



Wood Availability Forecasts – West Coast 2015

Prepared for the Ministry for Primary Industries
by Indufor Asia Pacific Limited

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Ministry for Primary Industries Wood Availability Forecasts

A new series of Wood Availability Forecasts is being prepared by Indufor Asia Pacific, for the Ministry for Primary Industries (MPI), covering the period from 2014 to 2050. These forecasts are intended as a planning tool for the forest industry, councils, and infrastructure and service providers. New forecasts for all nine regional wood supply regions will be published over the next eighteen months, along with new national forecasts.

MPI is working in association with the National Exotic Forest Description (NEFD) Steering Committee to prepare the new regional and national wood availability forecasts. NEFD user surveys have emphasised that wood availability forecasts are the most used and valued product delivered under the NEFD programme. The previous regional and national forecasts that were prepared between 2006 and 2010, and the new forecasts, are available here:

<http://www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/forestry/>

MPI wishes to express its appreciation to the forest owners, managers and consultants for their support in preparing these wood availability forecasts. The work would not be possible without this assistance.

Disclaimer

While every effort has been made to ensure the information is accurate, the Ministry for Primary Industries does not accept any responsibility or liability for error of fact, omission, interpretation or opinion that may be present, nor for the consequences of any decisions based on this information. Any view or opinion expressed does not necessarily represent the view of the Ministry for Primary Industries.

Publisher

Requests for further copies should be directed to:

Publications Logistics Officer
Ministry for Primary Industries
PO Box 2526
WELLINGTON 6140

Email: brand@mpi.govt.nz

Telephone: 0800 00 83 33

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PREFACE

This report was prepared at the request of the Ministry for Primary Industries (the Client) by Indufor Asia Pacific Limited.

The project involved development of a series of regional and national wood availability forecasts for New Zealand's plantation estate.

This report may only be used for the purpose for which it was prepared and its use is restricted to consideration of its entire contents. The conclusions presented are subject to the assumptions and limiting conditions noted within.

Indufor Asia Pacific

Nigel Chandler
Head of Forest Resources

Kenneth Tsang
Consultant

Contact:

Indufor Asia Pacific
7th Floor, 55 Shortland St
PO Box 105 039
Auckland City
NEW ZEALAND

Tel. +64 9 281 4750

www.indufor-ap.com

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1. INTRODUCTION

This report provides new wood availability forecasts for radiata pine and Douglas-fir to 2024 for the West Coast region. It has been prepared in co-operation with Ngai Tahu Forest Estates Limited and with advice from Forest Management Ltd.

The information in this report is intended to assist the forest industries, planners, and infrastructure and service providers in assessing wood processing opportunities, resource management planning, and infrastructure issues.

References to the West Coast region include the land areas of the territorial authorities of Buller, Grey and Westland Districts, a total of about 2.3 million hectares.

The report is one of a series of publications on regional wood availability forecasts. Readers who intend using the wood availability forecasts for planning or investment decisions are urged to thoroughly review the forecasts or engage the services of a professional forestry consultant who is able to interpret the forecast in the context of specific planning or investment decisions.

2. THE PLANTATION FOREST INDUSTRY

2.1 Ownership

Plantation forests were established on a small scale from the 1870s, but the first major plantings were started at Mahinapua Forest (originally known as Rimu Forest) in 1922 by the New Zealand Forest Service. The Crown dominated ownership of the plantation forest resource on the West Coast until August 2014 when Ngai Tahu Property, through its subsidiary Ngai Tahu Forest Estates, purchased the cutting rights on 22 800 hectares of plantation forest. The land was already owned and managed by Ngai Tahu Forest Estates.

Ngai Tahu Forest Estates is the only large-scale plantation forest owner on the West Coast. There are another 18 owners known to have between 10 and 999 hectares of plantation forest.

2.2 Area and Species Composition

As at April 2014, there were an estimated 31 687 hectares of plantation forests on the West Coast, of which 22 451 hectares were planted with radiata pine and 1 451¹ hectares were planted with Douglas-fir.

Table 2-1: Plantation Forest Areas by Species and Territorial Authorities as at 1 April 2014

Planted Area (ha)	Territorial Authority			
Species	Buller District	Grey District	Westland District	Total
Radiata Pine	2 973	11 864	7 614	22 451
Douglas-Fir	545	867	39	1 451
Cypress	26	322	4 439	4 787
Other Softwoods	121	408	367	896
Eucalypts	13	39	44	96
Other Hardwoods	12	185	1 809	2 006
Total NEFD	3 690	13 685	14 312	31 687

Source: Ministry for Primary Industries (2014a)

Radiata pine growing on the West Coast generally exhibits good tree form with small branches as a result of the low to medium soil fertility in most areas. Growth rates are mostly low compared to elsewhere in New Zealand.

