains substantially greater in Australia than in New Zealand.

Export of wood chips to Japan is a new trade for both Australasian countries. The basis for export figures of the hardwood chips from Australia is most unusual — being given in green tonnes, and it appears these are equivalent to roundwood in cubic metres (as data in Cree, 1974, give 2,628,000 m³ roundwood volume for the year 1973-74, compared with "Overseas Trade" data of 2,663,852 tonnes). The figure is required to calculate the overall roundwood equivalent deficit between Australian production and consumption. It appears that most of the expansion in production of logs harvested has gone to the export chip trade — about 18-19% of production.

There has been an earlier, but parallel growth of softwood log, rather than hardwood chip export from New Zealand. Log trade policy has changed twice: ". . . the Forest Service plans to curtail the export of logs from State forests" (NZFS, 1971); this was later modified to: "it is proposed, consistent with the development of local industry to allocate a portion of the cut from State exotic forests to maintain a log export trade at a viable level" (NZFS 1975b).

New Zealand chip exports are largely of softwoods.

Changes after 1975

Complete statistical data are not available, but a brief summary of further changes is given here for New Zealand to indicate developments since 1975. Total New Zealand forest products exports rose appreciably in real terms in the June 1976 year, though they declined slightly (to 7.9%) as a proportion of all exports (reflecting higher agricultural prices). Expansions in the pulp and paper industry were reflected by 2%

rises in the share of newsprint and paperboard sales at the expense of timber and logs. The actual rises in pulp/chips, newsprint and paperboard exports were NZ\$28.6 million; 15.4 and 9.0 respectively, or 49, 54 and 65% (Reserve Bank, 1977). Forest products exports for the calendar year 1976 were NZ\$197 million, Australia taking NZ\$94 million-worth and Japan NZ\$ 56.7 million; the Philippines (mostly pulp); Korea (pulp and logs) and China (pulp and paper) were the next most important though modest importers; exports were equivalent to 4.2 million m³ roundwood equivalent. (NZFS Economics Division pers. comm.).

New Zealand Market for Forest Product Imports

The real value of forest products imports into New Zealand rose 4% in 10 years (Table 6); the Australian component rose about 3%. Australia supplied about 14% of the pulp and paper imports. The United Kingdom is still the largest individual overseas supplier of paper and paperboard; the United States has supplanted Finland as the largest overseas supplier of pulp; Japan's share of both paper and pulp supplies is increasing. The Australian potential was given as ". . . there is also a demand for Australian papers to supplement New Zealand production or for Australia to supply grades which are not made in New Zealand. [But] Availability from Australia is severely limited . . . the opportunity exists under NAFTA for Australia to become a supplier, but unfortunately the capacity . . . is not available" (Conway *et al.*, 1974). There was "ample capacity" available by November 1977 (Australian Paper Manufacturers, pers. comm.).

New Zealand timber imports are small, and the 17% by value from Australia is unlikely to increase rapidly as only specialist timbers are imported. Australian sawnwood exports in 1974/5 were only 3400 m³, 38% of which went to New Zealand. The substitution of preservative-treated poles and railway sleepers has largely replaced the traditional importation of strong, durable hardwoods from Australia; supply would probably have been restricted.

New Zealand has a generally rising surplus of roundwood available for export (Table 8). The 1970 projections (Anon, 1970) of total, and export availability would now have to be amended, as the plantation planting rate has approximately doubled, and future local population estimates have been revised downwards.

The Australian Market for Forest Products Imports

Australian production and consumption of sawlogs and pulp logs by round produce equivalent is given in Table 9; values of import categories are given in Table 4. After allowing for the chip exports, there is a deficit of about 2 million m³ in each of the sawlog, and pulp/paper product categories. Table 4 indicates that paper is the largest component of forest product imports, approaching half the total value. Table 5 shows newsprint amounts to a third of the total paper import costs; the New Zealand component of this newsprint trade has been 49, 41, 33 and 29% from 1971/2 to 1974/5 respectively. The volume of New Zealand newsprint exports to Australia has also decreased (Table 7). As New Zealand total exports were relatively constant — 126; 124; 111 and 120 thousand tonnes for the calendar years 1971 to 1974 respectively — NZFS 1976 — the balance has been sent elsewhere. Future newsprint supply and access is now (August, 1977) under active debate, or confrontation, and is discussed

TABLE 9—Australian production and consumption of major forest products by roundwood equivalent

Year (ending 30/6)	Sawlogs				Pulp logs		Paper and paperboard	
	Production		Consumption		Production		Consumption	
	Volume ⁽¹⁾	% ⁽²⁾	Volume ⁽¹⁾	% ⁽²⁾	Volume ⁽¹⁾	% ⁽²⁾	Volume ⁽¹⁾	% ⁽²⁾
1966	8.35	71	9.74	63	1.53	13	3.42	22
1967	8.21	72	9.59	64	1.47	13	3.34	22
1968	8.26	72	9.82	63	1.53	13	3.45	22
1969	8.15	71	9.82	62	1.83	16	3.79	24
1970	8.03	70	9.67	60	1.83	16	4.25	27
1971	8.29	70	10.14	62	2.14	18	4.20	26
1972	8.25	71	9.95	63	2.03	17	4.60	25
1973	8.16	65	10.05	61	3.06	24	5.12	27
1974	7.10	54	9.26	61	4.63	35	4.42	29
1975	6.93	53	9.06	59	4.98	38	4.34	35
1976	6.85	55	9.33	65 ⁽³⁾	5.01	32	3.72	26

(1) Million m³

(2) Percentages of total roundwood equivalent produced

Sources: Forestry and Timber Bureau, Annual Reports to 1973-4; pers. comm. thereafter.

