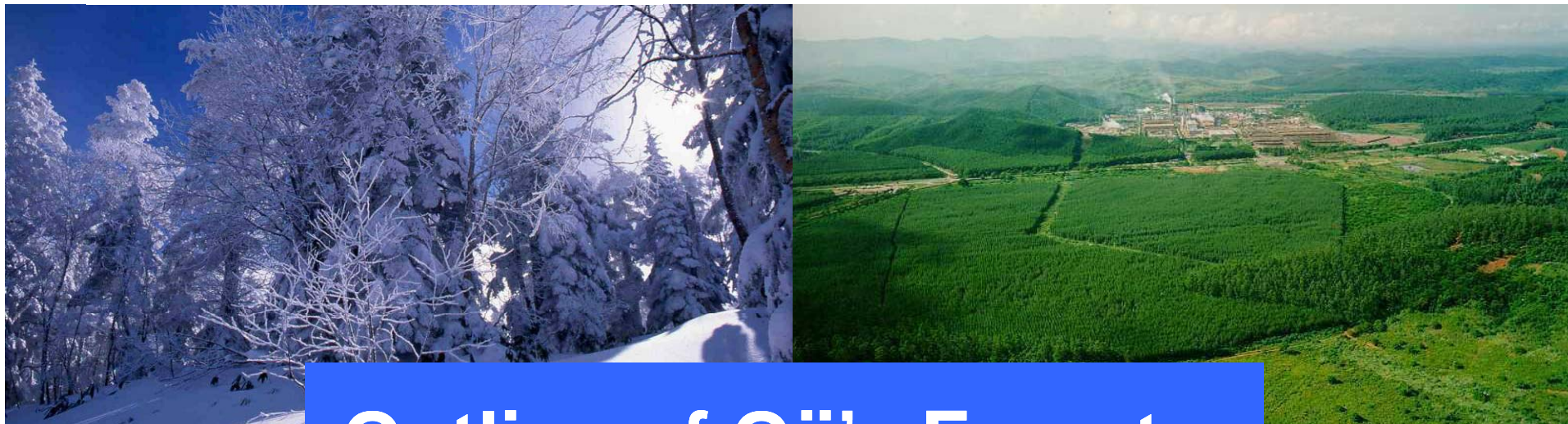


Beyond the Boundaries



Outline of Oji's Forest

Oji Green Resources Co., Ltd.