West Coast radiata pine has long internodal lengths and wood of low density and light colouration. Pruned logs are suited to long length clear and select grades and mouldings. Unpruned logs produce high quality cuttings grade lumber suitable for window and furniture components, finger-jointed products and finished goods.

Douglas-fir is not a favoured species for the West Coast because of the region's high rainfall, poor soils and competing weed growth, which make establishment difficult and growth poor. It may be an alternative to radiata pine on some snow-prone sites.

Cypress species account for 15 percent of the region's plantation estate. *Macrocarpa* (*Cupressus macrocarpa*), *lusitanica* (*Cupressus lusitanica*), and Lawson cypress (*Chamaecyparis lawsoniana*) are regarded as having potential to produce high quality timber on suitable sites.

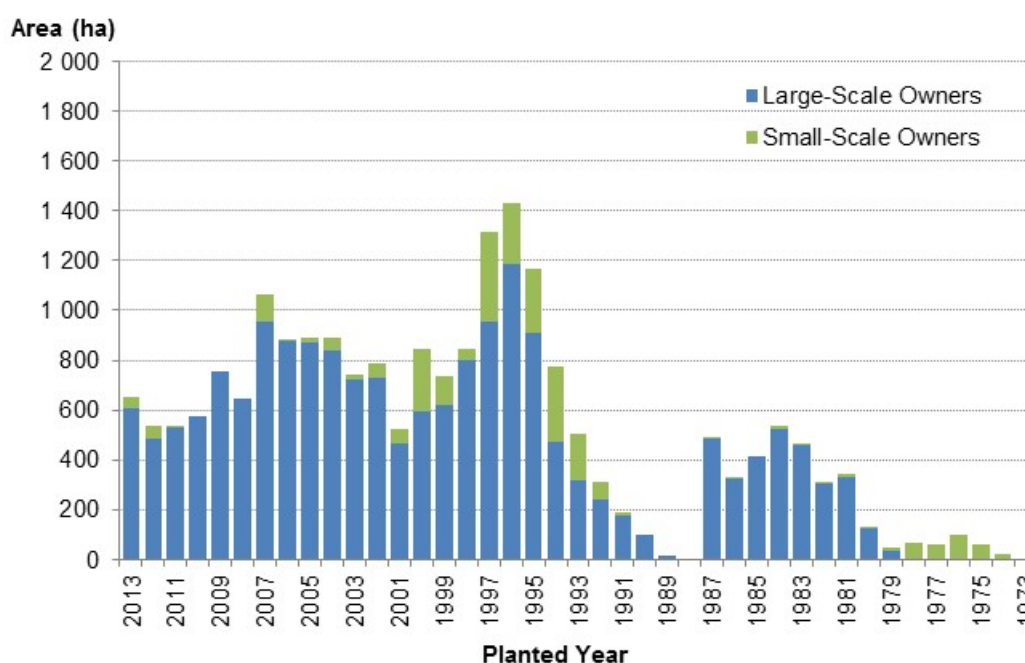
¹ The areas in Table 1 are from the published 2014 NEFD report. The total area for Douglas-fir has been revised since that report was published.

Eucalypt species are generally unsuited to the West Coast as most soils do not encourage vigorous, healthy growth. Insect attack by the native pinhole borer (*Platypus* species) causes extensive timber degradation. Australian blackwood (*Acacia melanoxylon*) can be grown on sheltered, warm, moderately fertile sites.

