



OTAGO – SOUTHLAND FORESTRY PROFILE – 2015

KEY POINTS

- The Otago - Southland wood supply region has a long established timber growing and processing industry. The region has a plantation estate of 207 000 hectares, with the earliest plantings now in their third and fourth rotations.
- The Otago – Southland estate is New Zealand’s most diversified with a quarter of the plantings in Douglas-fir and 6.6% in eucalypts and other hardwoods. The wood supply region has 50 percent of New Zealand’s Douglas-fir plantings and 54 percent of the national eucalypt resource.
- The roundwood harvest has almost doubled over the past twenty years, from 1.06 million cubic metres (m³) in 1994 to 2.03 million m³ in 2014. New wood availability forecasts indicate the harvest has the potential to reach 3.0 million m³ per annum in the late 2020s and sustainably maintain this level over the medium to longer term - www.mpi.govt.nz/document-vault/4407.
- Timber processing capacity expanded steadily in the 1990s and early 2000s, with the expansion of existing sawmilling capacity and the establishment of a medium density fibreboard factory and veneer plant. More recently, the sector has experienced a period of restructuring, which has seen a number of mill closures and on-going efforts to improve productivity.
- The industry has a strong export focus, with 1.08 million m³ of logs exported in the March 2014 year (through Port Otago and Southport) and 225 000 m³ of sawn timber. Other exports include medium density fibreboard and wood chips.

Table 1: Key Trends in the Otago – Southland Wood Supply Region , 1994 to 2014

	Region	Reporting Period	1994	2004	2014
Net Stocked Area (hectares)	Otago	1 April	87 072	128 917	124 365
	Southland	1 April	53 251	86 981	82 490
	Otago – Southland	1 April	140 323	215 898	206 855
Proportion in Radiata Pine	Otago	1 April	80.0	65.1	63.4
	Southland		8.8	25.1	25.7
Proportion in Douglas-fir			5.1	6.7	6.6
Proportion in Eucalypt Species and other hardwoods			1 060 000	1 510 000	2 030 000
Estimated Roundwood Removals (cubic metres)	Otago-Southland	March Year	540 000	1 110 000	870 000
Estimated Processing of Roundwood (cubic metres)			511 556	330 670	1 084 500
Log Exports (cubic metres)	Port Otago Ltd / Southport Ltd	March Year	81 426	24 713	150 032
Log Exports (Value \$ NZ000)			N/A	179 430	224 701
Sawn Timber Exports(cubic metres)			N/A	71 028	76 898
Sawn Timber Exports (Value \$ NZ000)					

Sources: Ministry of Forestry / Ministry of Agriculture and Forestry / Ministry for Primary Industries, National Exotic Forest Description, Editions 11, 21 and 31;

Ministry of Forestry / Ministry of Agriculture and Forestry - Statistical Releases, 1994, 2004;

Ministry for Primary Industries, Statistics & Forecasting – Forestry - <http://www.mpi.govt.nz/news-and-resources/statistics-and-forecasting/forestry/>