(3) Abnormally high, due to a substantial increase in imports of sawn timber — F. & T. B. pers. comm.

later in this paper. Paper other than newsprint has been unimportant as a New Zealand export until 1974, when kraft paper exports started to increase.

Pulp is another major forest products import; unbleached sulphate pulp comprises 4-5% of total forest products imports and is still dominated by New Zealand supplies. Again, the New Zealand percentage has decreased from 82% in 1971/2 to 69% in 1974/5. By contrast bleached sulphate pulp import values have risen from 0 to 13% for those years. There is a tariff advantage to New Zealand.

Sawn timber comprises 20-25% of Australian forest product imports by value, and New Zealand has a tariff advantage. New Zealand Douglas fir (*Pseudotsuga menziesii* Mirb. Franco) sales have declined in volume from 1969 and 1970. But checks against New Zealand export volumes indicate possible classification under "NEI" categories in Australian imports and the total discrepancy for this species for 1970/1 to 1974/5 was 32 000 m³. (National totals for all timber will be unaffected.) Details of North American and New Zealand Douglas fir imports are given in Table 10. After a rise to 1969 and 1970, Douglas fir sales from New Zealand declined as a percentage of overall imports. This is despite a tariff advantage to New Zealand. A feature of the Douglas fir imports, which dates back through the century, is the continued sustained sales of United States timber to Australia, although the U.S. is not the major world exporter, Canada (British Columbia) being the dominant world supplier. The decline of radiata pine (*Pinus radiata* D. Don) sales from New Zealand is in all three measures: real terms of 1966 values; as a percentage of New Zealand's total production, and of Australia's production. The amount of kiln-dried timber exported from New Zealand in 1976 (Y.E. 31/12) was 12 400 m³, with 1 540 m³ of construction grade. These are

TABLE 10—Australian imports of Douglas fir sawn timber

Year (ending 30/6)	Volumes (m ³ × 10 ³)			Values (A\$ million)			Value/m ³ (¹) (A\$)		
	Canada	NZ	USA	Canada	NZ	USA	Canada	NZ	USA
1966	244	5	170	9.2	0.2	7.4	37.8	39.0	43.8
1967	232	5	181	8.5	0.2	7.7	36.6	40.7	42.4
1968	207	21	176	7.6	0.9	7.6	36.6	44.9	43.0
1969	252	47	162	11.5	2.2	8.1	45.8	46.6	50.0
1970	197	48	144	10.0	2.4	9.1	50.9	49.1	62.7
1971	181	30	205	8.0	1.4	10.5	44.4	47.9	51.2
1972	206	33	177	9.6	1.7	9.2	46.7	50.3	51.9
1973	230	31	204	9.2	1.9	14.4	40.1	59.6	70.6
1974	191	24	246	14.0	1.9	22.0	73.4	77.8	89.7
1975 (2)	147	10	226	12.1	0.8	17.1	82.6	81.9	75.8
(3)	—	3.7	—	—	0.3	—	—	82.2	—
1976 (2)	117	35	291	9.3	2.3	26.1	79.5	72.6	89.7
(3)	—	13.4	—	—	1.1	—	—	83.6	—

(1) Unit values based on more detailed figures

(2) Sawn only

(3) Sawn and Dressed

Source: Overseas Trade 1966-76.

trifling volumes, and higher volumes of kiln dried timber were exported annually in 1957/60. Timber sales, like newsprint, are discussed further below.

DISCUSSION

While the effect of Nafta on overall trans-Tasman trade has been termed "more successful than might have been expected . . . [with] . . . remarkable growth in trade between the two Tasman nations in the 10 years since . . . 1966" (Anon, 1976a) the 75 to 100% increase in trade in real terms has been, in fact, little more than part of a wider trade expansion, as shown by the percentage figures in Table 2. The trans-Tasman trade in all goods had shown little change as a percentage of overall trade. New Zealand exports should have been assisted by the 19 to 35% devaluations relative to 1966. On this basis the 3 and 14% rise in the real value of trans-Tasman forest products trade reflects an almost complete failure to keep up with general trade expansion, and on the New Zealand side to benefit from devaluation.

This has been caused neither by any shortage of basic log availability in New Zealand (Table 8), nor of overall export capacity. Overall forest exports were 3% of 1963/67 exports; 5-6% in 1968/73 and 7-8% in 1974/76 (NZFS 1975b; Anon 1976b). The data presented here also show Australia continued to be a market for forest products which were apparently available in New Zealand, yet New Zealand's share of the market fell from 17½% to 13%. Hence the failure has been peculiarly:

(a) trans-Tasman

(b) in forest products.

The discussion below first extends the categories of newsprint, kraft pulp and sawn timber, with consideration of the current plantation potential. There is a brief examina-

tion of some Australian forestry attitudes; an analysis of Australian future production; and the scope for forest products trade in the next 10 years. Forest potential after 1990 is discussed, and the section concludes with some short-term recommendations from the New Zealand viewpoint.