2.3 Area Age-Class Distributions

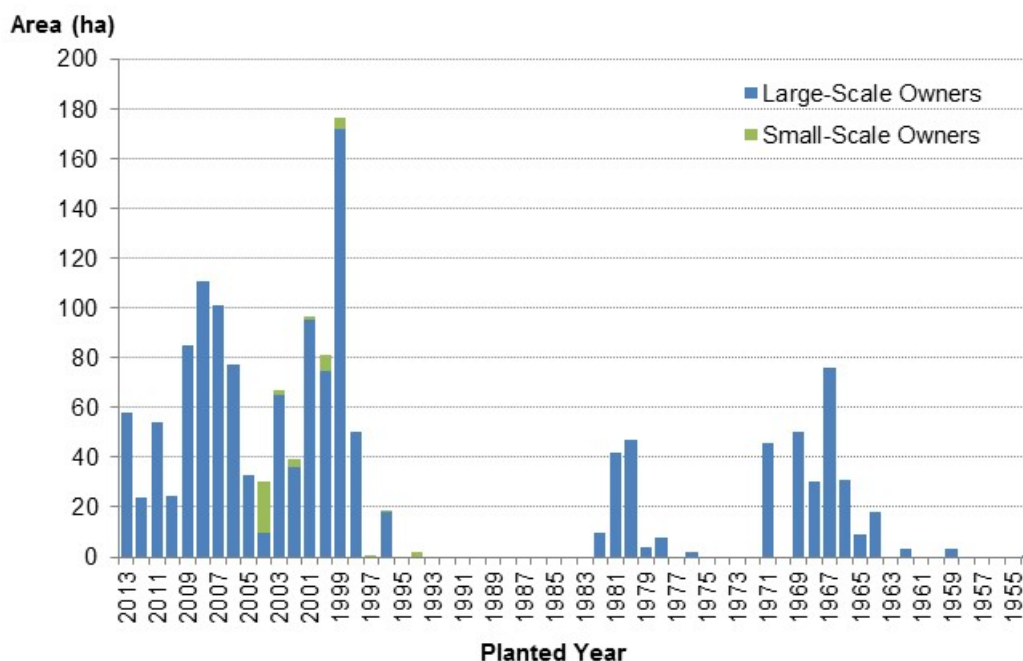
The radiata pine area-age class distribution shows a peak in planting in the mid-1990s that reflects a national surge in new planting at this time. There is a gap in the level of planting aged between 22 and 26 years (approaching maturity) that will require careful management if a sustainable level of harvest is to be secured over this period.

Figure 2-1: West Coast Age-Class Distribution – Radiata Pine as at 1 April 2014



Source: Ministry for Primary Industries (2014a)

Figure 2-2: West Coast Age-Class Distribution – Douglas-fir as at 1 April 2014



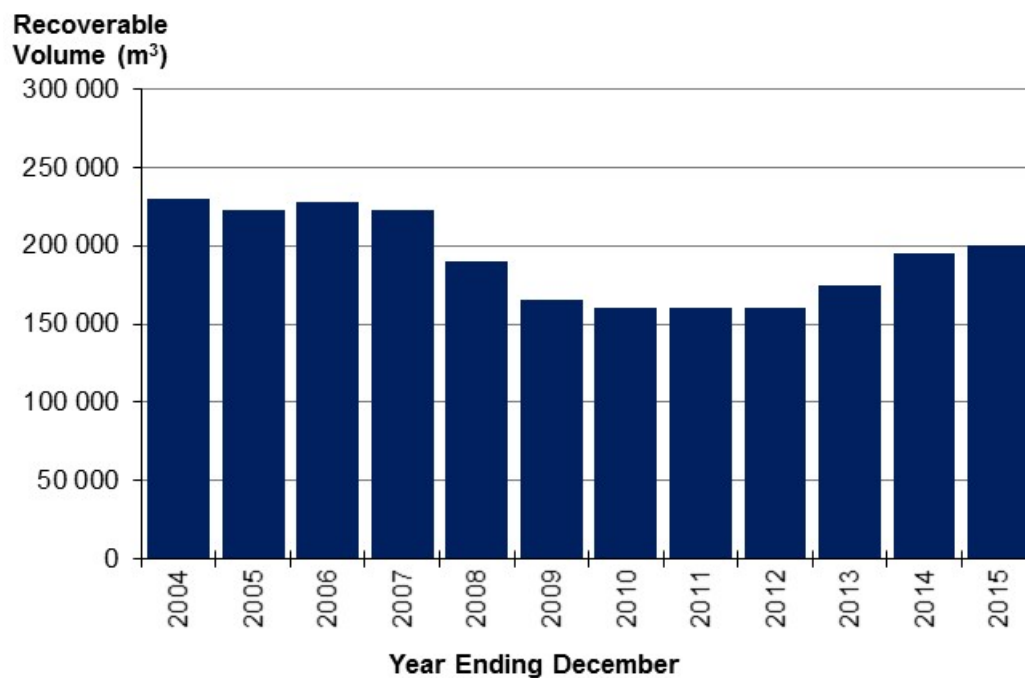
Source: Ministry for Primary Industries (2014a)

A small Douglas-fir resource has been regularly established over the last 16 years, but older age-classes are scattered meaning that harvesting from this resource will occur at intervals over the medium term.

