

# FACTS & FIGURES 2015/16

New Zealand Plantation  
Forest Industry





# New Zealand School of Forestry

Take your career to the next level.  
Study Forestry at UC.

- Bachelor of Forestry Science
- Bachelor of Engineering with Honours in Forest Engineering
- Graduate Diploma in Forestry
- Postgraduate Diploma in Forestry
- Master of Forestry Science
- PhD in Forestry

+64 3 364 2109  
[www.forestry.ac.nz](http://www.forestry.ac.nz)

**UC**   
**UNIVERSITY OF  
CANTERBURY**  
*Te Whare Wānanga o Waitaha*  
CHRISTCHURCH NEW ZEALAND

# Contents

Minister's Foreword	1
---------------------	---

## SECTION 1. FORESTRY AND NEW ZEALAND

New Zealand Economic Indicators	3
Land Use and Exports	4
New Zealand Planted Forestry in Summary	5
Contribution of the Main 65 Plant Species to NZ GDP	6
Global Forest Coverage	7
Industry Employment	8
Industry Training 2015	9

## SECTION 2. PLANTATION FORESTRY

Plantation Ownership	12
Commercial Planted Forest Ownership and Management	13
Ownership of Forest Land	14
Plantation Forest Management Statistics	15
FSC Certified Forest Owner/Manager	16
Plantation Forests by Location	17
Net Stocked Area of Radiata Pine	18
Planted Radiata Pine	19
Plantation Species (Ha)	20
New Forest Planting (1988) and Deforestation (since 2005)	21
Typical Log Out-turn	22
Log Flow in the New Zealand Forestry Industry	23
Forest Management Trends	25

## SECTION 3. PRODUCTION AND EXPORT

Top Export Destinations	27
Lumber Production and Exports	30
Domestic vs International Log Consumption 2015	30
Location of Wood Processors by Region 2016	31
Paper and Pulp Production	33
Panel Products Production	33
Production and Exports of Selected Forestry Products 2015	34
Plantation Forest Harvest	34
Major Export Earners	35
Exports of Forestry Products from New Zealand	36
Export Product Value by Destination	37
Exports by Port	38
Health and Safety Performance of the NZ Forestry Industry	40

## SECTION 4. SUPPLEMENTARY INFORMATION

Sector Agreements and Initiatives	42
NZ Wood	45
Forest Growers Levy Trust	46
NZ Forest Owners Strategic Plan	47
Terms and Things	48
New Zealand's Greenhouse Gas Inventory	49
How New Zealand's Plantation Forests Remove Carbon from the Atmosphere	50
Export and Domestic Log Pricing	51
Reporting a Suspected Pest/Disease	52
Contacts	53
Log Pricing Data	55

# Minister's Foreword



The forestry industry continues to make a significant contribution to the New Zealand economy. The primary sector is our growth engine – and forestry and wood processing are a vital part of this. This publication celebrates the success of the forestry industry and highlights the positive outlook for future growth.

Forestry is our third largest primary industry export. In 2015 our forestry exports were worth \$4.8 billion and this is forecast to grow in the coming years. The industry employs thousands of workers, both in the forest directly and in its supporting services such as transport and manufacturing. Forestry is a big contributor to regional economies, which is reflected in the role it plays in the Government's Regional Economic Development Action Plans.

The large number of forests which were established in the 1990s are now maturing and will contribute to the increasing amount of timber available for harvest in the coming years. This presents a great opportunity for processors and manufacturers to grow exports and work towards the Wood Council of New Zealand's (Woodco's) vision of more than doubling export earnings by 2022.

This Government is working with the sector to increase the proportion of wood processed domestically and to increase the volume of high value products exported. Recently, there has been significant onshore investment indicating strong business confidence in domestic wood processing. It is also encouraging to see the industry exploring innovation throughout the supply chain, from research into alternative plantation species, to advances in processing technology to achieve efficient housing solutions.

The continued success of New Zealand's forestry industry depends on collaboration towards a common vision, and information sharing is key to that. The Facts and Figures publication is possible because of statistics shared between industry and government. It is a valuable resource for all those who support and work in the forestry and wood products sector. I look forward to supporting the forestry industry as it continues to grow.

A handwritten signature in blue ink that reads "Jo Goodhew". The signature is fluid and cursive.

**Hon Jo Goodhew**  
Associate Minister for Primary Industries

## SECTION 1



# FORESTRY AND NEW ZEALAND: AN OVERVIEW



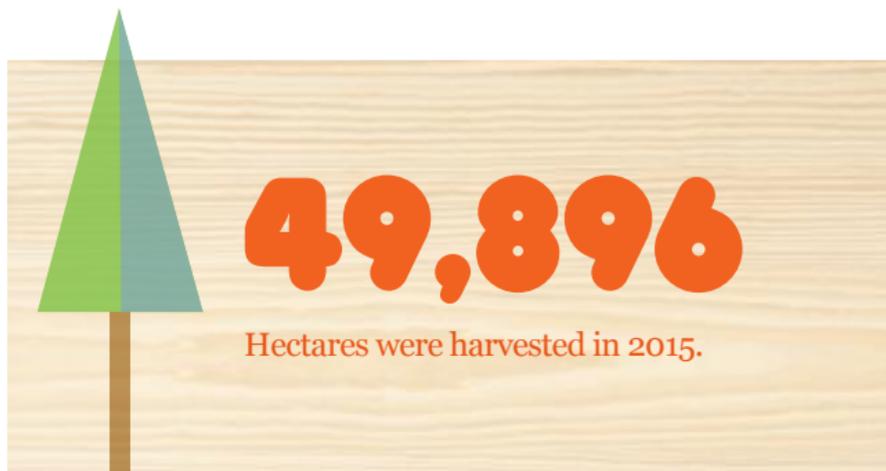
# New Zealand Economic Indicators

NZ Economic indicators	31 Dec 15
Population	4,600,000
GDP \$ billion	219.8
GDP per capita \$	48,619
Exports \$ billion	46.9
Forest products exports total \$ billion	4.8
Total overseas debt \$ billion	151.2
Annual percentage change GDP (at 31 March 15)	3.6%
Inflation (as measured by annual percentage change in CPI)	0.1%
<b>Forestry sector contribution to GDP</b>	<b>1.6%</b>

**Note:**

- GDP in 2009/2010 prices.

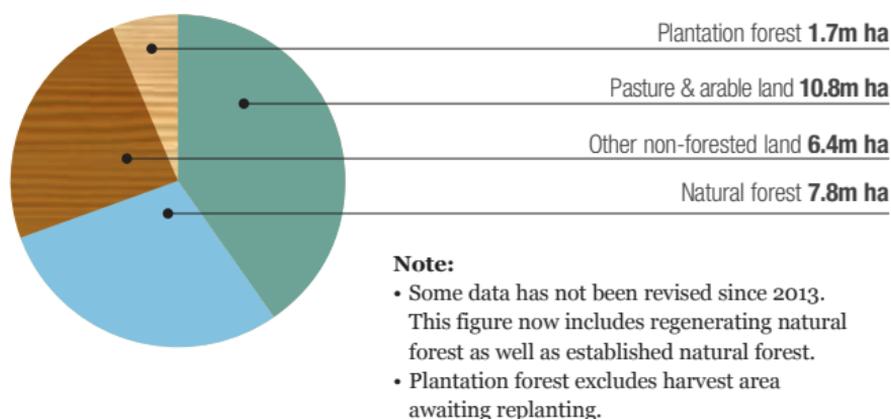
**Source:** Statistics NZ



**Source:** MPI (Forestry Production Statistics, year ended 31 December 2015)

# Land Use and Exports

## New Zealand Land Use



## Export value comparisons

Product	Area farmed <sup>1</sup> pasture only (hectares)	Export earnings (fob) average 2011-15	Export earnings per hectare
Red meat + Wool & hides <sup>2</sup>	5,397,855	\$7,933,000,000	\$1,470
Dairy Products	2,110,569	\$13,356,000,000	\$6,328
Forestry	1,684,209	\$4,747,000,000 <sup>3</sup>	\$2,819

**Source:** Statistics NZ

**Notes:**

1. Farmed areas from Statistics NZ website, using “pastureland” only for beef, sheep and deer farms and excluding other land categories, notably mature and regenerating bush. Forestry areas are based on plantations of exotic trees and harvested areas awaiting restocking including such land on various farm types, but again excluding mature and regenerating native bush. These areas are dated 30th June 2012.
2. These figures are the average for 2014 and 2015 only.

MPI expects forest export earnings over the next five years to continue to outstrip horticulture export growth, reaching

**\$6 BILLION BY 2018.**

Beef and sheepmeat export earnings will decline over the same period.

**Source:** MPI’s Situation and Outlook Report for Primary Industries 2016

# New Zealand Planted Forestry in Summary

<b>Area and standing volume statistics</b>	<b>1 April '13</b>	<b>1 April '14</b>	<b>1 April '15</b>
<b>Area and standing volume statistics</b>			
Net stocked forest area (ha)	1,728,500	1,733,400	<b>1,717,700</b>
<b>Growth characteristics</b>			
Standing volume (000 m <sup>3</sup> )	481,322	488,603	<b>501,716</b>
Average standing volume (m <sup>3</sup> /ha)	296	282	<b>292</b>
Area-weighted average age (years)	16.8	16.8	<b>17.1</b>
<b>Area by species (ha)</b>			
Radiata pine	1,553,700	1,559,055	<b>1,544,500</b>
Douglas-fir	106,500	105,133	<b>105,000</b>
Cypress species	10,100	9,900	<b>10,100</b>
Other exotic softwoods	23,600	23,000	<b>22,400</b>
Eucalyptus species	22,000	23,800	<b>23,300</b>
Other exotic hardwoods	12,600	12,500	<b>12,500</b>
<b>Planting statistics</b>			
	<b>Year ended 31 Dec '12</b>	<b>Year ended 31 Dec '13</b>	<b>Year ended 31 Dec '14</b>
<b>New planting (ha)</b>			
Total estimated new planting	11,500	3,500	<b>2,500</b>
Restocking	45,154	40,867	<b>41,533</b>
Harvested area awaiting restocking	51,869	44,642	<b>53,903</b>
<b>Harvesting statistics</b>			
	<b>Year ended 31 Mar '13</b>	<b>Year ended 31 Mar '14</b>	<b>Year ended 31 Mar '15</b>
<b>Harvesting (ha)</b>			
Area clear felled (ha)	50,342	46,001	<b>49,896</b>
Volume clear felled (TRVIB <sup>1</sup> , 000 m <sup>3</sup> )	26,296	23,437	<b>26,492</b>
Volume production thinned (TRVIB <sup>1</sup> , 000 m <sup>3</sup> )	307	244	<b>325</b>
Total volume removed (TRVIB <sup>1</sup> , 000 m <sup>3</sup> )	26,603	23,681	<b>26,818</b>
Average clear fell yield (m <sup>3</sup> /ha)	530	515	<b>537</b>
Area-weighted average clear fell age for radiata pine (years)	27.7	28.9	<b>28.4</b>
Estimated planted forest roundwood removal (000 m <sup>3</sup> ) <sup>2</sup>	28,030	30,258	<b>29,602</b>

## Notes:

<sup>1</sup> TRVIB is an abbreviation for Total Recoverable Volume Inside Bark.

<sup>2</sup> This is an indirect estimate based on the application of conversion factors to the various forestry products.

**Source:** National Exotic Forest Description (NEFD) 2014 and 2015

Throughout this publication, 'p' indicates provisional figures, while 'r' refers to figures which are 'revised' from those previously published.

Please note that due to rounding some percentages might not add up to 100%.

# Contribution of the Main 65 Plant Species to NZ GDP

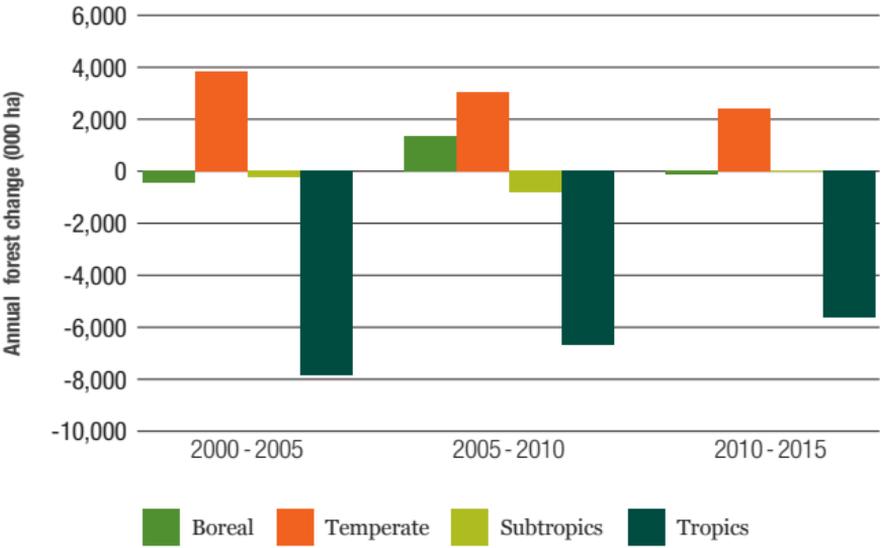
Plant	Total impact on GDP in 2012	Ranking #
Ryegrass	\$14,537,000,000	1
Pinus radiata	\$4,454,000,000	2
Clover	\$2,334,000,000	3
Kiwifruit	\$807,000,000	4
Douglas fir	\$200,000,000	12
Eucalyptus	\$41,000,000	23
Cypress	\$17,000,000	32