Newsprint

The New Zealand problem in the past decade has been one of production. The anticipation “. . . production will increase to some 350 000 tonnes/annum during 1975 from a third machine at present under construction” (Conway *et al.*, 1974) proved optimistic. The commissioning of the machine was delayed by prolonged strikes; and full production after completion in the financial year to March 1977 was also affected by strikes (Tasman Pulp and Paper Co., 1977).

The restriction on supply has been accentuated in recent years by the internal pricing policy in New Zealand; the Tasman Company itself describes this as “The current [1977] imported price of newsprint into New Zealand would be approximately \$130 per tonne in excess of that recommended by the NPA to its members and thus the situation in respect of the sale price of over 100 000 tonnes of newsprint sold each year within New Zealand remains completely unrealistic and untenable.” (Tasman Pulp and Paper Co., 1977). The figures are borne out in international comparisons. This situation is in total contrast to that suggested in 1968: “New Zealand’s rising consumption of newsprint, an item — in contrast to kraft paper — whose cost does not greatly influence the price of other export primary products, could be subdued by imposition of a sales tax on both domestic and imported paper. Admittedly, newsprint is sold on large-scale, long-term contracts, but a slackening of internal growth in demand could stimulate exports” (Fenton, 1968). But New Zealand consumption rose from 31 to 41 kilos/capita from 1966 to 1974 (NZFS, 1975a), and demand was presumably stimulated by low prices in recent years.

Newsprint was duty-free before Nafta, and this status was maintained. In early 1969 “Agreement having been reached between the Australian and New Zealand Governments on expansion of newsprint exports, Tasman Pulp and Paper Co. Ltd are planning to install a third newsprint machine” (NZFS 1969). The Agreement referred to above is apparently contained in “The text of the February, 1969 Ministerial exchange of letters [which] has not been made public but their existence has been known since the signing and reference has in the past been made to them”. (NZ Dept. of Trade and Industry, pers. comm.). A later press release (30/9/76) included:

“ . . . In his letter, Sir John McEwen had indicated that provided New Zealand newsprint of a satisfactory quality was available on reasonable delivery at a reasonable price, Australia would import only 11 percent of its total usage of newsprint from countries other than New Zealand. It would, in other words, source 89 percent of its newsprint requirements from Australia and New Zealand.”

“What the two Ministers then envisaged,” Mr Adams-Schneider said, “was that the utilisation of New Zealand newsprint would be left for commercial discussions between the New Zealand industry and the Australian users — negotiations undertaken, of course, in the knowledge of this commitment.”

“If these commercial negotiations failed, then the two Governments would consult to see what should be done to realise their objectives.”

“This letter,” Mr Adams-Schneider explained, “is not formally a part of the New Zealand Australia Free Trade Agreement in the same sense as the exchange of letters of August 1965,

which is appended as a schedule to the agreement. Like a number of other communications between the two Governments, however, it sets out understandings, arrived at in order to further Nafta objectives, and conceived within the Nafta frame-work."

"Discussions on supply questions for 1977 are being held at the commercial level, and I hope that these can be brought to a satisfactory conclusion. I hope that it will not be necessary for the two Governments to become involved." — (Special) (Release 30/9/76)

A New Zealand press comment on this situation was "But it was never tied up. The Aussies don't have to take our newsprint — and just as well, they say, because of all those strikes and holdups at Kawerau [Tasman]. All we have is one of those loosely written 'understandings' which doesn't have to be broken when they ride over it. . . .the aim: [of Australian Newsprint Mills] to produce 180,000 tonnes of newsprint every year . . . I'm wondering why . . . more time wasn't spent . . . in tying up the loose ends . . . for those loose ends will hang Nafta" (NZ Truth, 1977).

The Company's view is:

". . . at this stage a degree of uncertainty exists in respect of the sale of the total tonnage of newsprint to be produced in the forthcoming year (1977/8). This is due not only to the existing competitive situation in the world markets but more particularly to the reluctance of some Australian newsprint users to comply with the arrangements agreed between Governments under the New Zealand-Australia Free Trade Agreement (NAFTA). The third newsprint machine at Kawerau was installed and brought into operation in November 1975 on the clear understanding that the greater part of the additional production would be sold in Australia under the aegis of NAFTA which provides for New Zealand manufactured newsprint to be given preferred entry into Australia.

There has been considerable reference in recent months in both local and Australian media to a proposed development by Australian Newsprint Mills Limited which would include the construction of a newsprint manufacturing unit at Albury, New South Wales, to produce 180 000 tonnes of newsprint per annum for supply to the Australian market. This development, if proceeded with on the basis of the new mill being brought into production in 1981, is of major concern to the Tasman Company as it would completely negate the agreed intentions of both the Australian and New Zealand Governments in respect of the sale of New Zealand newsprint in Australia." (Tasman Pulp and Paper Co. 1977.)

These represent the New Zealand point of views; the Australian one seemingly has no official voice. The critical point appears to be whether the 1969 statement (quoted in the 30/9/76 release above) is, or is not, *formally* covered by Nafta. A detailed Australian press account included the information that the McEwan letter was drafted, but never signed and "when Mr Anthony became Minister of Trade another letter was drafted, again with the agreement of the [Australian] newspaper proprietors. It was similar in content and [it] too has not been signed" (Hall, 1972). This account includes: "Australian Newsprint Mills (ANM is) controlled by the newspaper proprietors (and) has a captive market for all its output and . . . [in] the long-term contracts with ANM . . . the price . . . is pitched to allow ANM to pay a 10 percent dividend and place 'adequate' provision to reserve."