2.4 Harvesting Trends

The last decade has seen a modest decrease in roundwood removals from the West Coast plantation forest estate (Figure 2-3).

Figure 2-3: Estimated Roundwood Removals from Plantation Forests in West Coast between 2005 and 2015



Source: Ministry for Primary Industries (2014b)

3. WEST COAST WOOD AVAILABILITY FORECASTS

3.1 Radiata Pine and Douglas-fir

Forecasts of radiata pine and Douglas-fir wood availability from 2015 to 2024 (Table 3-1, Figure 3-1, Table 3-2, and Figure 3-2) have been compiled by combining the harvesting intentions from Ngai Tahu Forest Estates and estimated annual volumes from the residual plantation forest resource. This residual resource has an estimated area of about 3 828 hectares (largely radiata pine plus a small area of Douglas fir).

Harvesting intentions reflect the forest owner's current strategy. They can change in accordance with market conditions, company objectives, and enhanced information about the forest resource.

The estimated wood availability from the residual plantation forest resource is based on advice from Forest Management Ltd, who are actively operating in the management and harvesting of West Coast plantation forests.

Table 3-1: West Coast Radiata Pine Availability by Log Grade

Year	Pruned	Unpruned	Pulplog	Total Recoverable Volume (m ³)
2015	30 000	138 000	32 000	200 000
2016	30 000	148 000	32 000	210 000
2017	28 000	159 000	33 000	220 000
2018	28 000	159 000	33 000	220 000
2019	28 000	150 000	32 000	210 000
2020	28 000	150 000	32 000	210 000
2021	28 000	150 000	32 000	210 000
2022	28 000	150 000	32 000	210 000
2023	28 000	150 000	32 000	210 000
2024	28 000	150 000	32 000	210 000

Table 3-2: West Coast Douglas-fir Availability by Log Grade

Year	Unpruned	Pulplog	Total Recoverable Volume (m ³)
2015	-	-	-
2016	-	-	-
2017	-	-	-
2018	-	-	-
2019	-	-	-
2020	24 000	6 000	30 000
2021	24 000	6 000	30 000
2022	24 000	6 000	30 000
2023	24 000	6 000	30 000
2024	24 000	6 000	30 000