Source: NZIER July 2016



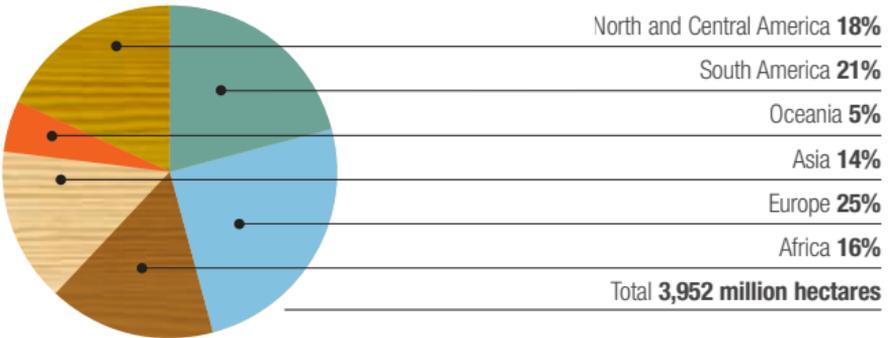
# Global Forest Coverage

## Net Annual Average Forest Area Change, by Climatic Domain (000 ha per year)

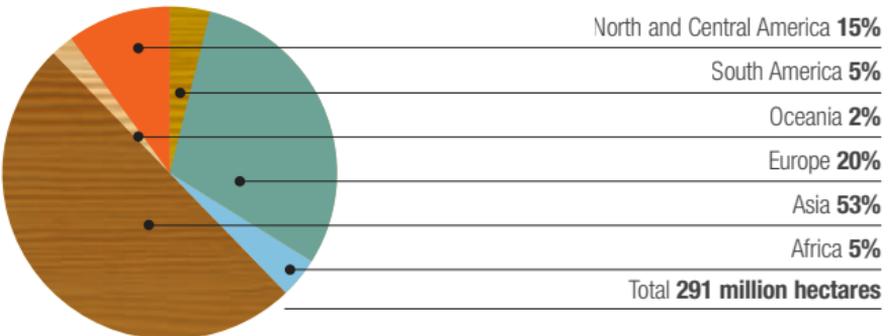


Source: FAO State of the World's Forests 2016

## Global Forest Areas



## Global Planted Forest Areas

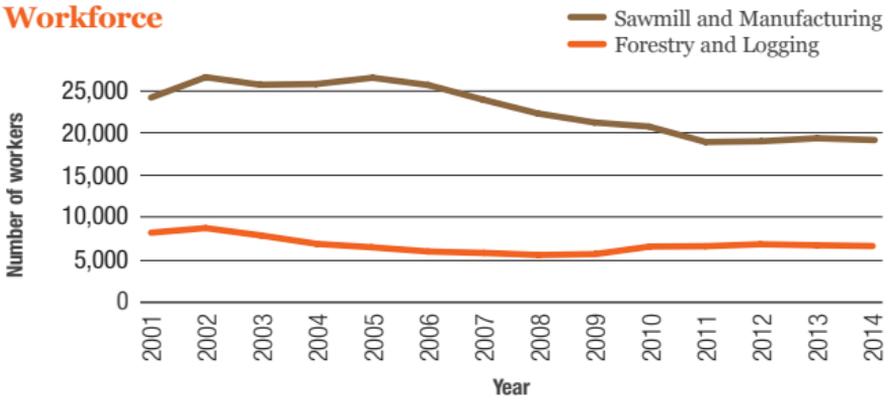


Source: FAO Global Forest Resources Assessment 2015

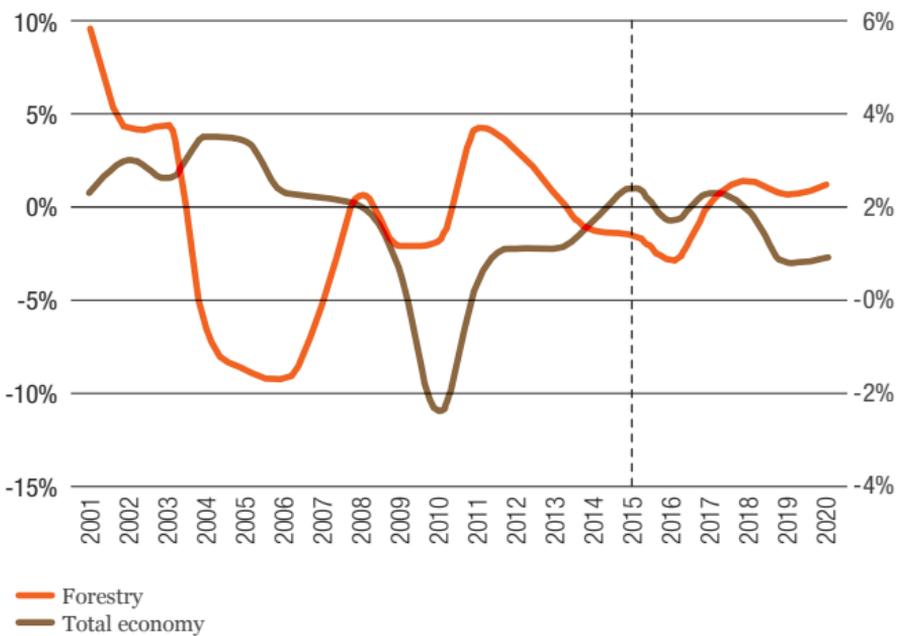
# Industry Employment

Year	2013	2014
Forestry and logging	4,490	4,290
Forestry support services	2,130	2,090
<b>Forestry and logging</b>	<b>6,620</b>	<b>6,380</b>
Log sawmilling and timber dressing	6,520	6,490
Other wood product manufacturing	8,710	9,090
Pulp, paper and converted paper product manufacturing	4,370	3,870
<b>Total forestry and first stage processing</b>	<b>26,220</b>	<b>25,830</b>

## Workforce



## Employment forecast (2015)

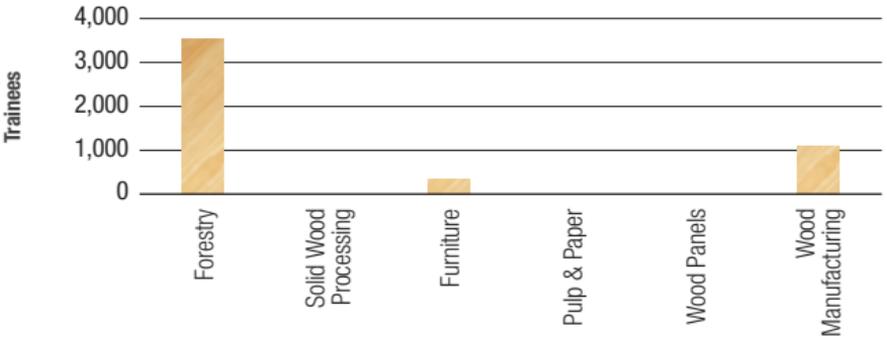


**Data source:** Infometrics and Statistics New Zealand.

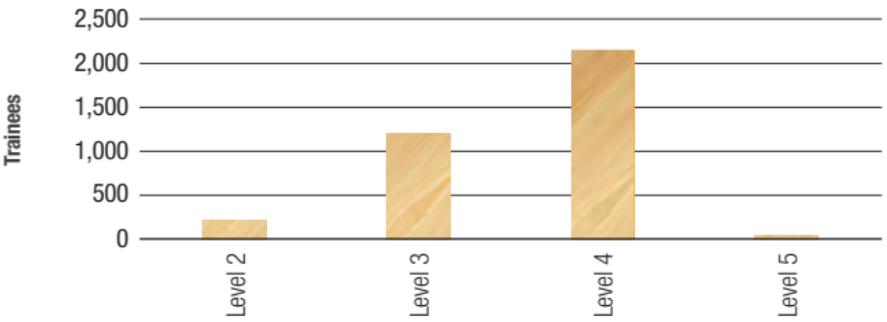
Forecasts are based on Infometrics modelling using: recent industry performance, key business influences and macroeconomic indicators e.g. inflation, interest rates, unemployment, the exchange rate, and business profitability. Data relates to the areas for which Competenz has gazetted coverage.

# Industry Training 2015

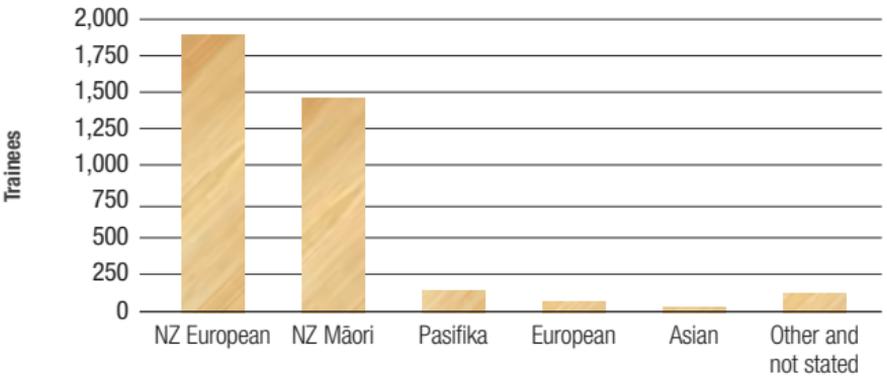
## Trainee Count



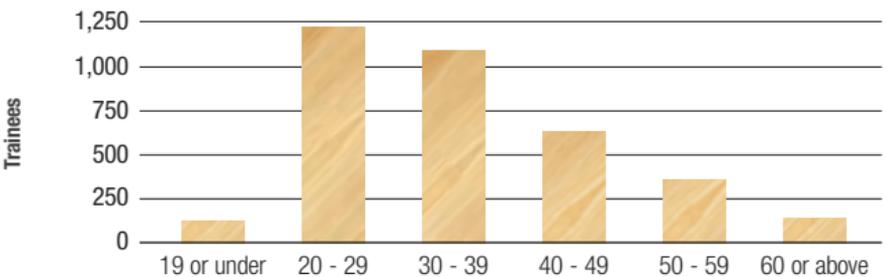
## Forestry Trainee Count



## Trainees by Ethnicity



## Forestry Trainees by Age



Source: Competenz

## SECTION 2



# PLANTATION FORESTRY



90%

Of all New Zealand plantation forests are planted with *pinus radiata*, with a majority of other species being planted in the South Island.



83%

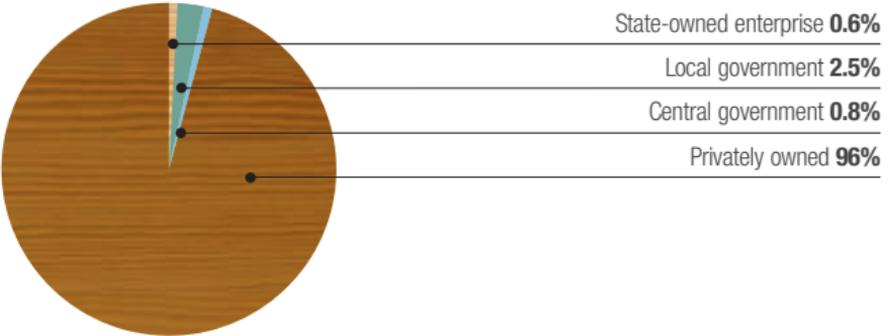
Of all logs harvested in 2014 were used for quality production or export.

Source: MPI



# Plantation Ownership

## Planted Forest Ownership – New Zealand



**Source:** NEFD 2015

**Note:**

- Ownership is based solely on the ownership of the forest irrespective of the ownership of the land.
- Net stocked planted production forest area.
- “Privately owned” includes all privately owned forests. The legal entities included in this category are private companies, partnerships, individuals and trusts, which include Māori trusts and incorporations.
- “Central government” forests are predominantly Crown-owned forests on Māori leasehold land. These forests are managed by the Ministry for Primary Industries.
- Individual entries may not sum to totals shown due to rounding.



# Commercial Planted Forest Ownership and Management

As at 31 December 2015

Forest Owner/Manager	Net stocked forest area ( ha )			
	2011 As at 1 April	2012 As at 1 April	2014 As at 31 Dec	2015 As at 31 Dec
Hancock Natural Resource Group	235,000	235,000	225,000	219,000
Kaingaroa Timberlands	175,000	174,000	175,000	175,740
Rayonier/Matariki Forests	118,000	121,000	118,060	115,287
PF Olsen Ltd	66,000	71,000	109,182	115,766
Global Forest Partners LP	91,000	84,000	84,960	73,191
Ermslaw One	109,000	109,000	113,159	105,644
Crown Forestry (MPI)	47,000	46,000	19,000	17,081
Juken New Zealand	60,000	31,000	32,100	32,299
Pan Pac Forest Products	34,000	34,000	35,200	34,436
GMO Renewable Resources	21,000	26,000	19,000	19,990
Hikurangi Forest Farms	25,000	25,000	25,000	26,581
Wenita	25,000	25,000	27,570	25,210
Roger Dickie NZ	24,000	26,000	26,576	26,576
Blakely Pacific	23,000	23,000	23,222	24,837
Forest Enterprises	21,000	21,000	21,000	20,000
City Forests	16,000	16,000	16,300	16,469
Lake Taupo Forest Trust	15,000	16,000	17,795	18,726
Summit Forests NZ Ltd	–	–	23,700	24,622
Ngāi Tahu Forest Estates Ltd	–	–	25,950	25,950
Others (under 10,000 ha)	608,000	629,000	629,556	644,150
<b>Total Plantation Forest Area</b>	<b>1,713,000</b>	<b>1,712,000</b>	<b>1,767,330</b>	<b>1,761,555</b>

## Notes for pages 13 and 14:

- Kaingaroa Timberlands is managed by Timberlands Ltd.
- GMO Renewable Resources is a shareholder in Wenita.
- Roger Dickie NZ Forests are managed by Forest Management NZ LTD.
- Lake Taupo Forest Trust is managed by New Zealand Forest Managers.
- Others (under 10,000 ha) are estimated numbers only.
- Crown land includes land leased under Crown Forest Licence.
- Kaingaroa Timberlands is 42% owned by the NZ Superannuation Fund.

# Ownership of Forest Land

As at 31 December 2015

Firm/Entity	Underlying Land Status (Productive area (ha))				
	Freehold	Leasehold			Total
		Crown	Māori Inc.	Other	
Hancock Natural Resource Group	106,045	9,733	76,978	39,193	231,949
Kaingaroa Timberlands	1,394	–	181,315	1	182,710
Rayonier/Matariki Forests	54,582	33,656	26,475	6,249	120,961
Global Forest Partners LP	43,687	–	49,053	925	93,665
Ermslaw One	57,334	43,818	9,542	–	110,694
Crown Forestry (MPI)	1,529	–	11,960	3,592	17,081
Juken New Zealand	9,907	14,593	6,675	1,124	32,299
Pan Pac Forest Products	4,809	15,736	15,020	81	35,646
GMO Renewable Resources	18,240	–	1,460	290	19,990
Hikurangi Forest Farms	25,570	–	2,218	296	28,084
Wenita	5,620	–	–	19,590	25,210
Roger Dickie NZ	26,576	–	–	–	26,576
Blakely Pacific	23,688	–	–	1,149	24,837
Forest Enterprises	20,410	–	–	–	20,410
City Forests	15,219	–	–	1,250	16,469
Lake Taupo Forest Trust	–	–	–	–	18,726
Summit Forests NZ Ltd	1,319	19,255	2,947	1,101	24,622
Ngāi Tahu Forest Estates Ltd	25,700	–	–	250	25,950
<b>Totals</b>	<b>441,629</b>	<b>136,791</b>	<b>383,643</b>	<b>75,091</b>	<b>1,055,879</b>

Source: FOA

# Plantation Forest Management Statistics

As at 31 December 2015

Firm/Entity	Forest Management (ha)	
	TIMO	Property Management
Hancock Forest Management (NZ) Ltd	231,618	195,282
Timberlands Ltd	–	182,710
Rayonier/Matariki Forests	–	120,961
Global Forest Partners LP	10,215	73,191
Ermslaw One	–	14,022
Crown Forestry (MPI)	–	–
Juken New Zealand	–	32,299
Pan Pac Forest Products	–	35,646
GMO Renewable Resources	19,990	–
Hikurangi Forest Farms	–	–
Wenita	–	25,210
Roger Dickie NZ	26,576	–
Forest Management NZ Ltd	–	26,576
Blakely Pacific	–	24,837
Forest Enterprises	20,410	–
City Forests	–	16,469
Lake Taupo Forest Trust	–	18,726
PF Olsen Ltd	2,533	151,922
Summit Forests NZ Ltd	–	24,622
<b>Totals</b>	<b>311,342</b>	<b>942,473</b>

## Note:

This table is designed to identify who **manages** NZ forests.

Within “management” there are 2 main categories:

1. Timberland Investment Management (commonly referred to as a TIMO).  
These organisations do not own any forest. Greenplan, Roger Dickie and Forest Enterprises are TIMOs, along with GMO RR, Hancock Natural Resource Group, New Forests, GFP etc. The forests are owned by retail investors or institutional funds.
2. Property Management.  
Planning and managing field operations, mapping and maintaining records.  
Some entities carry out both functions within the same organisation, others carry out both for some parts of a forest estate and not others.

Source: FOA

# FSC Certified Forest Owner/Manager

Company	Certificate/Data Forest Area (ha)
	<b>2016</b>
Blakely Pacific Ltd	34,187
City Forests Ltd	16,469
Craigpine Timber Ltd	20,191
Ernslaw One Ltd, South Island Region	29,049
Ernslaw One Ltd, North Island Region	113,709
GMO Renewable Resources	13,650
Hancock Forest Management NZ Ltd	193,734
Hikurangi Forest Farms Ltd	35,013
Juken New Zealand Ltd	32,299
Nelson Forests Ltd	62,328
Ngāi Tahu Forest Estates Ltd	25,950
NZ Forest Managers Ltd	56,778
Pan Pac Forest Products Ltd	45,670
PF Olsen Ltd	53,461
Rayonier New Zealand Ltd and Matariki Forests	170,975
Southland Plantation Forest Company of New Zealand	14,016
Summit Forests New Zealand Ltd	32,420
Tasman Pine Forests Ltd	36,200
Timberlands Ltd	206,374
Wairarapa Estate Ltd.	4,202
Wenita Forest Products Ltd	32,133
<b>Total FSC Plantation Productive Area (ha)</b>	<b>1,228,808*</b>
Total NZ Productive Plantation Area (ha) <sup>†</sup>	1,825,521
% Plantation Forest FSC Certified (ha)	67.31%
Lindsay & Dixon Ltd. (Naturally regenerated indigenous)	11,916
<b>Total NZ FSC Certification</b>	<b>1,240,724</b>

As of August 2016, there were  
**1,240,724 HA**  
of New Zealand forests certified by  
the Forest Stewardship Council.