The view of the Tasman board, on the introduction of ANM to the Tasman Company and vice versa was ". . . strongly of the opinion that the long term advantages of the arrangement will be substantial, not only in terms of the association with the Company's principal customers, but also in the orderly development of the industry in New Zealand and Australia in fields vital to the future of Tasman" (Tasman Pulp and Paper Co., 1962). As directors of Tasman sit on ANM's board, and vice versa, it is difficult to see

how the situation could have progressed/deteriorated to the present state.

The position whereby ANM is planning for expansion, and greater Australian self-sufficiency in newsprint reflects a long-standing, widespread and consistent policy of newspapers to protect/control their raw material supply. The origins of ANM, *c.* 1940, were based on a technological achievement in making newsprint from *Eucalyptus* (that, even now, few companies emulate) for strategic reasons.

Obviously much information is unavailable in published sources. The ownership of Tasman Pulp and Paper Co. would probably not be tolerated in many developing countries today (details are summarised in Table 11). The N.Z. Government also largely underwrote the project during construction (NZFS, 1953). The dominance of overseas interests is marked. Fletchers has a considerable Australian shareholder (The Colonial Sugar Refining Co. held 27% of shares in 1964 — Diehl, 1969; this has fallen to 22.27% in 1977 — N.Z. Herald, pers. comm.). N.Z. Forest Products Limited was 20% Australian held in 1969 (Diehl, 1969). Bowaters acted as sole selling agent (Diehl, 1969; N.Z. Forest Service, 1960); this company, after a decade in which dividends were reduced, merged with Ralli International (Sunday Times, 1972; 1974) to become a conglomerate, rather than a newsprint company. The press report that "Finally, in 1975 the Labour Government agreed to kick the multi-national Bowater Paper out of Tasman's shareholding fold. Tasman had never slept peacefully with Bowater, which muscled its way into the company in 1959. The Government purchased the bulk of the Bowater holding of 6.6 million (\$0.50) shares . . . and foolishly it left Bowaters with an international sales agent contract which does not expire until 1983" (Birchfield, 1977). The original date for termination of the sales contract was 31/12/78, not 1983. N.Z. Forest Products Limited now (1979) has a 7.8% Australian shareholding.

By the time this paper appears, the situation over newsprint will probably be resolved, but one irony of the situation is that the extra newsprint capacity was not a first objective, but very much a second best alternative. The statements in 1965/6 (quoted in Fenton, 1968) were clear that forest products would be the corner stone of Nafta, and the original New Zealand hope — allowed under Nafta — was to share the Australian tariff protection and produce kraft paper/paperboard, not newsprint, from the expanded wood supply available to Tasman. In reaction, the largest Australian Company — Australian Paper Manufacturers Ltd (APM) stated that purchases of New Zealand kraft pulp would cease. The New Zealand response was to accede to the position and abandon plans for kraft paper expansion.

There is little formal economic literature on the Australasian pulp and paper industry, which is deplorable for several reasons: its size and importance; the effect of monopoly or near monopoly on the ultimate consumer; the demand for (or at least the effect of) either high tariffs (Australia) or import control (New Zealand). The Official Secrets Act makes any official comment suspect. The few sources of information are the press, and, occassionally, the universities. One external view from university sources gives a historical review of the APM/Tasman (or Australian/New Zealand) debate over linerboard. It showed APM's position would have been ". . . intolerable . . . [being] . . . subjected to the mercy of a discriminating pricing policy, whether for pulp or [liner] board, and at the same time be debarred from fighting back if denied entry into the New Zealand market by import licensing" (Diehl, 1969). Diehl concluded a review

TABLE 11—Tasman Pulp and Paper Co.; ordinary shareholding in percentages

Holder	Country	Inception (1952?)	1954/5	1959	1962	1977	1978 Jan.	1978 Nov.
N.Z. Government	NZ	45	35	28½	23	34	34	43
Fletcher	NZ ⁽¹⁾	32	17½	14	11	17	36½	46
Public	NZ ⁽¹⁾	23		14	11	11	9 ⁽¹⁾	11
A. E. Reed	UK		26	21	17	17	0	
Bowater	UK			21	17	0		
ANM	A				20½	20½	20½	0
CDFC	UK		4½	0				

Figures are rounded and may not add to 100

Sources:

Inception	} Tasman Pulp and Paper Co. 1954
1954/5	
1959	NZFS 1960
1962	Tasman Pulp and Paper Co. 1963
1977	Tasman Pulp and Paper Co. 1977
1978 Jan.	New Zealand Herald 21/1/78
Nov.	New Zealand Herald 15/11/78

⁽¹⁾ Not all these shares are New Zealand held.

ANM Australian Newsprint Mills.

CDFC Commonwealth Development Finance Corporation.

of these negotiations with "It is abundantly clear that some high-powered bargaining had taken place, resulting in a quasi political solution". The official explanation was: "A proposal for the establishment of a plant to produce linerboard in New Zealand, mainly for the Australian market, has been under study by the industries in both countries. They have now reported that at this stage this proposal would not be an economic and viable proposition" (Joint Ministerial Statement 5/4/68 — supplied by APM). In the author's view, this statement needs publication of the detailed studies before it is persuasive.

The forest supplies available to Tasman (and the other pulp mills) in 1966-1975 were increasingly suitable for kraft, and less so for newsprint, being older, with higher density and so affording higher kraft yields, but containing more heartwood and requiring higher bleaching costs for newsprint.