Figure 3-1: West Coast Radiata Pine Availability - by Log Grade

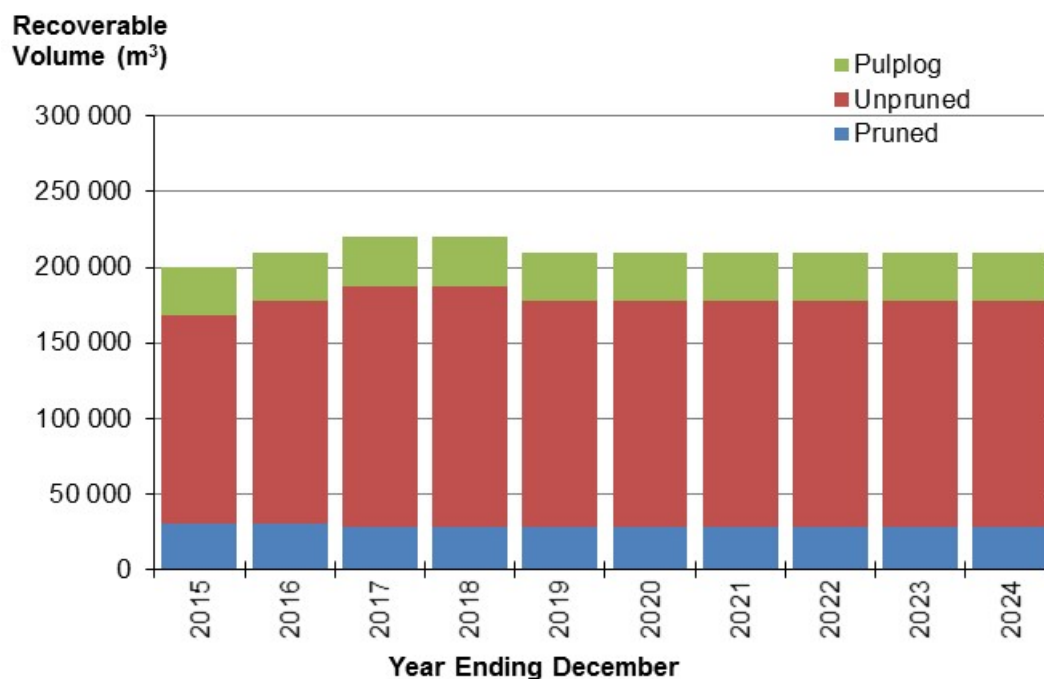
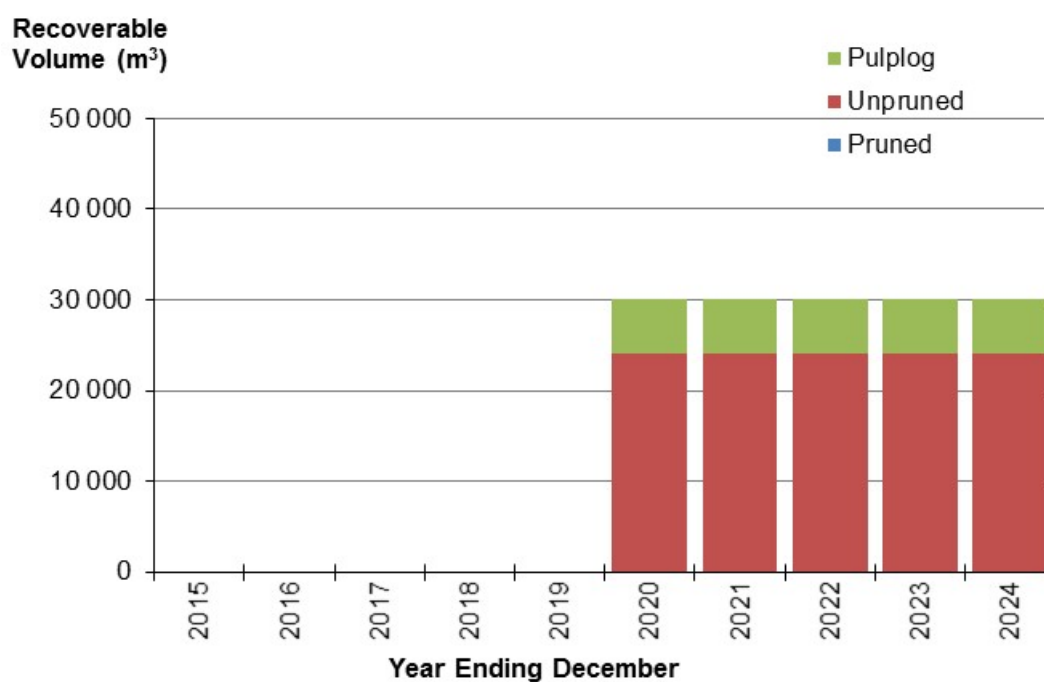


Figure 3-2: West Coast Douglas-fir Availability - by Log Grade



3.2 Other Species

There are also 4 787 hectares of cypresses recorded in the National Exotic Forest Description (NEFD), 896 hectares of 'other softwoods', and 96 hectares of eucalypts. Small volumes could potentially be harvested from these species at irregular intervals if markets arose during the forecast period and harvesting was economic to undertake. These would be additional to the volumes in Table 3-1, Figure 3-1, and Table 3-2, Figure 3-2.

3.3 Previous Wood Availability Forecast

The new radiata pine wood availability forecast transitions smoothly on from the previous forecast that estimated a harvest volume of 196 000 cubic metres in 2015 (the final year of the previous forecast). There was no previous forecast for Douglas-fir.

3.4 Beyond 2024

The radiata pine resource that accounts for the annual forecast harvests through to 2024 in Table 3-1 is that aged 18 years and older. Figure 2-1 indicates that there is a relatively uniform area age class distribution in younger years that should be able to maintain an annual harvest at a similar level for the following 15 years.

As noted above, the harvest from the Douglas-fir resource is expected to be irregular over the long term.

4. REFERENCES

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Indufor ...forest intelligence

Indufor Oy
Töölönkatu 11 A, FI-00100 Helsinki
FINLAND
Tel. +358 9 684 0110
Fax +358 9 135 2552
indufor@indufor.fi

Indufor Asia Pacific
7th Floor, 55 Shortland St, PO Box 105 039
Auckland City 1143
NEW ZEALAND
Tel. +64 9 281 4750
www.indufor-ap.com