**Notes:** \* From pg 5, Nsa 1,771,618 + area awaiting restocking 53,903 = 1,825,521

**Source:** FOA

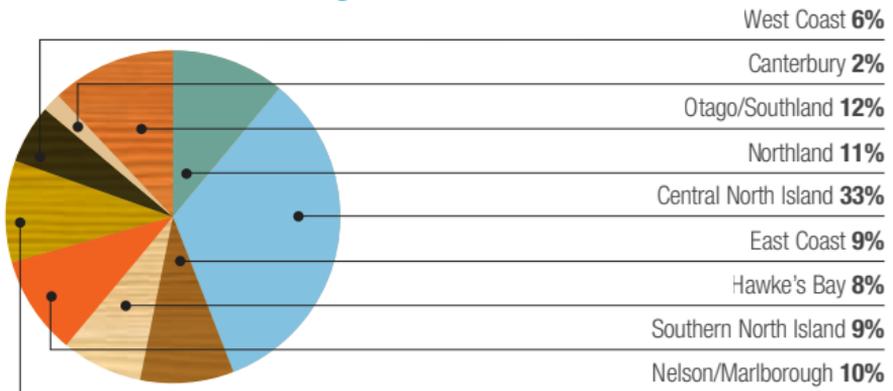
# Plantation Forests by Location

As at 1 April 2015

	2013 Hectares	2014 Hectares	2015 Hectares
Northland	201,196	191,512	188,416
Central North Island	553,956	573,966	569,297
East Coast	156,136	156,432	155,079
Hawke's Bay	131,735	133,324	134,841
Southern North Island	165,811	162,779	164,748
Nelson/Marlborough	170,171	168,421	169,783
West Coast	32,351	31,775	31,205
Canterbury	111,981	108,371	98,223
Otago/Southland	205,163	206,885	206,123
<b>Total</b>	<b>1,728,500</b>	<b>1,733,465</b>	<b>1,717,715</b>

Source: NEFD 2015

## Plantation Forests 2015

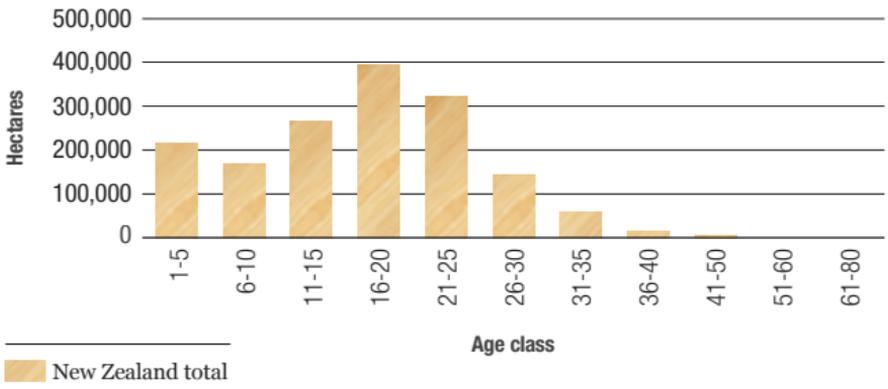


Source: NEFD 2015



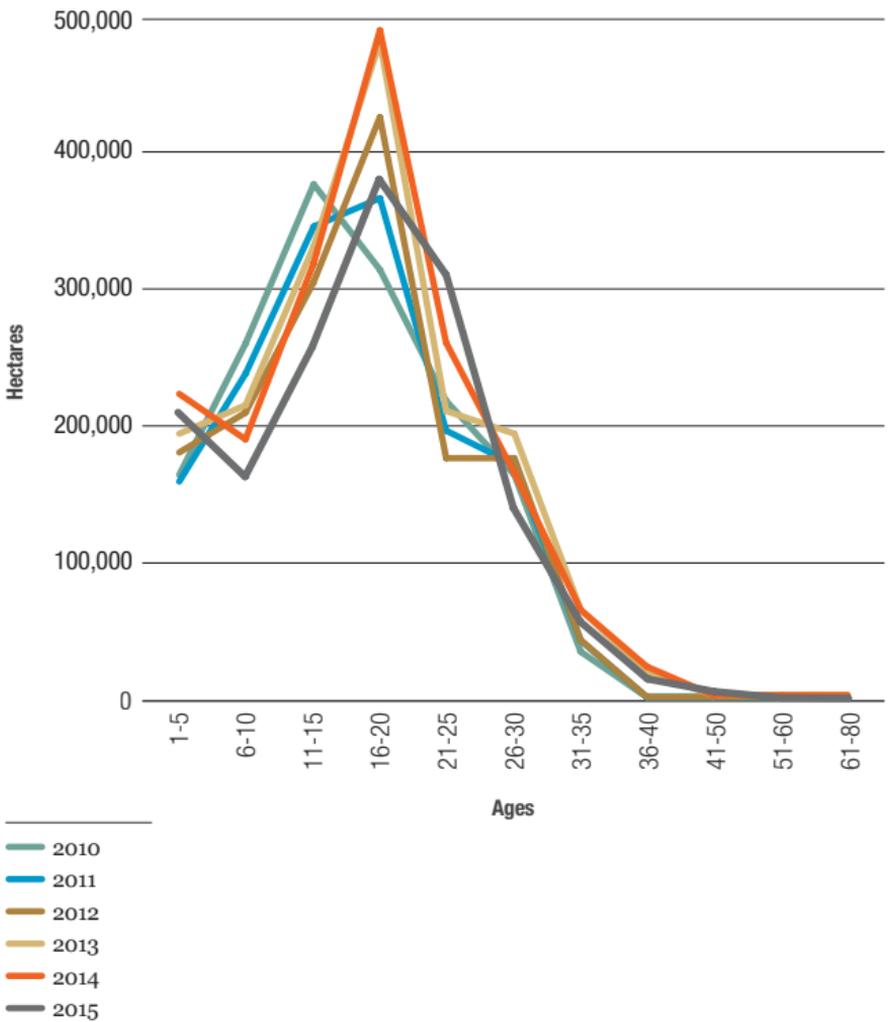
# Net Stocked Area of Radiata Pine

By age class at 1 April 2015



Source: NEFD 2015

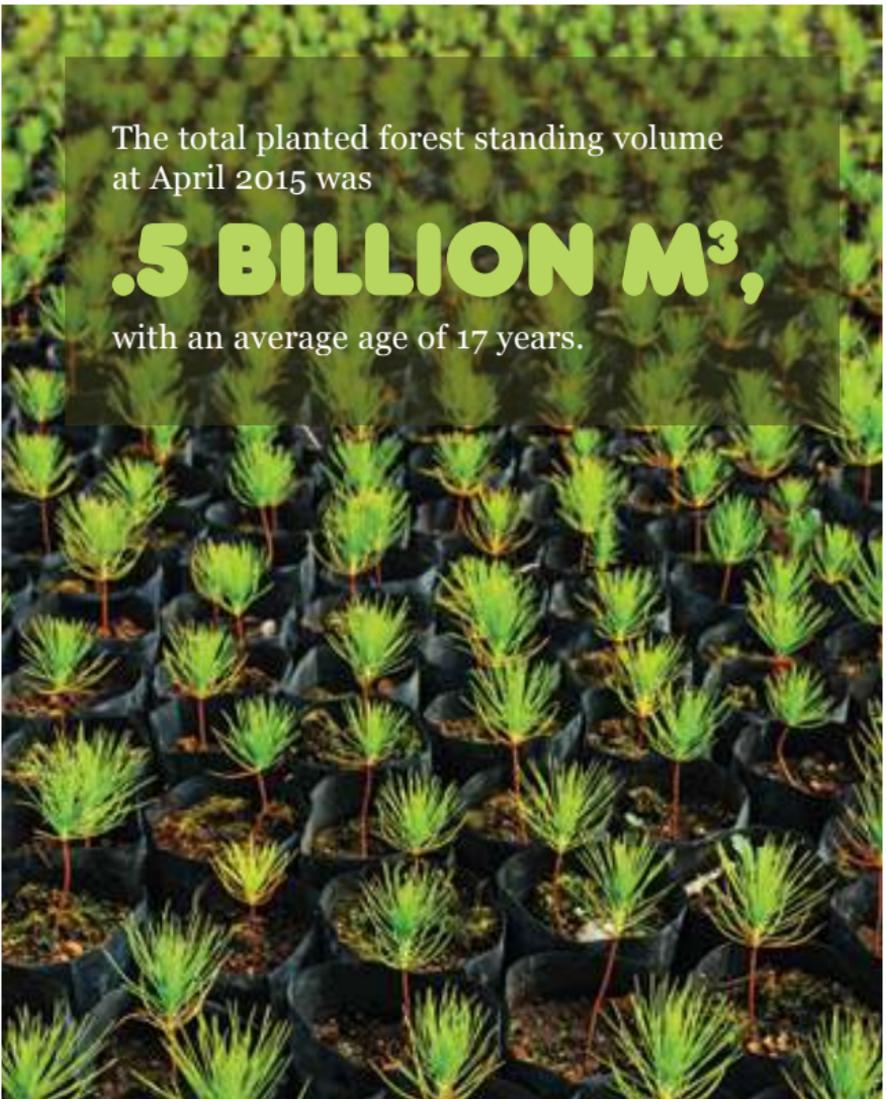
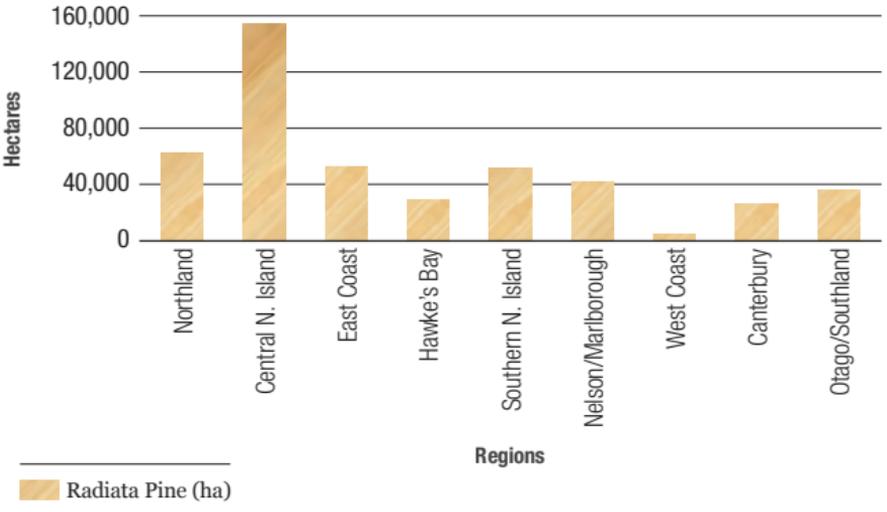
## Age class over time



Source: NEFD 2015

# Planted Radiata Pine

of Harvestable Age (21+) Per Region (Ha)

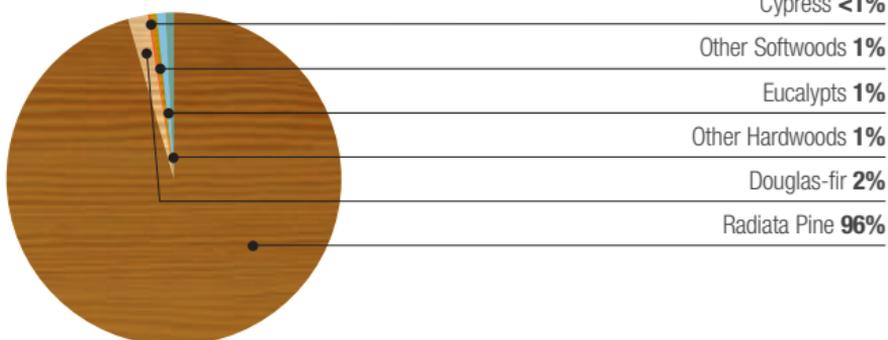


Source: NEFD 2015

# Plantation Species (Ha)

As at April 2014

## North Island



## South Island



Source: NEFD 2014

# 46%

*Pinus* spp. makes up approximately 46% of the estimated 53.4 million hectares of planted production forest worldwide, with Eucalypts the next largest at 26%.

FSC Strategic Review on the Future of Forest Plantations 2012

## Minor plantation species

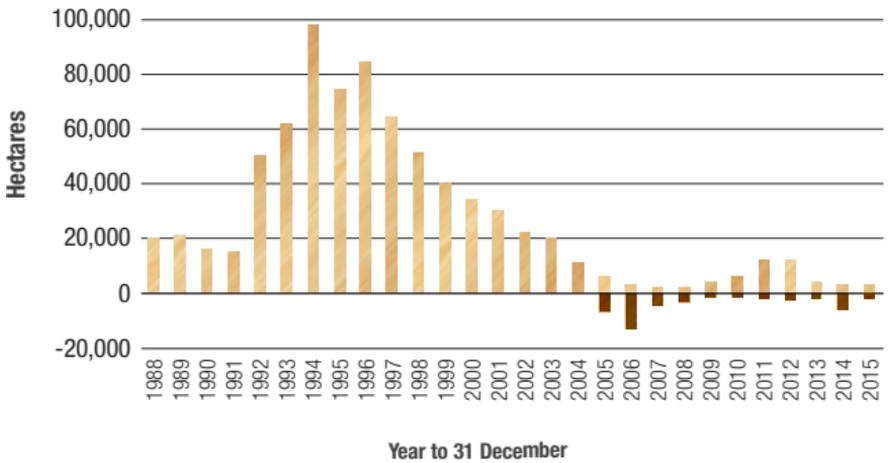
Other pines; *P. nigra*, *P. muricata*, *P. ponderosa*

Other softwoods; *Redwoods*, *Larch*, *Cryptomeria*

Indigenous species; *Kauri*, *Totara*

Other hardwoods; *Poplars*, *Acacia*, *Willows*, *Black Walnut*, *Paulownia*, *Oaks*

# New Forest Planting (1988) and Deforestation (since 2005)



**Note:**

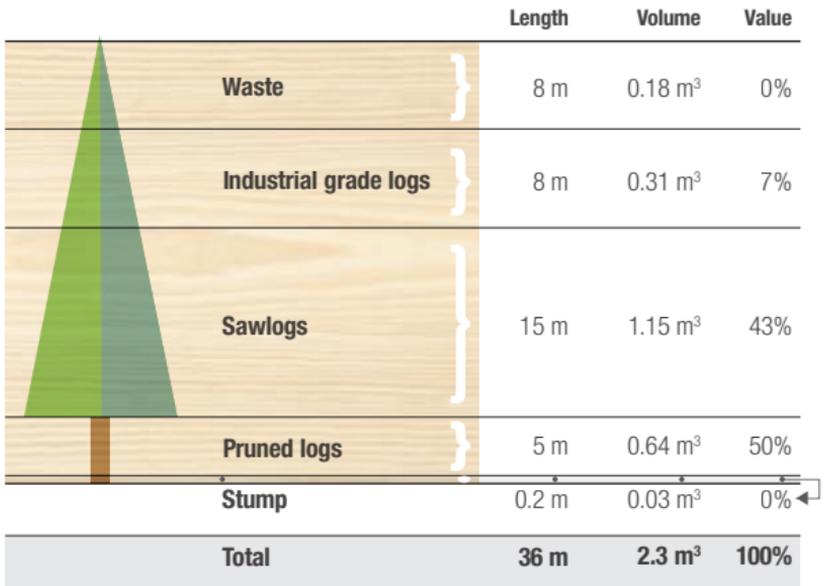
- These estimates do not include immature forest cleared for other land uses.
- Deforestation figure: [www.maf.govt.nz/news-resources/statistics-forecasting/statistical-publications/national-exotic-forest-description](http://www.maf.govt.nz/news-resources/statistics-forecasting/statistical-publications/national-exotic-forest-description).