Sulphate Kraft Pulp

New Zealand's share of the unbleached sulphate pulp imports into Australia by value was 68% in 1965-6 (Fenton, 1968), and 69% in 1974-5 (Table 5). The value of these imports have, however, doubled in real terms in this period.

There has also been a growth in bleached kraft pulp sales from New Zealand, both in percentage (from 1 to 31%) of such Australian imports and in real values from 1965-6 to 1975-6 when imports reached A\$6.5 million. It is argued that sales could have been higher and achieved earlier, if "the production of bleached pulp for export had commenced earlier, and Tasman's pulp mill expansion had not been delayed by industrial troubles" (APM, pers. comm.).

One Australian opinion of Australian Paper Manufacturers Limited (APM) was: "they said [to the Australian House of Representatives standing committee on environ-

ment and conservation inquiring into the softwood timber industry] that under Nafta Australian importers had to take 75% from New Zealand or pay duty on its imports from other sources. "The effect of this is that New Zealand pulp enjoys a preferential position in the Australian pulp market up to 70% of that market" . . . APM . . . said that the New Zealand pulp mills and the New Zealand Government did not consider, specially in times of shortage, that they had any reciprocal obligation to give their Australian customers priority of supply of pulp over other export markets. APM considers this is inequitable and has requested the Australian Government to have the inequity corrected . . ." (Anon, 1975).

This scarcity situation is, presumably, hypothetical as the New Zealand share by value of Australian imports of unbleached kraft pulp was 68% in 1965-6 and 65, 82, 75, 74 and 69% from 1970-7 to 1974-5 (based on "Overseas Trade" figures), and the volumes in Table 7 are relatively stable.

APM is now (late 1977) satisfied with its existing wood supply contracts with the New Zealand pulp mills. The New Zealand mills have acknowledged their preferred position in Australia and have given APM appropriate priority in the supply of pulp (APM, pers. comm.).

The New Zealand view is: "Australia is a very strong buyer, and Australian companies claim to be adversely affected by the preferred entry agreement for New Zealand pulp, in that mills elsewhere regard Australia as a New Zealand market for the future and are said, therefore, to be reluctant to channel their present scarce supplies into Australia. The preferred entry agreement for New Zealand softwood pulp is reciprocal in preferred entry for Australian hardwood pulp to New Zealand, and if this pulp, especially bleached hardwood pulp, were available to New Zealand from the Australian mills it would be readily purchased. The same arguments can be advanced in regard to the unwillingness of overseas mills to supply hardwood pulp to New Zealand, as this is more likely to be an Australian producers' market in the future" (Conway *et al.*, 1974).

The results for unbleached kraft pulp exports from New Zealand are uncorrected; corrected money values, for A\$ and NZ\$ (viz. including exchange fluctuations) are shown in Table 12. These data show that real prices of pulp were steady or declining over this eight-year period, and largely repeat the earlier (1957-65) trend which was of a 9% drop in real terms in 10 years (Fenton, 1968). The prolonged, clearcut fall in the real price of unbleached sulphate pulp has not been commented on in New Zealand, but is surely a strong disincentive for its production. New Zealand production is from two companies — N.Z. Forest Products as well as Tasman — and has, in fact, increased formidably from both while real prices fell.

Kraft Paper and Liner Board

Post-1975 developments have included the commissioning of a new kraft paper and kraft liner board plant at N.Z. Forest Products Limited; an appreciable proportion of its output is exported to Australia.

Sawn Timber

New Zealand exports of radiata pine to Australia reached 96 000 m³ in 1960 and have now fallen to about 50 000 m³ annually; this dismal record occurred while New Zealand production rose 85% to 1.46 million m³ by 1974 (NZFS, 1975a). The grades

TABLE 12—Australian unbleached kraft pulp imports, by unit values, from New Zealand 1965/66-76

Year (ending 30/6)	Values per tonne		Values per m ³ roundwood equivalent	
	Actual A\$(¹)	1966 A\$	1966 A\$	NZ\$
1965/6	109.7	109.7	23.1	18.6
7	111.5	107.7	22.7	22.7
8	95.5	90.1	19.0	19.0
9	92.0	84.1	17.7	17.7
70	96.1	83.8	17.7	17.7
1	103.3	84.4	17.8	17.8
2	105.8	81.5	17.2	18.3
3	107.7	78.3	16.5	16.5
4	128.1	85.4	18.0	18.5
5	150.2	81.4	17.2	17.6
6	160.1	75.0	15.8	18.9

(¹) Source: Overseas Trade; 1974/5 figure based on pers. comm. from Australian Statistician.

of the New Zealand exports are not fully known, but construction grade comprised 3% of exports of radiata pine in 1976 (and was generally lower in the 1972-5 years). Again these proportions are no better than in the 1950s and 1960s (Fenton, 1968). An earlier analysis of the failure of the New Zealand industry ". . . to appreciate the interactions between age, tree defects and timber quality . . ." and to kiln-dry framing timber has been published (Fenton, 1968); the poor design of "integrated" saw/pulp mills is an additional factor. In 1954 two mills cutting exotic timber were in the 23 600 m³ sawn output per year class and produced 29% of the exotic cut, in 1974 12 such mills produced 64% of the exotic cut (NZFS 1975a), but export performance to Australia deteriorated. Although 20 years ago "Industry is confident that kiln-drying down to 12 per cent and elimination of pith from overseas framing will result in satisfactory framing being available for use in Australia" (Ward, 1957), the result is an abject failure of technical ability. In total contrast "all framings . . . timber produced by South Australian Sawmills is kiln dried" (Woods and Forests Dept., pers. comm. 1977). As the New Zealand industry includes two State mills whose original justification included a demonstration and development role, the failure is compounded even further. Kiln-dried timber was duty-free before Nafta.