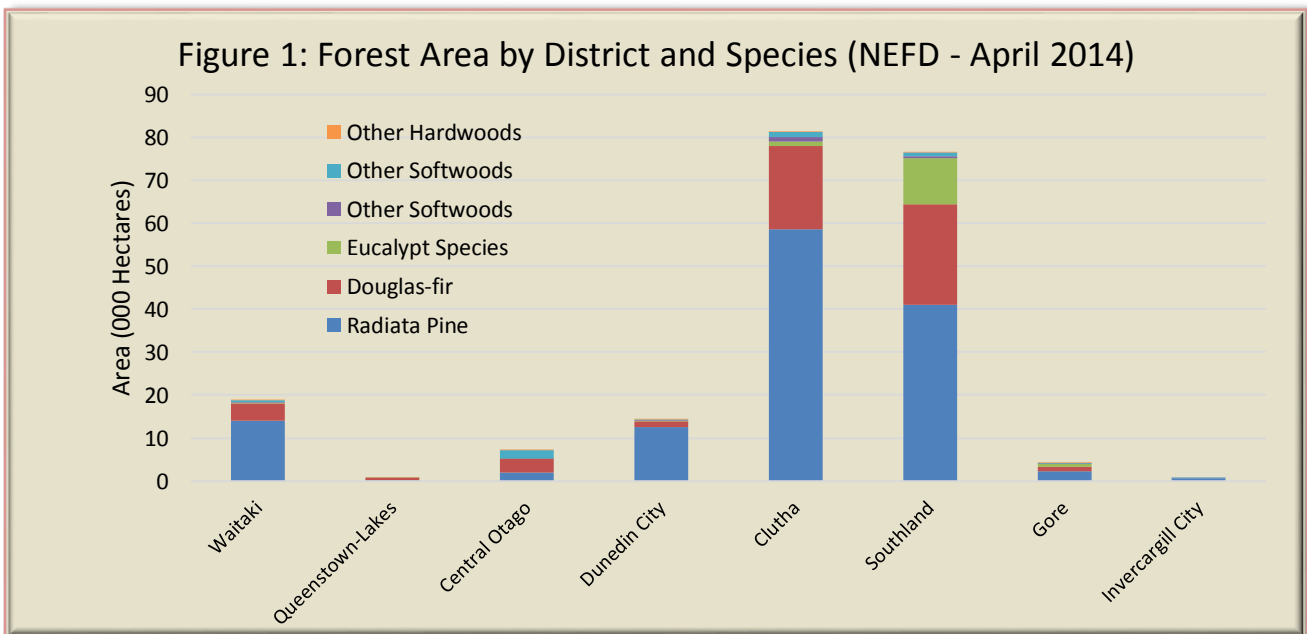


Commercial Forestry in Otago and Southland

The Otago – Southland wood supply region has a plantation estate of approximately 207 000 hectares (April 2014). The region has just under 12 percent of the national resource and is the second largest wood supply region (in terms of area), following the Central North Island. The estate is concentrated in two districts, Clutha and Southland (see Figure 1). These neighbouring districts have 160 700 hectares of commercial plantations, or 78 percent of the regional resource. Central Otago, Dunedin City and the Waitaki District also have significant areas of plantings (7 000 hectares, 14 500 hectares and 19 000 hectares respectively).



The region experienced steady investment in new plantings during the 1990s and the early part of this century, driven by positive returns and growing export markets. There was strong interest in planting by the farming sector, syndicates and individuals. Several corporate investors also developed additional holdings, focusing on Douglas-fir and eucalypts. Competition for land over the past decade has seen a small proportion of the estate converted to dairying, grazing and lifestyle properties. Between 2004 and 2014 the area in plantation forestry declined by 9 000 hectares (4.1%).



Source: Ministry for Primary Industries, National Exotic Forest Description, Edition 31.

The Otago - Southland estate is the most diversified of New Zealand’s wood supply regions, with 25 percent of plantings in Douglas-fir and 6.2 percent in Eucalypt species. The Douglas-fir resource is relatively young (with 78% aged under 15 years). The region is a favoured planting location for Douglas-fir and has just under 50% of the national estate. The Douglas-fir harvest will progressively increase during the 2020s and become a significant contributor to regional activity in the late 2020s and 2030s. The increased availability of Douglas-fir will compensate for the projected decline in radiata pine supply, following the harvest of the plantings established in the 1990s and early 2000s.