# Typical Log Out-turn

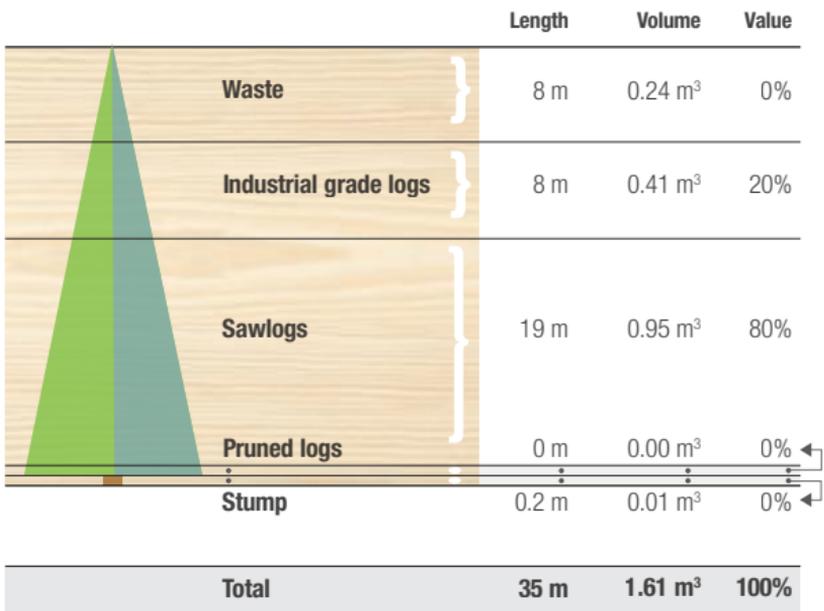
## Direct Sawlog Regime

Pruned and thinned. Final Crop Stocking 228 stems per hectare



## Structural Regime

Pruned and thinned. Final Crop Stocking 487 stems per hectare

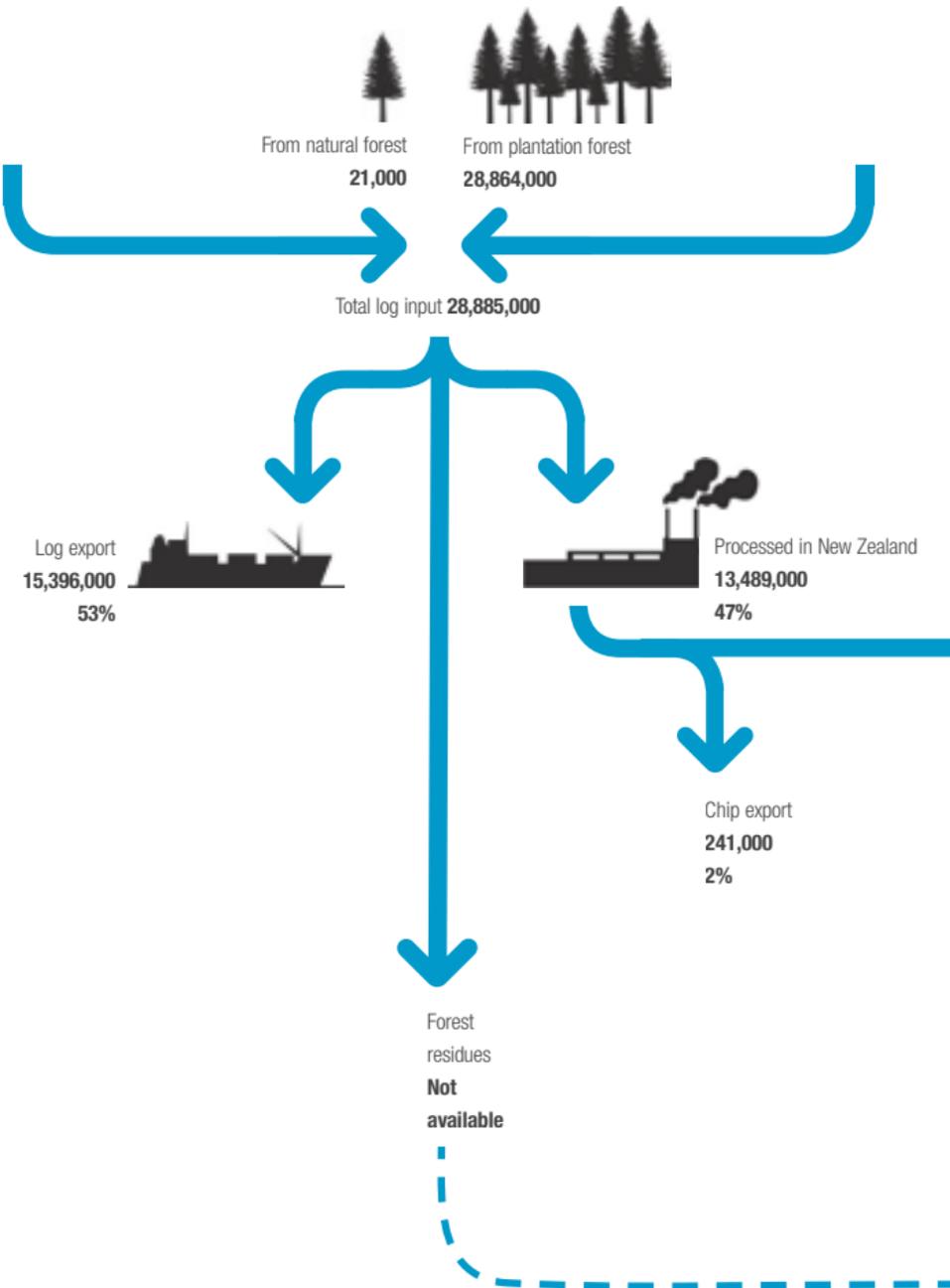


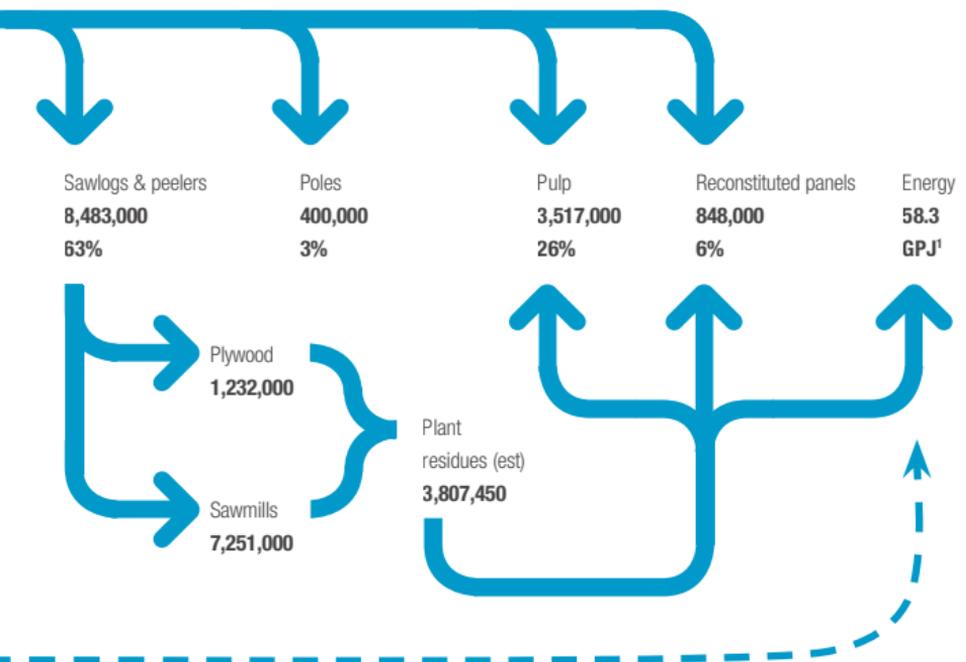
### Notes:

- Average site (Site Index 29 m, 300 Index 23 m<sup>3</sup>/ha/yr). Clearfelled at 28 years.

# Log Flow in the New Zealand Forestry Industry

Volumes in m<sup>3</sup> roundwood equivalent.  
Year to 31 December 2015



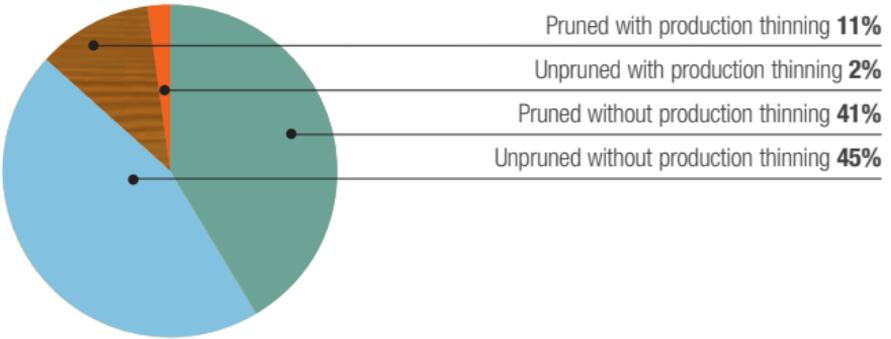


GPJ: Gross Petajoules

<sup>1</sup> Source: Energy in NZ 2015

# Forest Management Trends

## Radiata Pine 2015

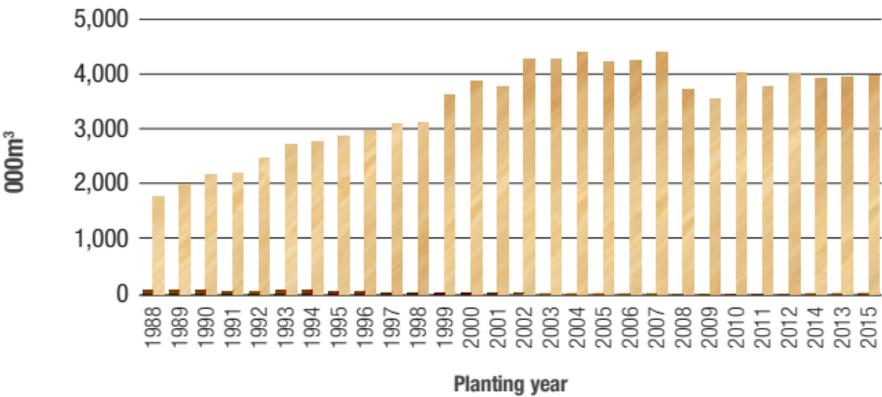


	2013	2014	2015
	%	%	%
Pruned without production thinning	44%	41%	41%
Unpruned without production thinning	40%	44%	45%
Pruned with production thinning	13%	13%	11%
Unpruned with production thinning	3%	2%	2%

# 5% MORE UNPRUNED

Just over half the plantation state is managed under a pruned regime (52%). However there is a consistent trend toward less pruning - a drop of 5% in three years.

## Indigenous and planted harvest 2015



Source: NEFD 2015

Indigenous Planted

## SECTION 3



# PRODUCTION AND EXPORT



# Top Export Destinations

Exports of forestry products by main countries of destination for the year ended December 2015 by value (NZ\$000)



## China

**SNZ 1,826,407**

Logs & poles	75.24%
Sawn timber	8.15%
Wood pulp	11.88%
Paper & paperboard	2.65%
Panel products	1.51%
All other	0.57%



## Australia

**SNZ 711,693**

Logs & poles	0.41%
Sawn timber	20.05%
Wood pulp	12.94%
Paper & paperboard	17.35%
Panel products	19.00%
All other	30.25%



## Republic of Korea

**SNZ 462,460**

Logs & poles	69.08%
Sawn timber	8.67%
Wood pulp	16.77%
Paper & paperboard	5.18%
Panel products	0.25%
All other	0.06%



## Indonesia

**SNZ 150,097**

Logs & poles	0.06%
Sawn timber	18.38%
Wood pulp	43.10%
Paper & paperboard	1.60%
Panel products	15.98%
All other	20.88%



## Taiwan

**SNZ 98,875**

Logs & poles	14.84%
Sawn timber	41.14%
Wood pulp	17.46%
Paper & paperboard	11.39%
Panel products	14.99%
All other	0.18%



## Thailand

**SNZ 76,780**

Logs & poles	3.38%
Sawn timber	39.03%
Wood pulp	21.15%
Paper & paperboard	26.27%
Panel products	0.75%
All other	9.42%



## South Africa

**SNZ 61,076**

Logs & poles	0.00%
Sawn timber	0.00%
Wood pulp	97.44%
Paper & paperboard	0.09%
Panel products	0.10%
All other	2.37%



## Netherlands

**SNZ 21,096**

Logs & poles	0.00%
Sawn timber	97.03%
Wood pulp	0.00%
Paper & paperboard	0.09%
Panel products	0.00%
All other	2.88%



## Maldives

**SNZ 17,969**

Logs & poles	0.74%
Sawn timber	30.49%
Wood pulp	0.00%
Paper & paperboard	0.55%
Panel products	2.93%
All other	65.29%



### Japan

**\$NZ 405,312**

Logs & poles	12.56%
Sawn timber	7.35%
Wood pulp	17.43%
Paper & paperboard	0.29%
Panel products	43.90%
All other	18.47%



### India

**\$NZ 254,383**

Logs & poles	80.37%
Sawn timber	2.04%
Wood pulp	7.94%
Paper & paperboard	2.96%
Panel products	2.30%
All other	4.39%



### USA

**\$NZ 224,286**

Logs & poles	0.01%
Sawn timber	81.08%
Wood pulp	0.00%
Paper & paperboard	2.34%
Panel products	11.46%
All other	5.11%



### Philippines

**\$NZ 75,760**

Logs & poles	0.00%
Sawn timber	29.43%
Wood pulp	6.80%
Paper & paperboard	33.65%
Panel products	29.31%
All other	0.80%



### Viet Nam

**\$NZ 74,927**

Logs & poles	6.97%
Sawn timber	63.93%
Wood pulp	1.41%
Paper & paperboard	9.52%
Panel products	15.92%
All other	2.25%



### Malaysia

**\$NZ 70,671**

Logs & poles	0.28%
Sawn timber	9.98%
Wood pulp	27.50%
Paper & paperboard	36.62%
Panel products	25.01%
All other	0.60%

### Other countries

**\$NZ**

Logs & poles	7.04%
Sawn timber	35.53%
Wood pulp	6.20%
Paper & paperboard	10.08%
Panel products	8.58%
All other	32.57%

### Note:

- Values are NZ\$000 f.o.b.
- All other forestry products include chips, mouldings, manufactures of paper and paperboard, furniture and miscellaneous forestry products.
- Other countries are all other countries to which New Zealand has exported forestry products during the year.

**Source:** Statistics NZ



**45%**

Of all lumber was exported in 2015.

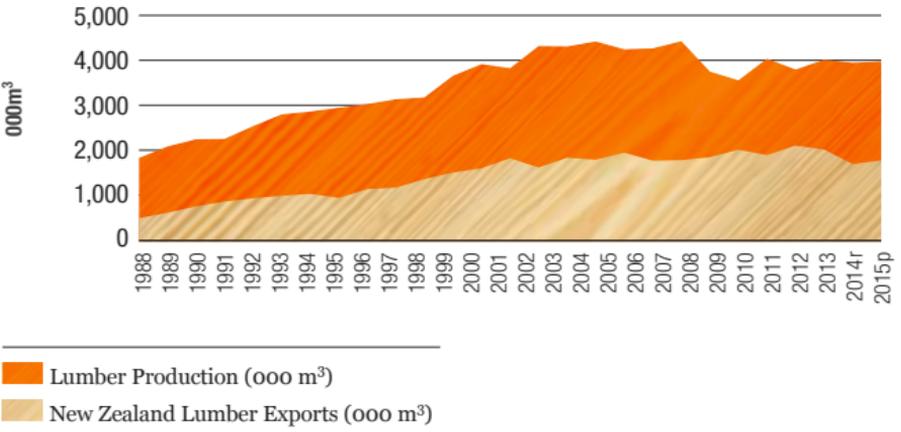
**99.72%**

Of all lumber harvested in 2015 was from plantation forests.