The final lifting of the duty on planed wood seven years after Nafta originated should have removed the only tariff impediment on supplies of finger-jointed wood, which remains a relatively unexploited product from the "old-crop" (pre-1940 plantings) plantations (Fenton, 1967). About half the total cut could be processed into clearwood.

Douglas fir exports from New Zealand have fallen from a 1969 and 1970 peak. The reasons were discussed earlier (Fenton, 1972) when the author asserted ". . . New Zealand Douglas fir sales now have to recapitulate the earlier lessons of radiata pine sales, to re-establish a reputation tarnished by initial failure to grade" and concluded "This failure was due to the technical ignorance of the managements concerned; a quick and transitory profit was preferred to the production problems involved in quitting

stocks of low grade Douglas fir labelled as such". This criticism should be extended "to the Australian importers, who ignored the necessity to do some grading and branding to Australian usage" (C. R. Hellawell, pers. comm.). Again, a State demonstration sawmill had a considerable share of the Douglas fir logs available.

While Japan is now the largest overseas market by volume of New Zealand sawn timber, the unit values are appreciably higher in Australia (1976 calendar year).

Current Forest and Plantation Potential

The log supplies of Australia and New Zealand are markedly different. Indigenous forests are now of limited importance for wood production in New Zealand, their high grade softwoods comprised 16% of 1976 sawn timber production and little of the industrial wood. Neither indigenous nor exotic hardwoods are yet of any consequence as a wood production resource. Australia, by contrast, still relies heavily on indigenous hardwoods for major forest industries; internal demand has presumably restricted the export potential of this resource. Scope for short fibre pulp and paper products, and for hardwood timber exists in Nafta. Conservationist pressures are now strong in both countries and affect utilisation prospects, and no very obvious large-scale changes appear likely in the immediate (5 year) future.

The plantations contrast with the indigenous forests, both countries concentrating on radiata pine (except in those parts of Australia where its growth is restricted by site, poor soils plus restricted rainfall in the west and south; and the low-altitude tropics). But the current supplies of radiata pine are again, markedly different; logs in New Zealand being mainly from "old-crop" (pre-1940 establishment) clear-fellings, while Australian supplies are largely of thinnings. South Australia is an exception, having a predominance of old (50-year plus) radiata pine in the log supply. During the decade of Nafta the bulk of the New Zealand log supply has, therefore, become progressively older, hence being more suitable for kraft pulp/paper (Reid, 1962) and less suitable for groundwood, while its increasing framing timber potential has not been exploited for export. The strongest radiata pine comes from the forests in the northern parts of New Zealand and the State forests of Auckland Conservancy now produce up to 0.5 million m³ of old-crop radiata pine annually. It is recommended that an increasing proportion of this cut be allocated to export markets, instead of the local one. This would amend current ideas on local supply forests and exports coming from the large "integrated" mills, but would direct the most appropriate resources to sorely-needed exports.

Australian production from current plantations will naturally improve in basic quality as the trees become older, and larger, but with the accelerated planting more than half the plantation area is now 0-10 years old (Brown, 1976). Policy in Australian states has generally been of obtaining as much wood as possible from plantations by implementing production thinnings, but whether this emphasis will be sustained is doubtful in some states. In the interim — till 2000 — much of the wood becoming available will be relatively young.

Production thinning's role in New Zealand plantation management is still debatable, but as a generalisation the proportion of the log supply of radiata pine from thinnings has been low, so the size of the log delivered in New Zealand has been larger than in Australia. The advantage has remained pitifully unexploited. But New Zealand's plantation expansion has also resulted in a large area of young forests and future wood

supplies, as in Australia, will be of much younger wood than is being used at present. The underlying effect of this will be considerable — the tendency being to favour production of sawn boards and newsprint, as against sawn framing timber and kraft products. Further, the forecast resource of the two countries will become more similar, and hence more competitive. New Zealand's under-exploited advantage presented by an abundance of old-growth stands is not likely to be available again; future planning must take cognisance of the potential quality of the young wood of the future plantations.

Australian and New Zealand Policy

An earlier statement and quote said: "The future Australian market is conjectural; if the Australian afforestation programme is fulfilled and consumption projections are correct, it is unlikely that much could be sold there. The major decision — whether Australia should even aim at self-sufficiency or rely partly on New Zealand supplies — has already been taken: it is ironical that this occurred while the F.T.A. itself was being decided. It aptly illustrates the reasons already given for past poor trading relations: ' . . . the rather exuberant nature of Australian nationalism has fostered an unwillingness on the part of Australian politicians and officials to make concessions to N.Z. viewpoints, while N.Z. parochialism and insularity have reinforced the complacency of the New Zealanders about the world they live in' (Robinson, 1965)". (Fenton, 1968).