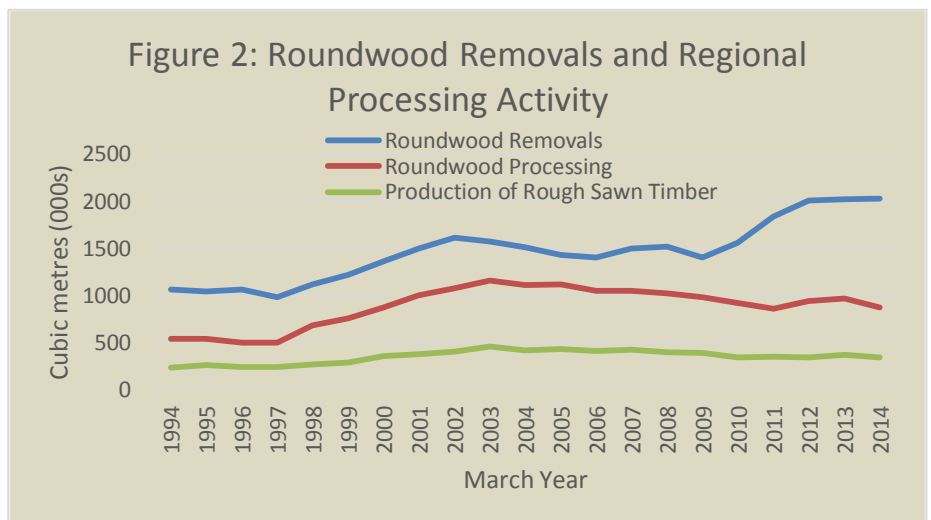


The region’s eucalypt resource stands at approximately 12 900 hectares. The majority of the plantings are located in the Southland District, with smaller areas in Clutha and Gore. The principal species is *Eucalyptus nitens* and the plantings are generally grown on a short rotation basis for chip production. The eucalypt plantings add a further dimension to the forestry sector in Otago and Southland. The regional plantings of eucalypts represent 54% of the national eucalypt estate.

The region has 16 owners or managers of commercial forests with estates of more than 1 000 hectares (net stocked area¹). Collectively they manage two-thirds of the regional estate. The six largest companies have estates of between 10 000 and 30 000 hectares (Matariki Forests, Wenita Forest Products Limited, Ernslaw One Limited, City Forests Limited, Southwood Export Limited and Blakely Pacific Limited). The remaining area is owned (or managed) by individuals, partnerships, syndicates and a number of smaller corporates. The farming community has made a significant investment in forestry, as part of property management, farm succession and long term investment.

Current Production and Forecasts

The harvest levels in Otago and Southland are currently sitting at around 2 million m³ per annum. The harvest has almost doubled over the past twenty years, with the maturing of plantings established in the 1960s, 70s and 80s (see figure 2). While the overall trend has been for increasing harvest activity, the annual totals have been more variable due to changing market and economic conditions.



Source: Ministry of Forestry / Ministry of Agriculture and Forestry - Statistical Releases, 1994 - 2004; Ministry for Primary Industries, Statistics & Forecasting – Forestry - <http://www.mpi.govt.nz/news-and-resources/statistics-and-forecasting/forestry/>

Harvesting activity increased in the late 1990s and early 2000s on the back of positive market conditions (particularly in the North American housing market) and favourable exchange rates. The harvest peaked in the March 2002 year, at an estimated 1.61 million m³. Demand weakened in the mid-2000s with an appreciating dollar, high freight rates and tighter market conditions in North America and Australia. This

¹ The planted production forest area occupied by trees, excluding mappable gaps such as landings, roads and other unstocked areas.



led to a contraction in harvesting and processing activity. Conditions tightened further with the global economic crisis. Harvest levels between 2005 and 2009 were in a range of 1.4 to 1.5 million m³ per annum.

Increased demand from China has fuelled harvesting activity over the past five to six years. Production rose by a third between 2009 and 2012, to top 2 million m³, and the harvest has been sustained at these levels. The growth in demand from China has largely been for logs rather than sawn timber or processed products such as mouldings.

While market conditions will continue to shape the direction of harvesting activity, forecasts can be prepared based upon the plantings in the ground, industry expectations and infrastructure constraints (such as the availability of additional harvesting gangs). In 2013, the Ministry for Primary Industries contracted Indufor Asia Pacific to prepare forecasts for New Zealand's nine wood supply regions. A harvest intentions survey (of the major owners in Otago and Southland) was carried out in early 2014 and forecasts for the region were released in September 2014. The forecasts look out to 2050 (for radiata pine) and 2070 for Douglas-fir. In developing the forecasts the key features of the local estate were identified:

- The corporate estate in Otago and Southland has a relatively even distribution of age classes for radiata pine (with some variation in individual years and between companies).
- The age-class distribution for small growers is highly variable, with a significant proportion of their plantings established between 1992 and 2004 (with a peak in the mid-1990s).
- The Douglas-fir resource will play an increasingly important role in the late 2020s and 2030s, as this resource matures.