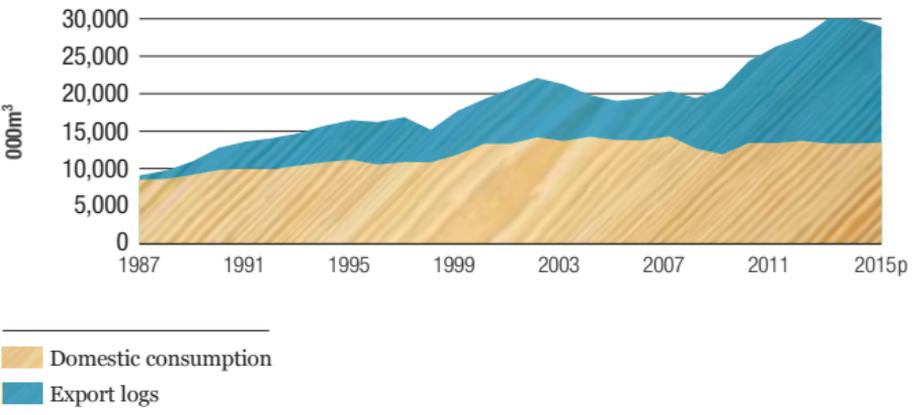
# Lumber Production and Exports

For Year Ended 31 December 2015



Source: MPI

## Domestic vs International Log Consumption 2015

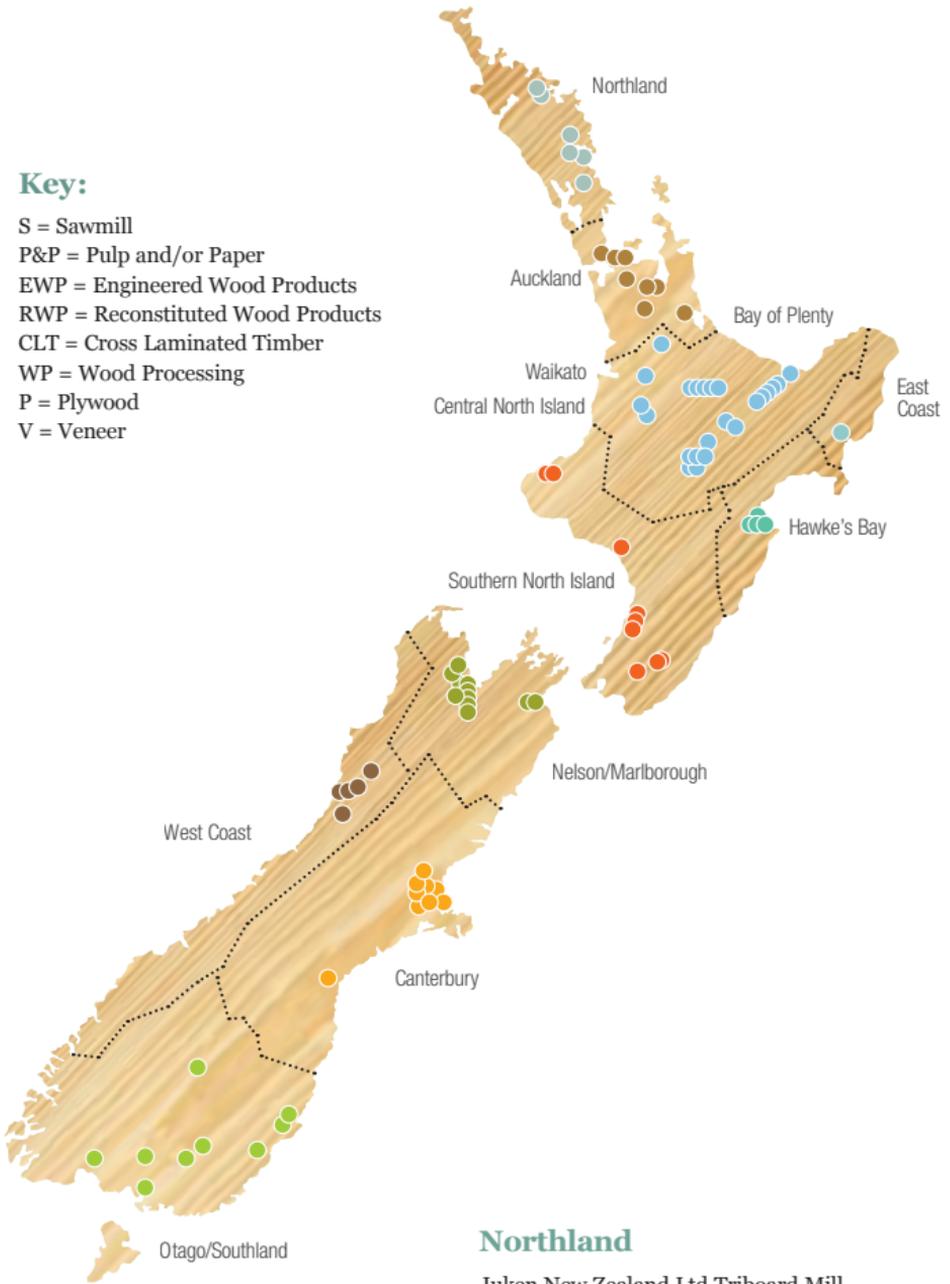


Source: MPI

# Location of Wood Processors by Region 2016

## Key:

- S = Sawmill
- P&P = Pulp and/or Paper
- EWP = Engineered Wood Products
- RWP = Reconstituted Wood Products
- CLT = Cross Laminated Timber
- WP = Wood Processing
- P = Plywood
- V = Veneer



## Northland

- Juken New Zealand Ltd Triboard Mill (Kaitaia) (RWP)
- Juken New Zealand Ltd Northland Mill (Kaitaia) (S)
- CHH Woodproducts, LVL (Marsden Point) (EWP)
- CHH Woodproducts (Whangarei) (S)
- Rosvall Sawmill (Whangarei) (S)
- Northpine Sawmill (Bream Bay) (S)
- North Sawn Lumber (Marsden Point) (WP)
- Waipapa Pine (Whangarei) (S)
- Mt Pokaka Timber Products (Kerikeri) (S/WP)
- Croft Poles Ltd (Whangarei) (S/WP)
- Topuni Timber (Kaiwaka) (S)
- Marusumi Whangarei Co Ltd (Marsden Point) (WP)

Source: WPMA and FIEA

## Auckland

Profiles Wood Products Ltd (Thames) (S)  
Jenkin Timber (Auckland) (WP)  
Goodwood Industries (Auckland) (WP)  
Timberlab Solutions Ltd (Auckland) (WP)  
Kopine (RWP)  
Max Birt Sawmills (Pokeno) (S)  
Pinepac (Auckland) (S)  
Max Birt Sawmill (Ohinewai) (S)

## Bay of Plenty

Claymark Sawmills (Katikati) (S)  
Pukepine Sawmills (Te Puke) (S)  
Whakatane Mill Ltd (Whakatane) (P&P)  
Laminated Beams Ltd (Papamoa) (EWP)  
KLC (Rotorua) (WP)

## Waikato

Jointwood (Cambridge) (WP)  
Otorohanga Timber Company  
(Otorohanga) (WP)  
Kiwi Lumber (Putaruru) (S)

## Central North Island

CHH Woodproducts, Plywood  
(Tokoroa) (P)  
Oji Fibre Solutions Kinleith Mill  
(Tokoroa) (P&P)  
Claymark Rotorua Sawmill Ltd  
(Rotorua) (S)  
Red Stag Timber (Rotorua) (WP/S)  
Hume Pine (Rotorua) (WP)  
Verda (Rotorua) (WP)  
CHH Woodproducts Kawerau Sawmill  
(Kawerau) (S)  
Sequal Lumber (Kawerau) (S)  
SCA Hygiene Australasia (Kawerau) (P&P)  
Oji FS Tasman Ltd (Kawerau) (P&P)  
Norske Skog Tasman Ltd (Kawerau) (P&P)  
Laminex Group (Taupo) (RWP)  
Tenon Ltd (Taupo) (S/WP)  
Winstone International (Ohakune) (S)  
(P&P)  
McAlpines (Rotorua) (S)  
Donnelly Sawmills (Reporoa) (S)  
Permapine (Reporoa) (WP)

## East Coast

Juken New Zealand, Gisborne Mill (LVL)

## Hawke's Bay

Pan Pac Forest Products Ltd (Napier) (S/P&P)  
East Coast Lumber (Wairoa) (S)  
Napier Pine (Napier) (WP/S)  
Tumu Timber (Hastings) (WP)

## Southern North Island

Taranakipine Ltd (New Plymouth) (S/WP)  
Juken New Zealand (Masterton) (EWP)  
Kiwi Lumber (Masterton) (S)  
Kiwi Lumber (Dannevirke) (S)

Clelands Timber Products Ltd  
(New Plymouth) (WP)  
Eastown Timber Products Ltd  
(Whanganui) (WP)  
W Crighton & Son Ltd (Levin) (S)  
Davis Sawmilling Co (Featherston) (S)  
Techlam (Levin) (EWP)  
Mitchpine (Levin) (WP)

## Nelson/Marlborough

Eurocell Wood Products Ltd (Nelson) (S)  
Nelson Pine Industries (Richmond) (LVL)  
Southpine Ltd (Nelson) (S)  
Timberlink (Blenheim) (S)  
CHH Wood Products, Nelson Sawmill  
(Eves Valley) (S)  
Hunter Laminates 2014 Ltd  
(Nelson) (WP)  
Nelson Forests Limited (Renwick) (S)  
XLAM (Nelson) (CLT)  
GoldPine Ltd (Richmond) (WP)  
Motueka Lumber Ltd (Motueka) (S/WP)  
Prowood Ltd (Motueka) (WP)

## Canterbury

Daiken (Rangiora) (RWP)  
SRS New Zealand Limited  
(Rolleston) (S/WP)  
Starwood Products Ltd (Timaru) (WP)  
Southern Pine Products  
(Christchurch) (WP)  
McAlpines (Rangiora) (WP)  
Westco Lumber Ltd  
(Christchurch) (WP)  
Stoneyhurst Timbers Ltd  
(Christchurch) (S)  
Belfast Timber Ltd (Christchurch) (WP)  
Fraemohs Industries Ltd (Christchurch) (WP)

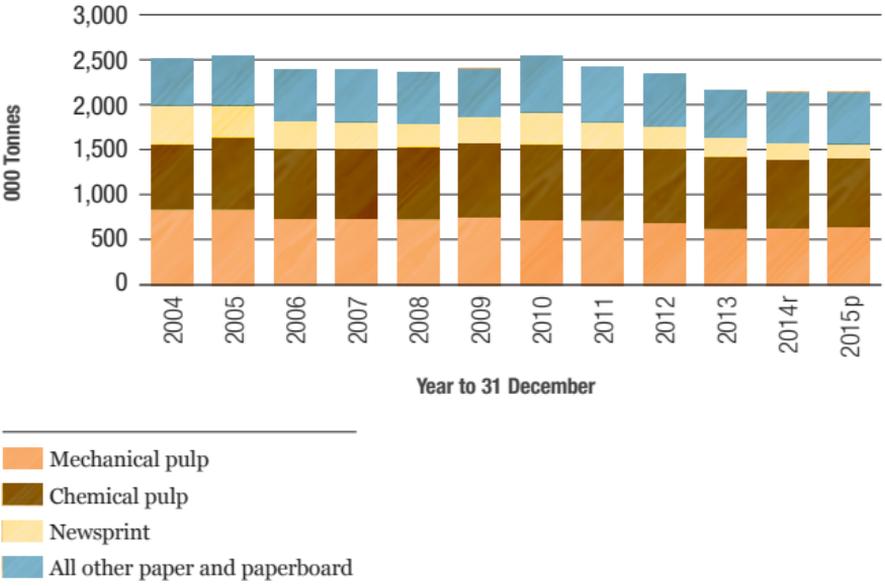
## West Coast

International Panel and Lumber Ltd  
(Greymouth) (WP)  
Stillwater Lumber Limited  
(Greymouth) (S)  
Westco Lumber Limited (Hokitika) (S)  
NZ Sustainable Forest Products Ltd  
(Reefton) (WP)  
Westtimber Ltd (Ngahere) (S)

## Otago/Southland

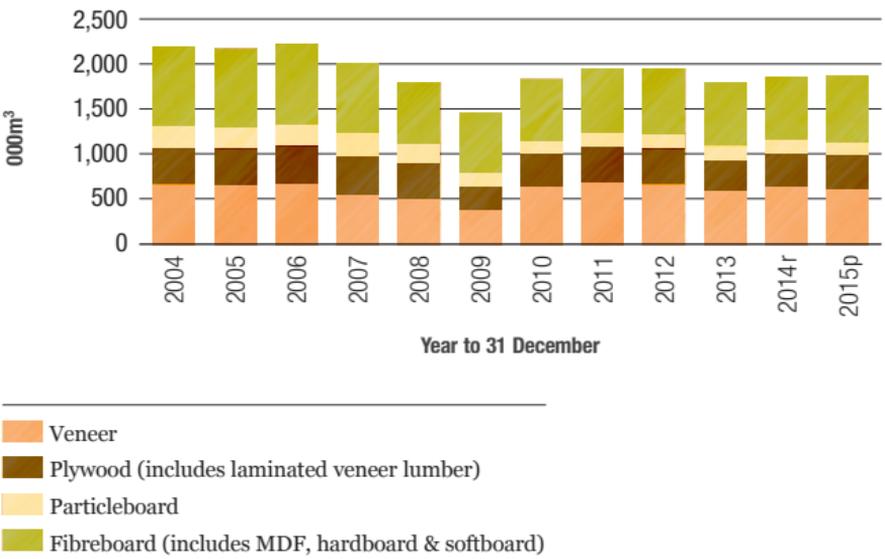
Dongwha Patinna NZ Ltd  
(Mataura) (RWP)  
Niagara Sawmilling Co Ltd (Invercargill/  
Ashburton) (S/WP)  
Pan Pac Forest Products (Otago) Ltd  
(Milburn and Milton) (S)  
Craigpine Timber Ltd (Winton) (S)  
Stuart Timber Co Ltd (Tapanui) (S)  
Ngahere Sawmilling Co (Gore) (S)  
Lindsay and Dixon (Tuatapere) (S)  
TrussTech (Cromwell) (WP)  
Otago Lumber (Mosgiel) (S)

# Paper and Pulp Production



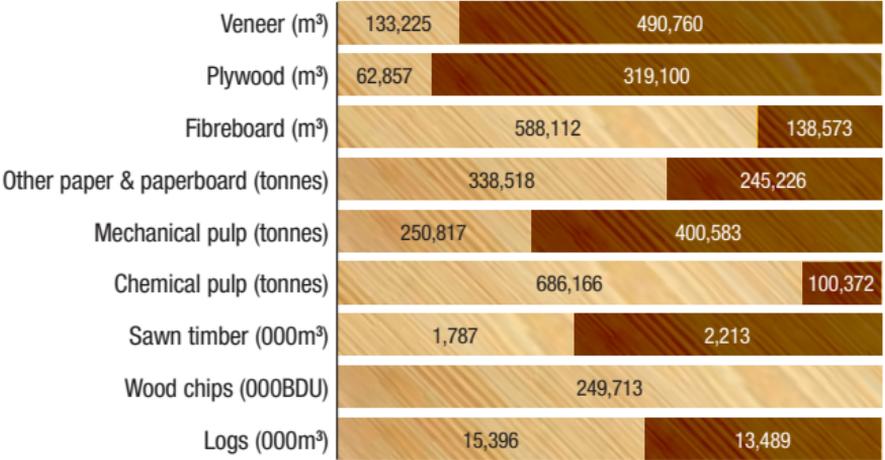
Source: MPI

# Panel Products Production



Source: MPI

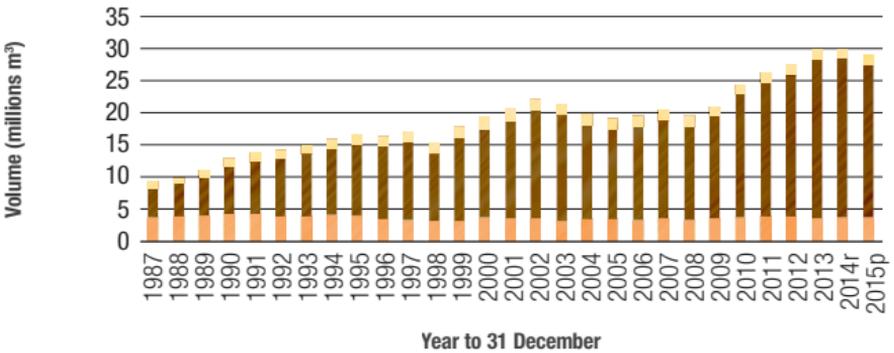
# Production and Exports of Selected Forestry Products 2015