One Australian Ministerial view was:

"Some people held that: . . . New Zealand . . . would flood the Australian market and would cause damage to the Australian industry . . . but the result has proved very satisfactory. While New Zealand has increased slightly her exports to Australia there has certainly been no flooding of the market. In 1955-6 we imported \$26.7 million from New Zealand and in 1967-8 this had only gone up to \$28 million, and last year to \$29 million, so overall this has made very little difference to the local industry" (Fairburn, 1969). Recent Australian opinion and attitudes, allowing for the Australian plantation programme, is epitomised by "A. J. Watt said that during the 1974 For-Wood Conference the question had been raised why the Australians should grow forests when New Zealand could do so more easily. One reason for increasing production of forest products was to increase export income but Australia has neither a balance of payments problem nor are imports of wood significant in terms of total imports. A second reason . . . was as a strategic reserve although this was no longer considered valid. This left the only valid reason that can be offered for expanding the forest area as one of comparative advantage. [He] was not certain that the Australian forest industry had an advantage over New Zealand but felt that the Australasian area in general had an advantage over the rest of the world in terms of both tree growth and processing. Rapid forest growth was a typical feature whilst the good capital situation and social infrastructure permitted setting up of competitive industries. He felt that there was plenty of opportunity for both countries to export without offering undue competition to the other." (Forest Development Conference, 1975).

An earlier Australian statement "A New Zealand Forest Service study indicated that the present forest resources of New Zealand are inadequate to meet the likely needs of New Zealand by the turn of the century" (Jacobs, 1963) was refuted previously (Fenton, 1968). Ten years later it was stated "Recent forecasts by the New Zealand Forest Industries indicate that that country will have no exportable surplus of sawn

timber by 1985" (Jacobs, in Anon. 1973); this seems remote from actuality for 1985, and grossly misleading for any long-term forecast.

The position is exacerbated by the fact that earlier projections of Australian demand (Jacobs reported in Williams, 1968) are already proving to be too high. The projected population for 1975 was 14 million, against an actual 13.55 million; the projected total wood consumption was 18.97 million m³ round wood equivalent, allowing for the lower population would reduce this to 18.36 million m³. But the average yearly consumption for the three years 1974-76 inclusive was 15.03 million m³ — 22% less than the population-corrected projection.

The initial conclusion is that Australia will probably be self-sufficient in forest products in the year 2000, based on managed production from the existing forests. In fact there are no conclusive reasons why Australia should not become a wood exporting country; physical and biological conditions, and managerial ability are favourable, though, not exceptionally, no formal cost of production figures are available. An analysis of over 150 policy statements for successive (British) Commonwealth Forestry Conferences shows the more limited aim of autarchy is held by all but a few countries, and has generally been a consistent post-war policy of Australian States; New South Wales statements being particularly clear. Whether conservationist pressures succeed in curtailing plantation establishment in Australia is uncertain; but it would be unwise for New Zealand planning to assume this (and vice versa).

The conclusion is clearly that the Australasian countries will be in direct competition, with similar plantations for somewhat conjectural markets. There is one apparent consolation in this situation — the hitherto ignored Australasian consumer could, if Nafta continues, benefit from actual or potential supplies from the other country; this consolation would be lessened by the fact that plantations have to be paid for — either by taxpayers or shareholders. Forest products will then be a competitive primary product and, in contrast to agricultural products, will presumably be under Nafta.

The general economic outlook for Australia is better than for New Zealand, and further changes in exchange rates are likely to continue to favour Australia (making New Zealand supplies, however, cheaper). The larger internal Australian market will presumably give Australian forest producers an advantage. It remains to be seen if the dairy-products situation is repeated whereby Australian surplus production is sold overseas at well below domestic prices. Future negotiations could well consider these points, this time in advance.

Short-term (1977-1990) recommendations for New Zealand are

1. The present prodigal utilisation of the first crop old radiata pine stands be better directed to export markets.
2. Kiln drying of framing timber be begun at once, the State mills being once again used as demonstration units for this purpose.
3. Export dried-framing quotas should be applied to the old forests grown on Auckland clay and sand sites, the quotas being increased annually.
4. Finger jointing potential be better exploited.

CONCLUSIONS

1. Forest products trade has failed to match the general expansion of trans-Tasman trade.
2. The initial liberalisation of forest products trade was too slow and too restrictive — e.g., seven years to phase out planed or dressed timber duties.
3. The major New Zealand error in the decade appears to have been to drop the planned kraft paper/paperboard expansion by Tasman.
4. Newsprint sales arrangements have been unsatisfactory.
5. Inability of New Zealand industry to dry wood for the established market reflects low technical standards.
6. Poor results from "integrated" large scale plants indicate indifferent plant design in log segregation.
7. Overall lack of New Zealand industry recognition of the technical potential of the "old-crop" radiata pine — now a dwindling resource — has resulted in a poor export record for sawn timber.
8. Resources in *c.* 20 years' time will be markedly younger than those currently utilised.
9. There is no point in scrapping the forest products provisions of Nafta, although they have had little effect in stimulating trade in the first decade.
10. Australia and New Zealand will have similar products competing on similar markets in *c.* 25 years' time, as both are planning plantation expansion and have sufficient resources for domestic requirements.

ACKNOWLEDGMENTS

The writer's original work on the subject was largely financed by a Rotiman's Research Fellowship at the Department of Forestry of the Australian National University. The Statistics section of the New Zealand Forest Service supplied additional recent figures, but otherwise data used are taken from public sources.