Indufor prepared forecasts for Otago and Southland, as well as the combined wood supply region. Four scenarios were developed for radiata pine and one for Douglas-fir. Following industry feedback, an additional scenario was prepared, combining the radiata pine and Douglas-fir supply. The full set of forecasts can be found at: www.mpi.govt.nz/document-vault/4407. Two of the scenarios, and their associated forecasts, are described below.

Radiata Pine Availability for the Combined Region (Based upon a Split, Non-Declining Yield Scenario)

In this scenario Indufor modelled radiata pine availability on a targeted rotation age of 28 years. Total wood availability was assessed on a non-declining yield basis, apart from a five year period between 2035 and 2039, when an annual change of up to 10% was allowed. The forecast from this scenario indicates that radiata pine supply will remain relatively stable for the next one to two years, and then has the capacity to reach a sustained harvest of around 2.5 million m³ from 2020 through to the early 2030s. The majority of this supply will be in the unpruned and pulp grades, with 300 to 500 000 m³ per annum in the pruned grade (through the 2020s). Wood availability declines in the 2035 to 2039 period, with reduced supply from smaller growers.

Douglas-fir and Radiata Pine Availability for the Combined Region (including production thinning)

This scenario jointly models Douglas-fir and radiata pine wood availability. Douglas-fir has a target rotation age of 40 years and radiata pine 28 years. Total wood availability is modelled on a non-declining yield basis and constraints are included for the change in Douglas-fir availability from year to year.



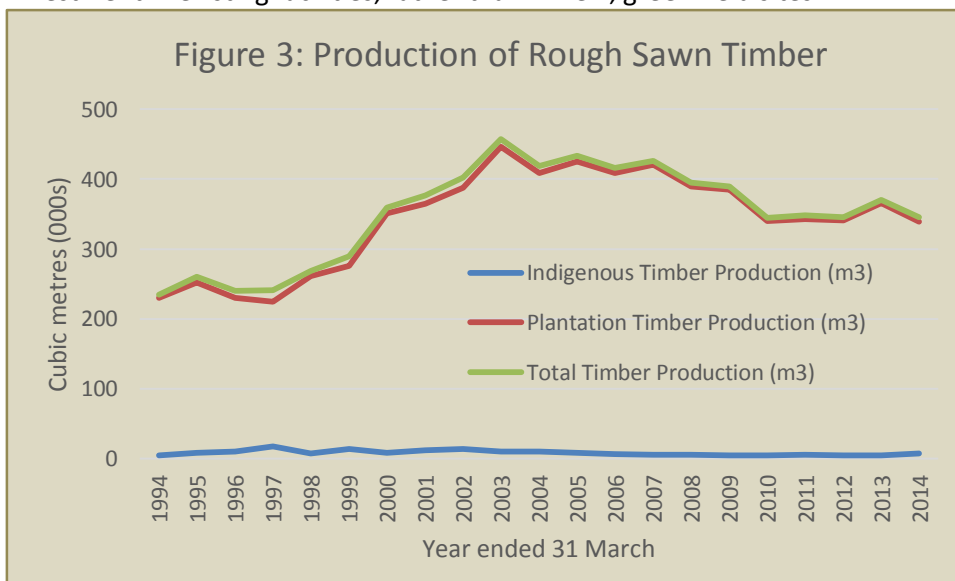
The combined Douglas-fir and radiata pine forecast indicates that the regional harvest has the potential to reach 3.0 million m³ per annum in the late 2020s and sustainably maintain this level over the medium to longer term, with Douglas-fir increasing in importance during the 2030s and early 40s. From a planning perspective, the forecasts show that the region has the ability to sustainability increase the level of forestry activity by 50% over the next fifteen years and that stable volumes of supply can be sustained over the medium to long term.