Quantity Exported  
Domestic Consumption

Source: MPI, Statistics NZ

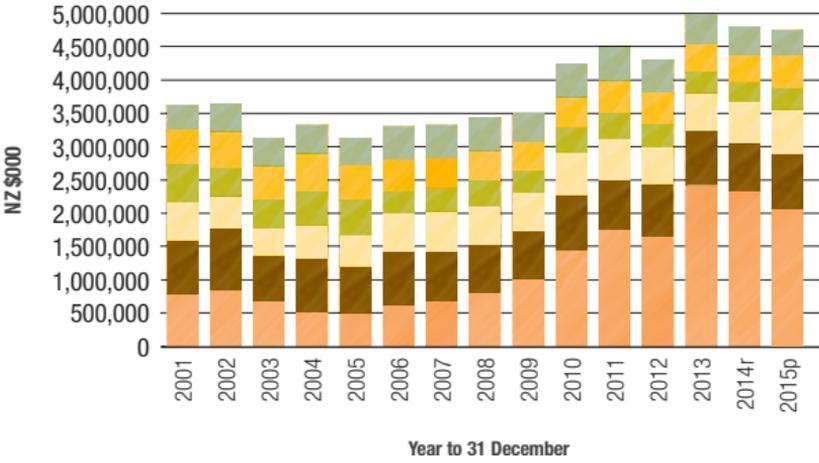
## Plantation Forest Harvest



Pulp logs  
Quality logs  
Other roundwood

Source: MPI

# Major Export Earners



- Logs and wood chips
- Sawn timber and sleepers
- Wood pulp
- Paper and paperboard
- Panel products
- Other forestry products

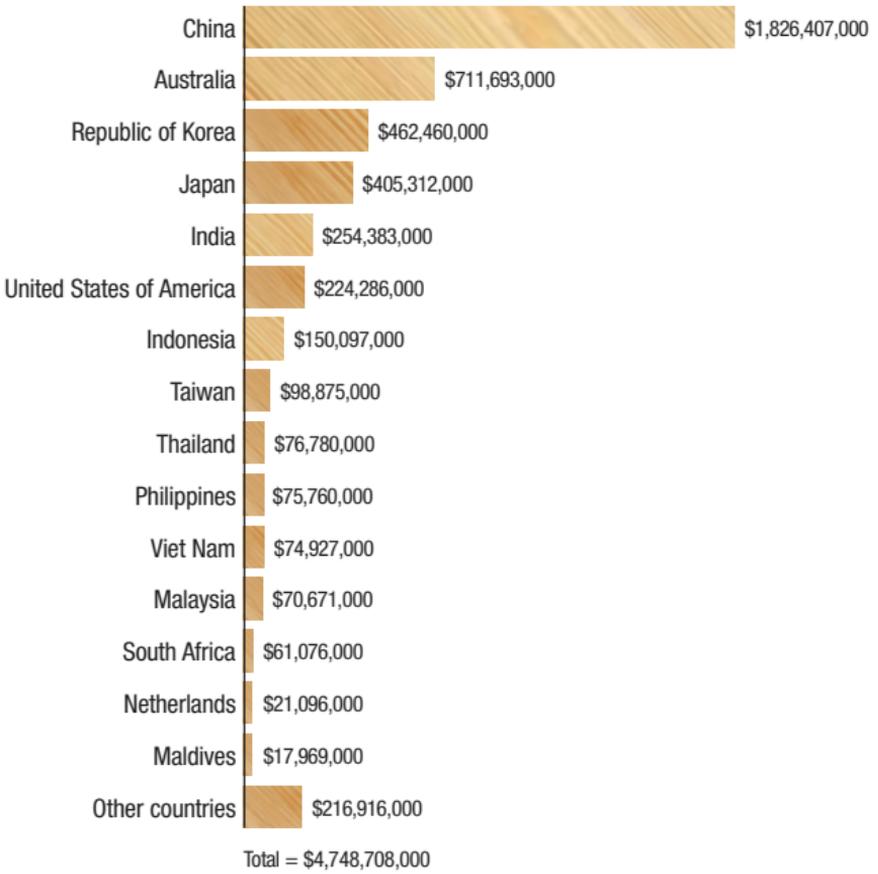
**Note:**

- Values are NZ\$ free on board (f.o.b.).
- Other forestry products includes wood manufactures, cork and cork manufactures, waste paper and prefabricated wooden buildings.



# Exports of Forestry Products from New Zealand

Year to 31 December 2015



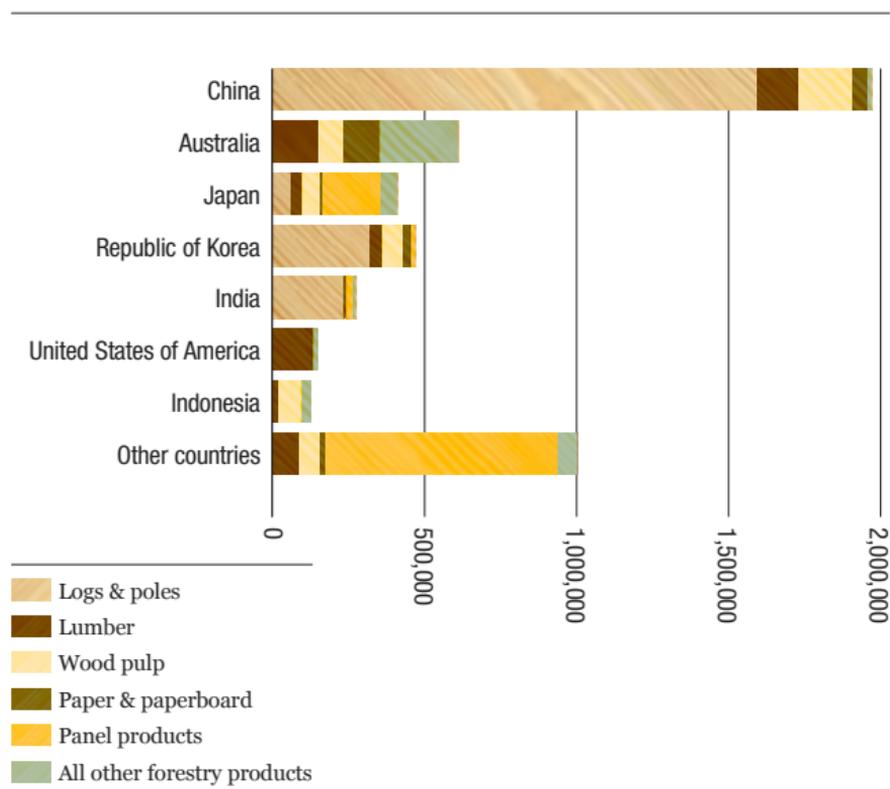
**Note:** Some newsprint value has been included, but most has been excluded to comply with confidentiality rules.

The 2015 value of forestry products exported from New Zealand **DECREASED 1%** (to \$4,922 million) on 2014 receipts, with China spending 7.3% less on forestry products from New Zealand than it did in 2014. South Africa, Netherlands and the Maldives became 'top 15' market destinations.

# Export Product Value by Destination

For Year Ended 31 December 2015

Country of Destination	Total Export Value (NZD 000)		
	2013	2014	2015
China	2,111,462	1,963,694	1,826,407
Australia	679,077	693,027	711,693
Korea, Republic of	488,067	466,159	462,460
Japan	480,508	434,767	405,312
India	219,384	268,110	254,383
United States of America	191,560	173,398	224,286
Indonesia	164,031	145,542	150,097
Taiwan	92,564	80,408	98,875
Thailand	60,954	67,716	76,780
Philippines	82,644	83,420	75,760
Viet Nam	74,197	66,923	74,927
Malaysia	68,330	63,849	70,671
South Africa	48,154	60,118	61,076
Netherlands	17,679	19,983	21,096
Maldives	–	13,677	17,969
Other countries	166,394	197,472	216,916
<b>Total</b>	<b>4,945,005</b>	<b>4,798,263</b>	<b>4,748,708</b>



**Note:** Excludes re-exports.

**Source:** Statistics NZ

# Exports by Port

For Year Ended 31 December 2015

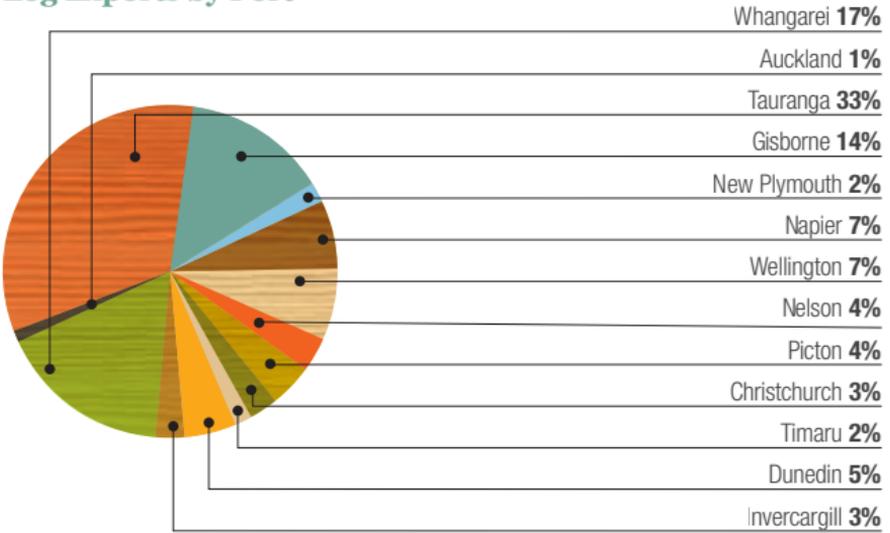
Port of Loading	Quantity m <sup>3</sup>		
	Sawn Timber	Logs	Total
Whangarei	10,182	2,613,742	2,623,924
Auckland	198,869	122,602	321,471
Tauranga	837,189	5,158,739	5,995,928
Gisborne	279	2,167,697	2,167,976
New Plymouth	–	280,692	280,692
Napier	322,048	1,012,167	1,334,215
Wellington	2,173	930,446	932,619
Nelson	114,284	559,081	673,365
Picton	1,561	665,150	666,711
Christchurch	132,805	421,320	554,125
Timaru	537	258,958	259,495
Dunedin	73,328	773,555	846,883
Invercargill	93,721	431,486	525,207
<b>Total</b>	<b>1,786,976</b>	<b>15,395,635</b>	<b>17,182,611</b>



# Exports by Port continued

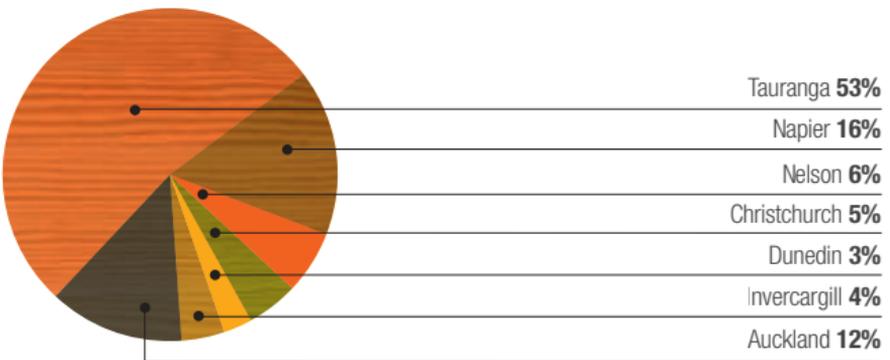
For Year Ended 31 December 2015

## Log Exports by Port



**Note:** Ports with <1% not included.

## Sawn Timber Exports by Port



**Note:** Ports with <1% not included.

**Source:** Statistics New Zealand, Overseas Trade

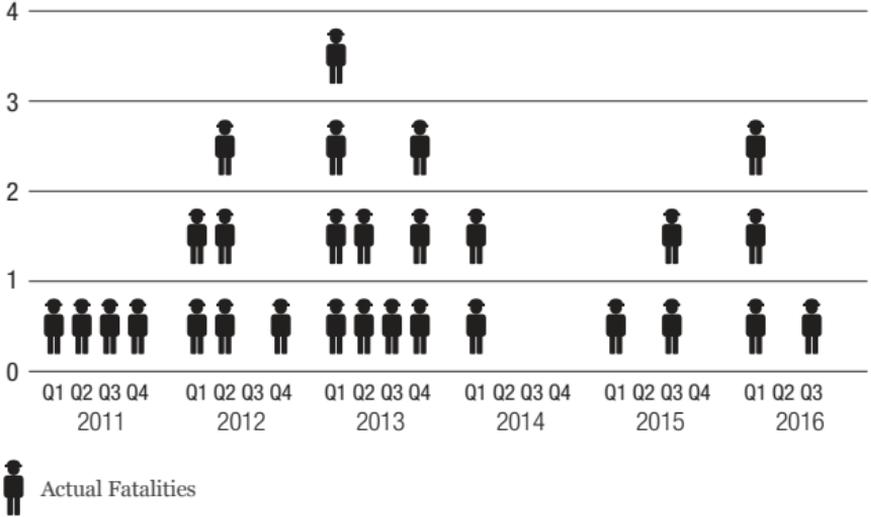


# Health and Safety Performance of the NZ Forestry Industry

As at March 2016

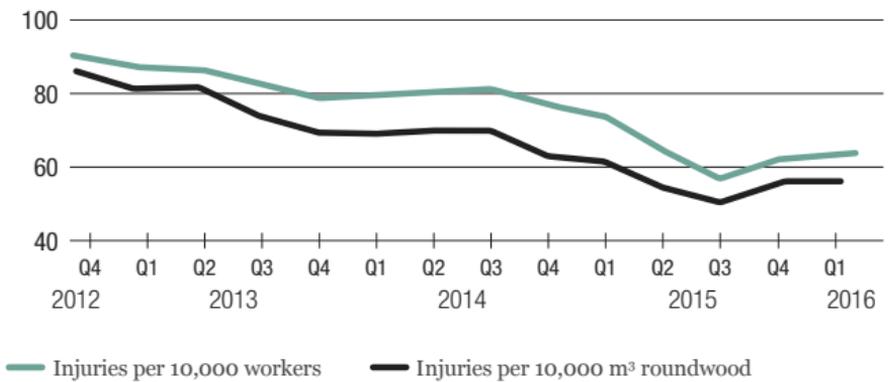
## Fatalities

Workers killed on the job



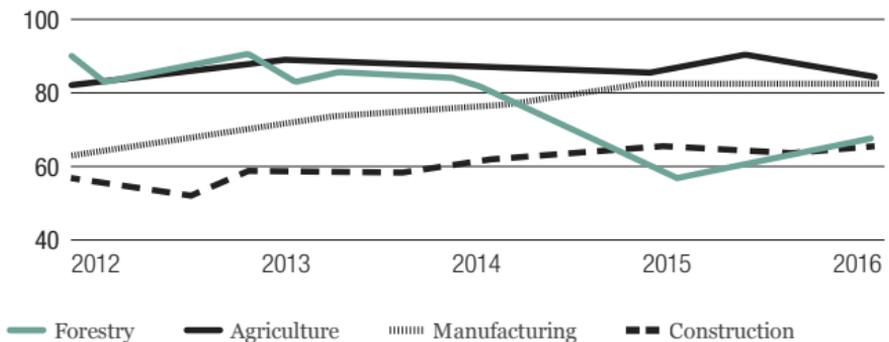
## Severe Injuries

Rates of severe injuries to workers



## Severe Injuries

By sector



**Source:** ACC claim data; NZ.Stats Linked Employer-Employee Data (LEED); WorkSafe NZ; FISC

## SECTION 4



# SUPPLEMENTARY INFORMATION



# Sector Agreements and Initiatives

**Members of the FOA are committed to the following agreements and initiatives:**

## **New Zealand Forest Accord 1991**

The New Zealand Forest Accord 1991 was updated in 2007 to reaffirm the principles of the 1991 Accord and respond to the threat of climate change. It is an agreement between conservation groups and most major plantation growers and users to:

- Define areas unsuitable for forestry
- Acknowledge that existing natural indigenous forest should be maintained
- Recognise commercial forests as essential
- Ensure any use of wood from indigenous forests is on a sustainable, value-added basis
- Ensure new plantation forests will not disturb areas of natural indigenous vegetation.