REFERENCES

- ANON 1970: Report on Australia/New Zealand forest resources, consumption, production, imports and exports. NAFTA Joint Consultive Council on forest industries.
- 1973: Deafening silence broken. Dr Jacobs speaks up in Victoria. **Australian Forest Industries Journal**, Sept. 73: 56.
- 1975: APM wants incentives for forestry industry. **Evening Post (Wellington)** 8 April 1975.
- 1976a: NAFTA: the little brother and the big brother. **N.Z. Economist** May 1976; 12, 13, 39.
- 1976b: Overseas Exchange Transactions. **Reserve Bank Bulletin, Wellington** 39(8): 242-53.
- 1976c: "In only 20 years". **Tradewind** 8(3): 3-5. (Newspaper of Tasman Pulp and Paper Co.).
- 1977a: Business News (reporting 1977 OECD Annual Survey). **N.Z. Herald** 24.8.77.
- 1977b: Overseas News Review; Reserve Bank of New Zealand 28(16) 12.8.77.
- 1977c: New Zealand News Review; Reserve Bank of New Zealand 28(16) 12.8.77.
- AUSTRALIAN BUREAU OF STATISTICS, 1976: Official Year Book of Australia No. 60, 1974, Canberra.
- BIRCHFIELD, R. 1977: Tasman Pulp: options under study by Government. **New Zealand National Business Review** 29.6.77.

- BROWN, A. G. 1976: Background to thinning practice in Australia. **N.Z. J. For. Sci.** **6(2)**: 133-40.
- COMMONWEALTH OF AUSTRALIA, 1965: "New Zealand-Australia Free Trade Agreement." Commonwealth Government Printer, Canberra. 43pp.
- CONWAY, M. J.; CURRIE, J. T. and HOSKING, M. R. 1974: Production and export potential of New Zealand Forestry. Paper for Forwood Conference, Canberra.
- CREE, C. S. 1974: Pulpwood production in Australia. **Timber Supply Review** **24(1)**: 33-4.
- DEPARTMENT OF STATISTICS, 1976: New Zealand Official Yearbook 1976. 81st Annual Edition. Wellington.
- 1977: Monthly Abstract of Statistics. July 1977. Wellington.
- DIEHL, F. W. 1969: A comparative study of the productivity and structure of the pulp and paper industry in Australia and New Zealand. Thesis, University of New England, Armidale.
- FAIRBURN, D. 1969: "Official opening". **Aust. Timb. J.** **35(11)**: 84-5.
- FENTON, R. 1967: A timber grade study of first rotation *Pinus radiata* (D. Don) from Kaingaroa Forest. **N.Z. For. Serv., For. Res. Inst., Tech. Pap.** **54**.
- 1968: New Zealand's export trade in forest products with Australia. **N.Z. J. For.** **13(1)**: 5-29.
- 1972: Trans-Tasman trade in forest products in the first five years of NAFTA. Pap. in "The Tasman: Frontier and Freeway?" Ed. N. Haines. Australian National University, Canberra.
- FORESTRY DEVELOPMENT CONFERENCE 1975: Summarised proceedings of the 1975 meeting, 8th May, Wellington.
- FORESTRY AND TIMBER BUREAU 1966-73: Annual Reports 1965/6 to 1972/73. Department of Primary Industry, Canberra.
- 1977: Forest Resources 1975: Department of Primary Industry, Australian Government Publishing Service, Canberra.
- HALL, R. 1976: Time for a showdown on N.Z. newsprint into Australia. **The Sydney Morning Herald**, **3 May 1972**.
- HOGAN, W. P. 1976: Economic Survey, chapter in "The Far East and Australasia, 1975-6". Seventh Edition, Europa, London.
- JACOBS, M. R. 1963: To what extent should Australian foresters plan for national demand? **Aust. Timb. J.** **29(5)**: 235-42.
- NEW ZEALAND FOREST SERVICE 1975a: Statistics of the forests and forest industries of New Zealand to 1974. **N.Z. Forest Service, Information Series** **33**.
- 1953, 1960, 1969, 1971, 1975b, 1976: Annual Report of the Director General.
- NEW ZEALAND TRUTH 1977: "Eye on the Hill". 26.4.77.
- OLLERENSHAW, S. 1976: The role of thinning in the Management of Privately Owned Plantations. **N.Z. J. For. Sci.** **6(2)**: 283-91.
- OECD 1976: Survey of New Zealand. Organisation for Economic Co-operation and Development Economic Survey. August 1976.
- OVERSEAS TRADE 1965-1975: Census and Stats Dept., Commonw. Aust., Bulletins 62-71; 1974/5 Part I.
- REID, H. A. 1962: Some factors affecting the kraft pulping of pine woods. **Appita**, **15(5)**: 102-10.
- RESERVE BANK OF NEW ZEALAND 1977: Bulletin, May 1977.
- ROBINSON, A. D. 1965: Towards a Tasman community. **Discussion Pap. 5, N.Z. Inst. Econ. Res.**
- SUNDAY TIMES 1972: Worse to come at Bowater. **Sunday Times (London)** **6 Feb. 1972**.
- 1974: How Bowater swam out of the treacle. **Sunday Times (London)** **7 April 1974**.
- TASMAN PULP & PAPER CO. LTD, 1962: Annual Report. 11th Annual General Meeting.
- 1977: Annual Report. 25th Annual General Meeting.
- WARD, W. C. 1957: The importance of grading in timber utilisation. **N.Z. For. Serv., Tech. Pap.** **23**.
- WILLIAMS, R. W. M. 1968: Trade in forest products between Australia and New Zealand. **N.Z. J. For.** **13(1)**: 30-49.