Timber Processing Trends

Otago and Southland have a timber processing history dating back more than 160 years. The early development of the industry was based on the region’s natural timber resources. The processing of exotic species began in 1933 (with production thinnings), and in the late 1940s the Conical Hill sawmill (at Tapanui) was constructed as a demonstration unit for processing plantation timber. The picture today is markedly different with more than 99 percent of the regional harvest now being sourced from plantation forests and the remainder from sustainably managed natural forests.



The region experienced steady investment in sawmilling capacity during the 1990s and the early part of this century, with increasing timber supply and favourable market conditions, as discussed earlier. Between 1994 and 2003, the production of rough sawn timber climbed 94 percent (from 235 000 to 457 000 m³), as shown in Figure 3. The growth in capacity occurred primarily as a result of additional investment in existing facilities, rather than in new, green field sites.



The increased production was mainly destined for export markets around the Asia – Pacific region, with a particular focus on the United States. Sawn timber exports (through Dunedin and Bluff) increased from 58 000 m³ (\$20.5 million – free on board value) in the March 1996 year to 175 000 m³ (\$83 million) in 2003. As discussed previously, weaker

Source: Ministry of Forestry / Ministry of Agriculture and Forestry - Statistical Releases, 1994 - 2004; Ministry for Primary Industries, Statistics & Forecasting – Forestry - <http://www.mpi.govt.nz/news-and-resources/statistics-and-forecasting/forestry/>



economic conditions in the middle of the decade reduced sawmilling returns. This can be seen in the March 2006 export receipts, where the volume of sawn timber was almost identical to 2003, but the value had fallen 31 percent, to \$57 million (free on board).

In the 2006/07 period, the region had 28 sawmilling operations with annual production of more than 500 m³ per annum. By the end of 2014, this figure had fallen to 18 operations. A combination of increasing domestic competition, the impact of the global economic crisis, tighter margins in the international market and higher input prices worked against a number of mills. Older generation mills, with fewer opportunities for reducing unit costs were particularly affected.

The region's largest mills (Craigpine Timber Company and Niagara Sawmilling Company) have continued to develop their operations during this period, with a focus on improving their competitiveness and building new market opportunities.

With the restructuring in the sector, sawn timber production has fallen by more than 20 percent from the production peak, and has been sitting at 340 to 370 000 m³ per annum over the past four years. An increasing proportion of the production is destined for the export market, with the volume of sawn timber exports reaching (or exceeding) 200 000 m³ in four of the past eight years.

In addition to sawmilling, the region has a medium density fibreboard factory located at Matura. The plant was commissioned in 1997 and is now owned by Dongwha Enterprise Limited of South Korea. Approximately 70 percent of production is exported, principally to the United States, Japan and China. The region also has a stand-alone chipping facility at Awarua, near Invercargill. This operation is owned by Southwood Export Limited, and is used primarily to process short rotation eucalypts, for the manufacture of high quality writing and printing paper.

Infrastructure

The development of forestry and timber processing in the south has been supported by efficient infrastructure, the availability of support services and pro-active council and business structures.

- The Otago – Southland region has an extensive and well maintained roading network, covering 15 665 kilometres of local roads and 2 077 kilometres of state highways. The major forestry companies link into this network with their own roading networks; and work with roading authorities to identify key pressure points;
- The region is serviced by two modern port facilities (Port Otago Limited and Southport New Zealand limited), which have progressively invested in upgrading wharf, storage and support facilities. The ports work with the major forestry and processing companies to determine their future requirements;
- The region has reliable energy production and supply networks;





Southern Wood Council



- The region's economic development agencies have been supportive of industry initiatives; and have worked to identify new opportunities, in areas such as residues; and
- The region is serviced by three major tree growing nurseries (and a number of smaller operations).



Regional Contacts

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