## **New Zealand Climate Change Accord 2007**

Acknowledging, inter alia:

- The environmental benefits delivered by indigenous and plantation forests
- That carbon sequestration by forests is a key mechanism to offset greenhouse gas emissions
- That policies must be consistent with the Polluter Pays Principle, be broad-based and cover all greenhouse gases in all sectors, should avoid net increases in greenhouse gases, should promote the retention and expansion of indigenous forests and the replanting and expansion of plantation forests; ensure all sectors are taking responsibility, be consistent with customary rights and the Treaty of Waitangi and acknowledge that wood is a renewable, reusable and recyclable resource.

## **Eliminating illegal forest products**

On 14 August 2008 a statement was signed in which the signatories called on the New Zealand government, importers, processors, retailers, New Zealand forest and plantation managers and processors of forest and plantation products to support their call to strongly oppose the import and the use of illegally harvested and traded forest products in New Zealand. Trading in illegal products contributes to deforestation, biodiversity loss, poverty and other adverse social effects, and undermines the viability of legal forest products.

Prohibition of the import of these products will benefit New Zealand's legal forest products industries; assist in improving the producer countries' social, environmental, and economic well being; and show that New Zealand is responsibly addressing the problem. Illegal logging is not sustainable and thus eliminating illegal logging is an important step towards achieving sustainable forestry globally.

# Sector Agreements and Initiatives continued

The organisations that signed the statement were: the Ecologic Foundation, Environment & Conservation Organisations of New Zealand (ECO), Greenpeace Aotearoa New Zealand, New Zealand Forest Owners Association, New Zealand Farm Forestry Association, New Zealand Pine Manufacturers Association, Royal Forest and Bird Protection Society, Sustainable Energy Forum, Wood Processors Association of New Zealand and WWF New Zealand.

## Log Transport Safety Accord

Log truck operators and forest owners on 7 August 2008 signed an updated Log Transport Safety Accord designed to further improve the safety of all road users. Since the Accord was first signed in 2001 there has been a 65% reduction in log truck crashes, and a 75% reduction in rollover crashes, during a time of rapid growth in the logging industry. The Accord has been updated with the aim of reducing the rollover crash rate even further.

## Principles for Commercial Plantation Forest Management in New Zealand

To promote understanding between the signatory parties with a view to New Zealand achieving environmental excellence in plantation forest management and participating as an effective advocate internationally for the sustainable management of plantation forests and the protection, preservation, and sustainable management of natural forests. These principles are complementary to the New Zealand Forest Accord (August 1991).

## Forest Industry Safety Council

FOA is participating in the pan-industry initiative to improve health and safety in forestry. This initiative will largely be run by the Forest Industry Safety Council (FISC) which is chaired and managed by neutral third parties. The mission of FISC is to reduce the rates of serious injuries and deaths in the New Zealand plantation forest sector, with an ultimate goal of eliminating serious injuries and deaths in the sector. The purpose of FISC is:

- To foster cultural change in the plantation forest industry to ensure that safety is treated in the industry as an overriding priority and a shared responsibility throughout the sector
- To promote a safety conscious plantation forest sector
- To promote the competence and confidence of the plantation forest industry workforce in relation to work safety
- To promote effective safety programmes within companies operating in the plantation forest sector.

## Forest GIA for Biosecurity

The NZ Forest Owners Association (FOA) signed on to a Government Industry Agreement (GIA) on biosecurity in November 2015.

The GIA provides the protection mechanism from the range of pests, diseases and weeds which could invade New Zealand forests.

Decision making on how to prevent an incursion, and the means to control or eradicate one, are made jointly between an industry sector and the Ministry for Primary Industries. Costs are also shared.

The Forest Biosecurity Surveillance programme began operations on 1 July 2016, covering all commercial plantations.

FOA is working with MPI on contingency plans for insect pests and phytophthora fungi in particular.

The first incursion under the Forest GIA was the discovery of the Eucalyptus variegated beetle in early 2016 in Hawkes Bay.

PineNet has also been set up as a network of the forest industry prepared to respond if there is a major incursion. FOA has a Memorandum of Understanding with AsureQuality for participation in a National Biosecurity Network should a biosecurity response be necessary.

## New Zealand Forests Portal

A Planted Forests Portal was launched by FOA, developed by Scion with support through MBIE research funding and the Forest Growers Levy Trust.

The link is: <http://www.nzplantedforests.org>. The Portal was unveiled by Associate Minister for Primary Industries, Jo Goodhew at the National Fielddays at Mystery Creek in Hamilton in June 2016. The Portal provides a one stop shop for planted forest facts and information.





Wood is the world's most renewable raw material. For this reason forests and the wood they provide are vital in the fight against climate change. As the effects of global warming impact on our environment, the use of renewable and sustainable building materials has never been so important.

The stages of the wood story – planting and renewal, growth, harvesting and use – are part of a renewable cycle that takes and stores carbon dioxide from the atmosphere, making wood a better-than-carbon-neutral building material.

## **Wood is the only construction material which has absorbed CO<sub>2</sub> from the atmosphere when produced, not emitted more**

During its production, one tonne of:

- Concrete – has released 159 kilos of CO<sub>2</sub> into the atmosphere
- Steel – has released 1.24 tonnes of CO<sub>2</sub> into the atmosphere
- Aluminium – has released 9.3 tonnes of CO<sub>2</sub> into the atmosphere
- Wood, however, has absorbed a net 1.7 tonnes of CO<sub>2</sub> from the atmosphere, over and above the energy expended in growing, harvesting and processing.

## **The more timber you use in a house, the more CO<sub>2</sub> you remove from the atmosphere**

- It takes around 20 trees to build an average house frame
- A steel house frame has added 4.5 tonnes of CO<sub>2</sub> to the atmosphere
- A wooden house frame has absorbed 9.5 tonnes of CO<sub>2</sub> from the atmosphere
- Choosing timber options for an average house can take around 20 tonnes net of CO<sub>2</sub> out of the atmosphere (saving the equivalent of 150 trips Auckland to Wellington, or 7.1 years of car use)
- Using alternative materials (concrete, steel, brick and aluminium) can add 24 tonnes net CO<sub>2</sub> to the atmosphere (costing the equivalent of 180 trips Auckland to Wellington, or 8.6 years of car use).

Using wood is something we can all do to help the environment. By demanding and using more sustainably produced wood, we can ensure that more trees will be planted and more carbon dioxide will be absorbed from the atmosphere.

The result is a better world for ourselves, our families and future generations. It's simple.

**Wood. Our most renewable raw material.**

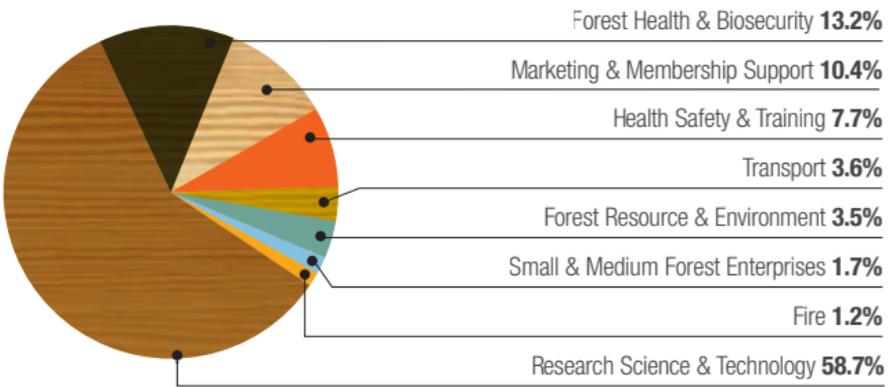
**[www.nzwood.co.nz](http://www.nzwood.co.nz)**

# Forest Growers Levy Trust



The Harvested Wood Material levy came into effect on 1 January 2014 with a rate of 27 cents per tonne. The levy generated in the year to 30 June 2016 was \$8,063,955 (ex GST). The proceeds from the levy are overseen by the Forest Growers Levy Trust which has contracted the Forest Owners and Farm Forestry Associations to manage the annual work programme. The annual work programme consists of research and work which will benefit the industry as a whole. More information including the 2015 Annual Report, can be found at [www.fglt.org.nz](http://www.fglt.org.nz).

## Expenditure by Category



Source: FGLT



# NZ Forest Owners Strategic Plan

## **The Strategic Action Plan provides a pathway to shape a strong forest and wood products sector for the future.**

The New Zealand plantation forest and wood products industry is based on wholly renewable resources, producing 100% of its products from plantation forests and recycled waste fibre; is New Zealand's largest biomaterial recycler and has a very low carbon footprint. In the future it will be substantially independent of non-renewable energy inputs apart from transport fuel (and even this could be sourced from New Zealand wood in the long run). The industry already provides greenhouse gas offsets, reducing New Zealand's overall carbon footprint.

### **Vision for the Plan**

The vision target is that in the ten years to 2022 annual export earnings will more than double to \$12 billion from a New Zealand forest and wood products industry that is:

- delivering innovative wood-based solutions from a sustainable resource to meet our customers' needs
- manufacturing a range of high-value, fibre-based products, including new biochemical and biofuel value streams
- recognised as a world-leader in timber-engineered building solutions
- underpinned by forest growing as a valued and profitable land use
- recognised as a key New Zealand growth industry, delivering strong economic and environmental benefits
- connected and collaborative across the value chain, from end-product to seedling
- characterised by industry players that have pride in the wood products industry, with the sector regarded as a preferred career option for our brightest talent

Forest product export earnings to March 2016 were \$4.929 billion. On the current path of development MPI anticipates forest export earnings to be \$6.325 billion in 2020.

**Note:** MPI – Situation and Outlook for Primary Industries 2016.



# Terms and Things

## Area and volume

- A hectare (ha) = 100 x 100 metres.
- A cubic metre (m<sup>3</sup>) = 1 metre x 1 metre x 1 metre.
- An average radiata pine tree yields 2.4 m<sup>3</sup> of wood at harvest.
- 1 hectare of 28 year-old radiata pine contains between 650 and 800 m<sup>3</sup> of wood.
- 1 hectare grows up to 28 m<sup>3</sup> of wood each year.
- A log truck and trailer carries approximately 30 tonnes of logs.
- A log ship contains approximately 30-35,000 tonnes of logs.



## Organisations by abbreviations

<b>FAO</b>	Food and Agriculture Organization of the United Nations
<b>FGLT</b>	Forest Growers Levy Trust
<b>FIEA</b>	Forest Industry Engineering Association
<b>FISC</b>	Forest Industry Safety Council
<b>MfE</b>	Ministry for the Environment
<b>MPI</b>	Ministry for Primary Industries
<b>NEFD</b>	National Exotic Forest Description
<b>NZIER</b>	New Zealand Institute of Economic Research
<b>WPMA</b>	Wood Processors and Manufacturers Association

# New Zealand's Greenhouse Gas Inventory

## The Carbon Cycle

Planting trees begins a cycle that continuously removes, releases and reabsorbs greenhouse gases such as carbon dioxide. As trees grow, they absorb carbon dioxide through the process of photosynthesis.

The carbon dioxide absorbed by the growing forest remains stored within the wood products used throughout the lifetime of the building structure or product.

When a structure or product reaches the end of its lifetime, the carbon dioxide is released back into the atmosphere as the wood decays or is burnt as fuel.

Wood can be recycled to extend its lifetime and slow down the natural release of carbon dioxide back into the atmosphere. Once the carbon dioxide is released, it is available to be re-absorbed by growing trees.

When wood materials decay or are burnt as fuel they release carbon dioxide that was absorbed during the growth of the trees and are therefore carbon neutral.

## New Zealand's Greenhouse Gas Inventory – Key Points

In 2013, New Zealand's total emissions were 81.0 million tonnes of carbon dioxide (Mt CO<sub>2</sub>-e). Total emissions for New Zealand are now an estimated 14.2 Mt CO<sub>2</sub>-e higher than in 1990 when emissions totalled 66.7 Mt CO<sub>2</sub>-e.

26.8 Mt CO<sub>2</sub>-e was removed from the atmosphere through the land use, land use change and forestry sector (LULUCF), therefore bringing New Zealand's net emissions to 54.2 Mt CO<sub>2</sub>-e in 2013. It is estimated that forestry land was responsible for removing 33.7 Mt CO<sub>2</sub>-e (net) in 2013, an increase in removals of 3.5 Mt CO<sub>2</sub>-e since 1990.

Agriculture continued to be the biggest contributor to New Zealand's Greenhouse Gas emissions with 49% (39.2 Mt CO<sub>2</sub>-e) of all emissions coming from this sector, while the energy sector was responsible for 39% (31.7 Mt CO<sub>2</sub>-e). Both the waste and industrial processes and product use sectors contributed 6% of the emissions (5.1 Mt CO<sub>2</sub>-e).

New Zealand contributes 0.15% to global emissions, which is 17.21Mt CO<sub>2</sub>-e per person - a high rate for a developed country.

**Source:** Snapshot April 2015 Info 735, New Zealand's Greenhouse Gas Inventory 1990-2013 (MfE)

## Offsetting biological emissions from livestock using a Radiata pine plantation

	Tonnes of CO <sub>2</sub> -e per year from 100 animals	Hectares of new plantation added every 20 years to offset biological emissions
Sheep	38	1.2
Beef	179	5.7
Dairy	273	8.7

**Source:** Climate change and agriculture: Understanding the biological greenhouse gases, Parliamentary Commissioner for the Environment, October 2016

# How New Zealand's Plantation Forests Remove Carbon from the Atmosphere

## How is carbon removed from the atmosphere by New Zealand's forests?

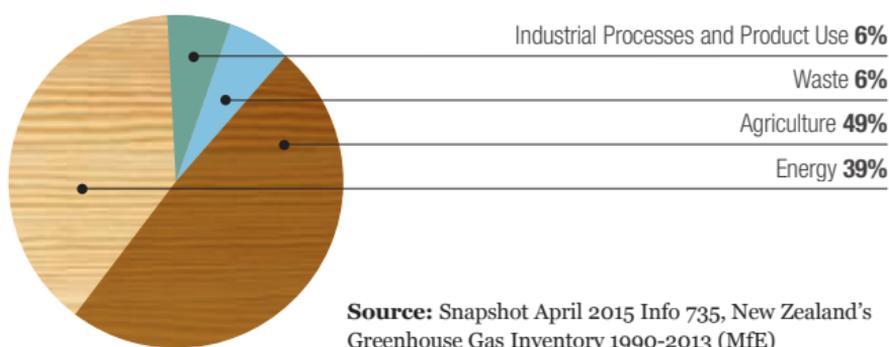
Forests act as carbon sinks – a type of reservoir that removes and stores more carbon from the atmosphere than it releases. Trees use carbon dioxide (CO<sub>2</sub>) as part of their 'breathing' cycle – taking in CO<sub>2</sub> and storing it within roots, trunks and branches – and releasing oxygen.

The amount of CO<sub>2</sub> a forest removes depends on the species grown and place in its growing cycle. A young forest will remove smaller amounts of CO<sub>2</sub> until the trees establish and enter a growing phase – this is when forests will remove the most carbon. As a forest ages and its growing process slows, it will revert to absorbing less carbon again.

At harvesting, the forest ceases to be a carbon sink but instead of releasing all the carbon it has stored, the harvested wood retains some of it. All wood products store carbon that will eventually be released, however the rate at which that carbon is released depends on the type of product and the type of treatment the wood has undergone. Studies are still being conducted into these release rates.

The amount of carbon removed by New Zealand's forests is therefore dependent on the coverage of forestland, the age of the trees and the rate of harvest. In 2013, the net amount of carbon removed by the LULUCF sector was 26.8 Mt CO<sub>2</sub>-e. This number takes into account the approximately 8,500 hectares of forest that was lost in 2013.

## Emissions by Sector As at April 2015



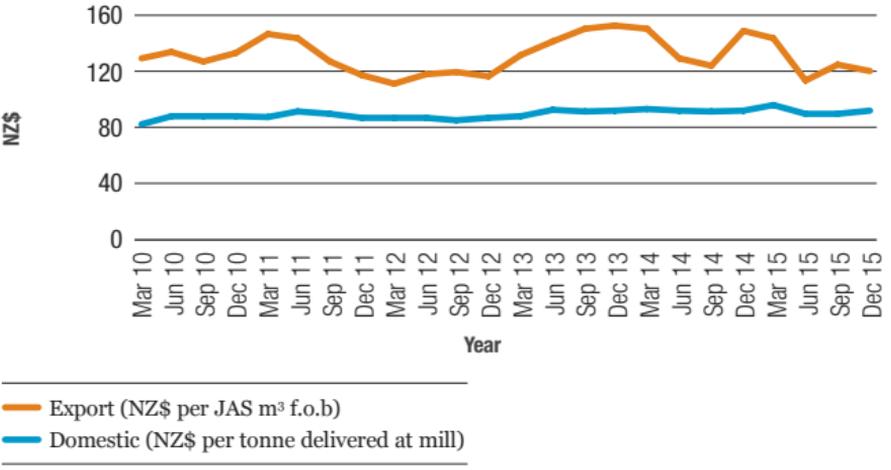
New Zealand plantations and their soils lock up

# 454 MILLION

tonnes of carbon, which is equivalent to 17 days of global fossil fuel emissions.

**Source:** Scion and MfE

# Export and Domestic Log Pricing



Source: MPI



# Reporting a Suspected Pest/Disease

Don't go down in history as the person who noticed something but didn't tell.  
Keep our forests free of new pests and diseases.



Eucalyptus variegated beetle, *Paropsisterna variicollis* larvae

If you believe you've found something that shouldn't be here, such as the two eucalyptus beetles pictured, phone MPI's hotline on **0800 80 99 66**. They will arrange for whatever photos, samples and site visits are necessary.

Or, email to; **Info@mpi.govt.nz**, with 'Reporting a suspected pest/disease' in the subject line, and make sure to include contact name, phone number and location of the discovery. Photos of the pest and plant damage would be useful.



The Eucalyptus leaf beetle  
*Paropsisterna beata* adult



# Contacts

## **Board and Committee Chairs of New Zealand Forest Owners Association**

### **President**

#### **Peter Clark**

Chair, Promotions & Membership

Tel: 07 921 7201

Mobile: 021 726 197

Email: peter.clark@pfolsen.com

#### **David Balfour**

Tel: 07 343 1079

Mobile: 021 941 951

Email: david.balfour@tll.co.nz

#### **Paul Burridge**

Tel: 09 967 5502

Mobile: 021 244 7373

Email:

paul.burridge@summitforest.co.nz

#### **Dave Cormack**

Chair FOA/FFA Forest Biosecurity

Tel: 03 489 3234

Mobile: 021 2229315

Email:

Dave.Cormack@dn.wenita.co.nz

#### **Grant Dodson**

Chair FOA/FFA Fire

Tel: 03 467 7730

Mobile: 027 654 6554

Email: grant@cityforests.co.nz

#### **Warwick Foran**

Tel: 04 894 0394

Mobile: 029 894 0394

Email: Warwick.Foran@mpi.govt.nz

#### **Dave Hilliard**

Chair FOA/FFA Transportation &  
Logistics

Tel: 06 370 6400

Mobile: 0274 546061

Email: david.hilliard@jnl.co.nz

#### **Kerry Ellem**

Tel: 07 571 7915

Mobile: 027 403 2589

Email: kellem@hnrng.com

#### **Phil Taylor**

Chair FOA/FFA Research

Tel: 03 365 2846

Email: ptaylor@blkakely-pacific.co.nz

#### **Paul Nicholls**

Tel: 09 357 9119

Mobile: 0275 958708

Email: paul.nicholls@rayonier.com

#### **Peter Weir**

Chair FOA/FFA Resources &  
Environment

Tel: 03 384 7873

Mobile: 027 454 7873

Email: peter.weir@ernslaw.co.nz

---

### **FOA Staff**

#### **David Rhodes**

Chief Executive

Tel: 04 913 8702

Mobile: 027 495 5525

Email: david.rhodes@nzfoa.org.nz

#### **Glen Mackie**

Technical Manager

Tel: 04 473 4769/2

Mobile: 027 445 0116

Email: glen.mackie@nzfoa.org.nz

#### **Diane Davidson**

Office Manager

Tel: 04 473 4769/1

Email: nzfoa@nzfoa.org.nz

#### **Don Carson**

Communications Manager

Tel: 04 473 4769/4

Mobile: 027 537 9488

Email: don.carson@nzfoa.org.nz

#### **Russell Dale**

Research Manager

Tel: 07 921 1883

Mobile: 027 493 8061

Email: russell.dale@nzfoa.org.nz

#### **Venise Comfort**

Policy Advisor

Tel: 04 473 4769/5

Mobile: 027 530 4443

Email: venise.comfort@nzfoa.org.nz

#### **Natalia Reid**

Accountant

Tel: 04 473 4769/3

Email: natalia.reid@nzfoa.co.nz

#### **Veronica Bennett**

Office Manager – Rotorua

Tel: 07 921 7246

Email: veronicabennett@nzfoa.org.nz

## **NZ Wood Processors & Manufacturers Association**

### **Jon Tanner**

Chief Executive

Tel: 04 473 9220

Mobile: 021 890 624

Mobile: jon@wpma.org.nz

### **Jeanette Sutherland**

Executive Assistant

Tel: 04 473 9220

Mobile: 027 465 9718

Email: jeanette@wpma.org.nz

---

## **Wood Councils**

### **Eastland Wood Council**

#### **Prue Younger**

CEO

Mobile 021 276 5484

Email: prue@eastlandwood.co.nz

### **Marlborough Forest Industry Association**

#### **Vern Harris**

Tel: 03 572 8475

Mobile: 027 251 0097

Email: vern.forest@kinect.co.nz

### **Southern North Island Wood Council (Inc)**

#### **Geoff Cameron**

Tel: 04 972 0495

Mobile: 027 445 0892

Email:

geoff.cameron@paradise.net.nz

### **Hawkes Bay Forestry Group**

#### **Keith Dolman**

Mobile: 022 093 4557

Email: kdolman@novapsi.net.nz

### **Northland Wood Council**

#### **Andrew Widdowson**

Tel: 09 470 1307

Mobile: 027 234 2510

Email: awiddowson@hnrng.com

### **Southern Wood Council**

#### **Brent Apthorp**

Tel: 03 470 1902

Mobile: 021 227 5177

Email: brent.apthorp@fiea.org.nz

## **Forest Industry Safety Council**

### **Fiona Ewing**

Mobile: 027 502 8065

Email: fiona.ewing@fisc.org.nz

---

## **New Zealand Farm Forestry Association**

(Also a member of FOA Board)

### **President**

#### **Dean Satchell**

Tel: 09 407 5525

Mobile: 021 235 7554

Email: dsatch@xtra.co.nz

### **Glenn Tims**

National Manager

Tel: 04 472 0432

Mobile: 027 440 8472

Email: glenn.tims@nzfoa.org.nz

---

## **New Zealand Institute of Forestry**

### **President**

#### **James Treadwell**

Tel: 04 974 8421

Email: Admin@nzif.org.nz

---

## **NZ Forest Industry Engineering Association**

### **Director**

#### **Brent Apthorp**

Tel: 03 470 1902

Mobile: 021 227 5177

Email: brent.apthorp@fiea.org.nz

---

## **NZ Forest Industry Contractors Association**

### **Secretary**

#### **John Stulen**

Tel: 07 921 1382

Mobile: 027 275 8011

Email: john.stulen@innovatek.co.nz

---

## **Bioenergy Association of NZ**

### **Executive Officer**

#### **Brian Cox**

Mobile: 027 477 1048

Email: brian.cox@bioenergy.org.nz

# Log Pricing Data

<b>Log Type, Pricing Point and Market</b>	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11
<b>EXPORT (NZ\$ per JAS m3 f.o.b)</b>	<b>Quarter</b>	<b>Quarter</b>	<b>Quarter</b>	<b>Quarter</b>	<b>Quarter</b>
Pruned-Japan, Korea	154-187	148-219	176-203	179-197	155-181
A Grade-Japan	127-144	118-121	114-136	132-144	133-148
J Grade-Japan	*	*	*	*	*
K Grade-Korea	115-140	109-118	106-130	130-148	125-145
Pulp	105-127	103-105	100-120	129-137	110-176
<b>All grades average per quarter</b>	<b>137</b>	<b>130</b>	<b>136</b>	<b>150</b>	<b>147</b>
<b>DOMESTIC (NZ\$ per tonne delivered at mill)</b>					
P1	125-161	125-156	130-154	128-147	130-152
P2	104-131	108-127	109-132	110-127	122-130
S1	95-102	97-130	97-100	88-98	99-125
S2	94-103	89-101	92-102	92-103	86-105
L1 and L2	73-109	71-99	73-102	72-103	74-115
S3 and L3	75-84	81-94	80-86	82-92	81-92
Run of bush	..	..	..	..	..
Pulp	44-57	44-59	46-58	47-57	48-61
<b>All grades average per quarter</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>96</b>	<b>101</b>

**Source:** MPI

**Notes:**

\* Limited response – very small volume traded.

.. Data not available.

The photos on pages 2, 6, 10, 17, 21, 24, 26, 33, 34, 41, 46 and 51 came from Phil Taylor, Blakely Pacific Ltd.

Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13
Quarter									
161-173	146-155	144-513	154-163	153-166	144-190	168-192	169-209	177-201	181-206
123-132	112-122	110-117	110-122	116-118	103-125	128-138	136-153	143-162	137-169
*	*	*	*	*	*	*	*	*	*
108-114	105-112	94-109	104-116	103-110	90-121	112-131	114-147	132-156	127-159
109-118	98-112	87-100	84-111	91-120	79-102	106-108	108-123	128-131	119-154
<b>130</b>	<b>120</b>	<b>114</b>	<b>121</b>	<b>122</b>	<b>119</b>	<b>135</b>	<b>145</b>	<b>154</b>	<b>157</b>
132-152	127-134	120-134	127-170	120-136	122-149	135-150	142-158	126-157	132-156
114-130	111-128	110-127	110-123	111-126	111-123	120-121	121-133	114-125	121-127
99-105	99-103	95-100	95-98	95-102	95-104	97-102	103-110	102-120	102-123
94-108	93-101	88-100	88-97	88-96	90-97	95-98	101-107	90-110	90-113
78-95	76-91	90-110	83-92	80-89	77-96	84-100	88-105	78-111	80-113
82-89	79-87	66-81	76-79	77-80	77-86	92-90	83-100	75-106	75-102
..	..	..	..	..	..	..	..	..	..
49-61	49-54	49-55	49-55	47-49	48-53	46-50	46-51	47-54	46-54
<b>99</b>	<b>95</b>	<b>95</b>	<b>95</b>	<b>93</b>	<b>95</b>	<b>97</b>	<b>103</b>	<b>101</b>	<b>102</b>

Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15
Quarter								
181-206	171-198	158-190	146-187	165-236	186-199	121-199	189-211	121-228
137-169	142-165	104-142	110-140	127-169	134-150	81-133	90-133	81-141
*	*	*	*	*	*	*	*	*
127-159	133-159	96-137	101-134	117-163	124-143	99-126	91-125	91-135
119-154	125-140	110-122	92-108	112-135	117-121	65-107	73-110	65-118
<b>157</b>	<b>154</b>	<b>132</b>	<b>127</b>	<b>153</b>	<b>147</b>	<b>116</b>	<b>128</b>	<b>123</b>
132-156	129-155	131-155	132-154	134-154	139-164	135-170	135-174	135-174
121-127	126-126	119-130	125-126	121-130	116-136	116-133	116-133	105-170
102-123	98-112	101-111	103-109	98-108	108-112	100-109	100-108	96-109
90-113	92-118	91-123	101-110	98-109	96-109	85-109	85-105	85-109
80-113	77-123	78-78	81-87	85-103	97-139	78-95	78-94	78-109
75-102	86-108	90-115	81-100	86-100	88-100	69-96	76-90	69-96
..	..	..	..	..	..	..	..	..
46-54	44-55	46-55	45-55	49-54	50-55	31-54	31-55	31-55
<b>102</b>	<b>104</b>	<b>102</b>	<b>101</b>	<b>102</b>	<b>103</b>	<b>102</b>	<b>102</b>	<b>102</b>

## 2015/16 Facts & Figures organisation sites

<b>Competenz</b>	<a href="http://www.competenz.org.nz">www.competenz.org.nz</a>
<b>FAO</b>	<a href="http://www.fao.org/forestry">www.fao.org/forestry</a>
<b>MfE</b>	<a href="http://www.mfe.govt.nz">www.mfe.govt.nz</a>
<b>MPI</b>	<a href="http://www.mpi.govt.nz">www.mpi.govt.nz</a>
<b>NZIER</b>	<a href="http://www.nzier.org.nz">www.nzier.org.nz</a>
<b>NZFOA</b>	<a href="http://www.nzfoa.org.nz">www.nzfoa.org.nz</a>
<b>NZ Forests Portal</b>	<a href="http://www.nzplantedforests.org">www.nzplantedforests.org</a>
<b>Scion</b>	<a href="http://www.scionresearch.com">www.scionresearch.com</a>
<b>Statistics NZ</b>	<a href="http://www.stats.govt.nz">www.stats.govt.nz</a>
<b>WPMA</b>	<a href="http://www.wpma.org.nz">www.wpma.org.nz</a>
<b>WorkSafe NZ</b>	<a href="http://www.business.govt.nz/worksafe">www.business.govt.nz/worksafe</a>

### Disclaimer

Every effort has been made to ensure that the statistics and information found within this publication are accurate and fair. The NZ Forest Owners Association provides no warranty as to accuracy and shall not be liable to any person for any loss or damage for the use, directly or indirectly, of the information.

# TOGETHER TOWARDS ZERO

The Forest Industry Safety Council is a pan-industry initiative to reduce and ultimately eliminate deaths and serious injuries in New Zealand plantation forestry, by;

- Improving leadership of safety
- Providing easy-to-use forest safety resources through **www.safetree.nz** website
- Sharing better information on what's causing injuries
- Getting companies and workers more competent
- Helping the sector adapt to the Health and Safety at Work Act 2015.

**FOREST  
INDUSTRY  
SAFETY  
COUNCIL**



[www.fisc.org.nz](http://www.fisc.org.nz)

**safetree**<sup>™</sup>  
You are the key

**WITH THE COMPLIMENTS OF:**



Ministry for Primary Industries  
Manatū Ahu Matua



supported by  
**forestgrowers**  
commodity levy



Designed by [www.scenario.co.nz](http://www.scenario.co.nz)

**Further copies of this publication can be ordered from**  
the New Zealand Forest Owners Association Inc  
Level 9, 93 The Terrace, PO Box 10986, Wellington 6143

Tel: +64 4 473 4769, Fax: +64 4 499 8893  
Email: [nzfoa@nzfoa.org.nz](mailto:nzfoa@nzfoa.org.nz)  
or order on-line at: [www.nzfoa.org.nz](http://www.nzfoa.org.nz)

**Ministry for Primary Industries**  
Sector Data & Analysis, Sector Policy  
PO Box 2526, Wellington 6140  
Tel: +64 4 894 0100, Fax: +64 4 894 0720  
Website: [www.mpi.govt.nz](http://www.mpi.govt.nz), Email: [stats\\_info@mpi.govt.nz](mailto:stats_info@mpi.govt.nz)