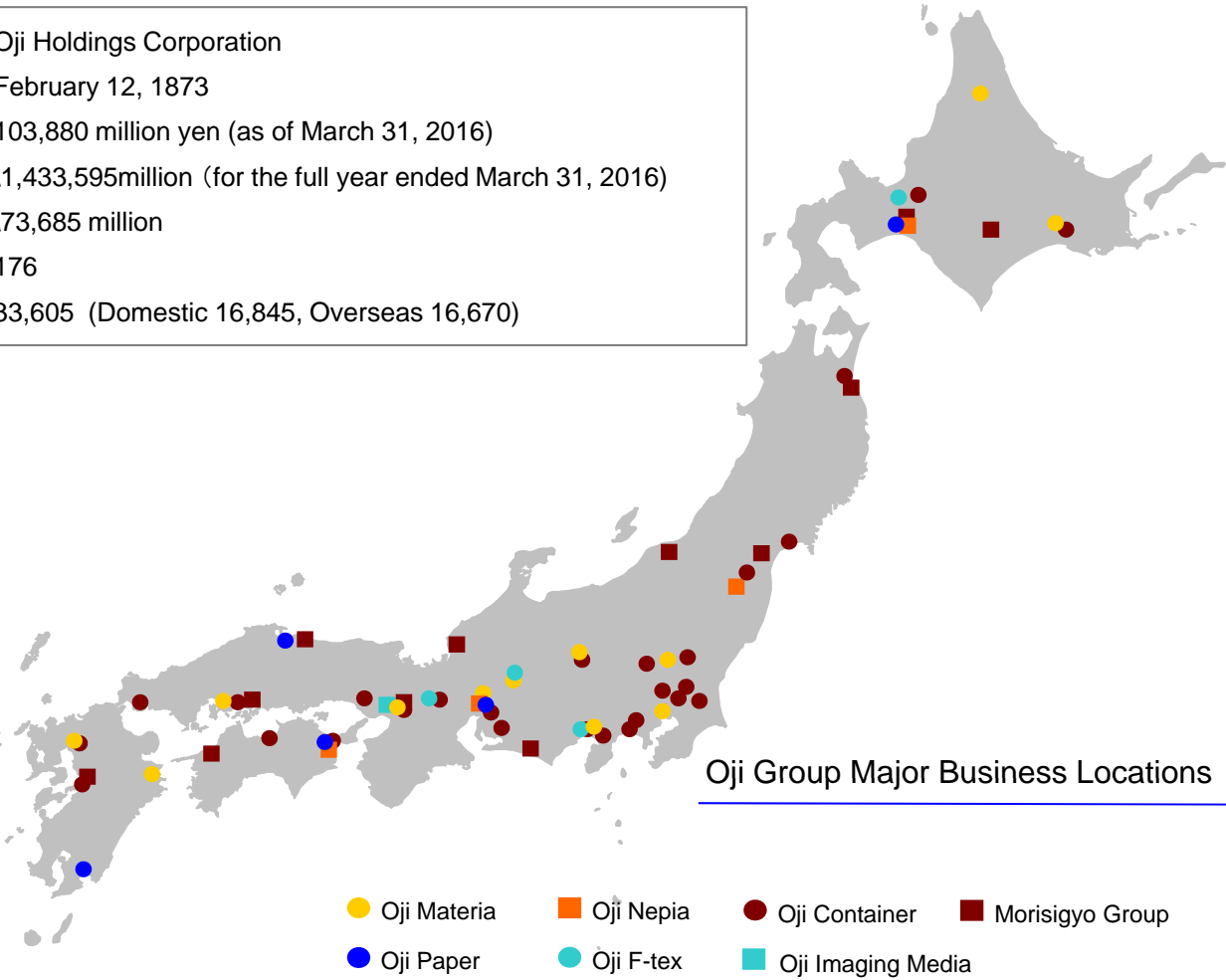




Outlook of Oji Group

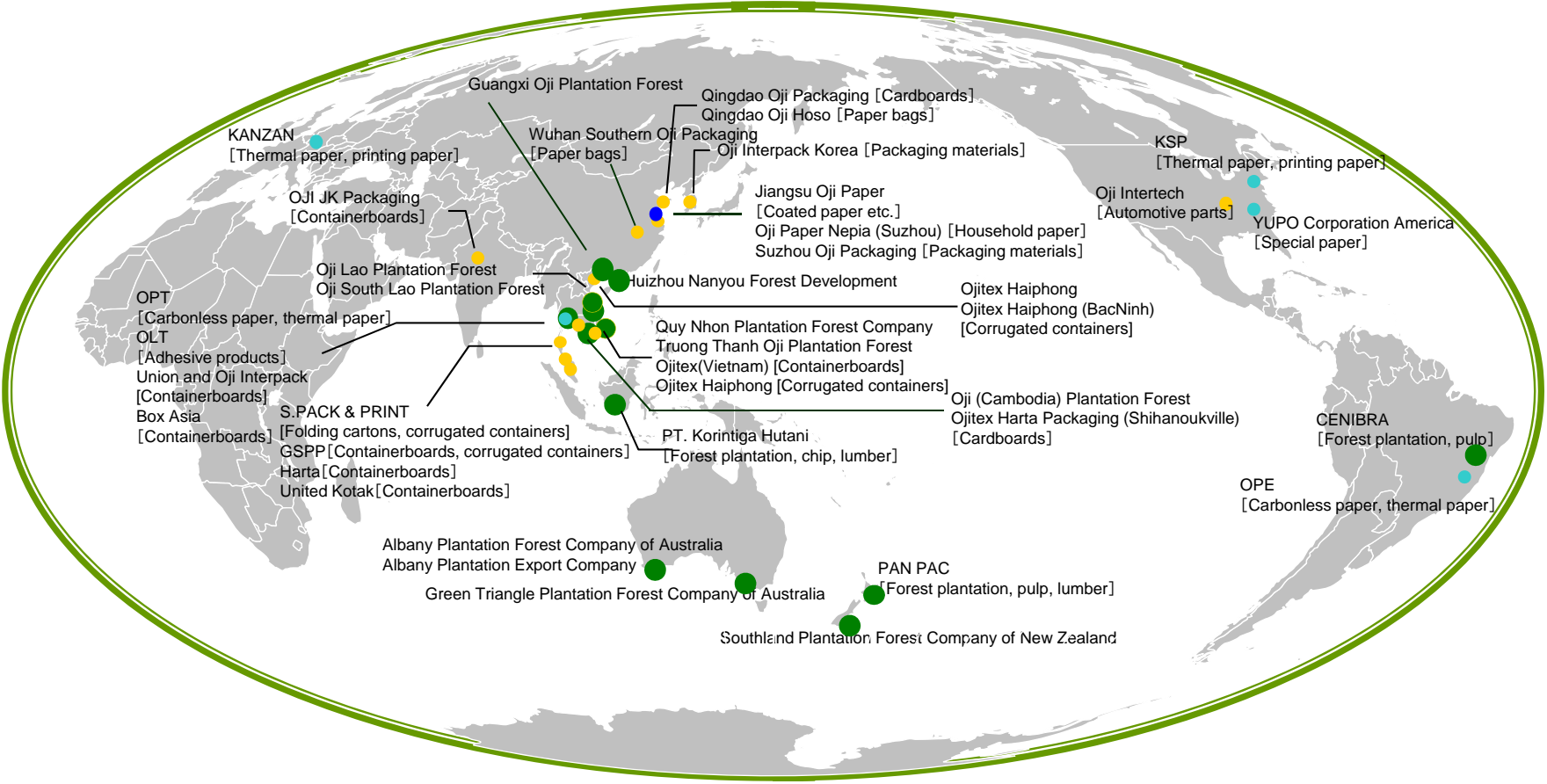
Outline of Oji Group

Company Name	Oji Holdings Corporation
Date established	February 12, 1873
Capital	103,880 million yen (as of March 31, 2016)
Revenue	¥1,433,595million (for the full year ended March 31, 2016)
Operational Profit	¥73,685 million
Number of consolidated subsidiaries	176
Number of employees	33,605 (Domestic 16,845, Overseas 16,670)



Global Business Locations

Oji Group began overseas operation in the 1970s with the establishment of a pulp production in Brazil, since then, the operation has been expanded continuously



- Printing and communications media
- Industrial Material (Cardboards, Packaging etc.)
- Functional Materials (Thermal paper, carbonless paper etc.)
- Forest resources and environmental marketing (Forest plantation, pulp, lumber, chip etc.)

Oji Paper Group Products

Oji Paper Group Products are used extensively in our everyday life

Industrial and Household Materials



Corrugated Container



Envelope



Paper Bag



Toilet Roll



Facial Tissue



Diaper

Printing and Communications Media



Newsprint Paper



Printing Paper



PPC Paper

Functional Materials



Film Material



Transformer Board

Forest Resources and Environmental Products



Pulp



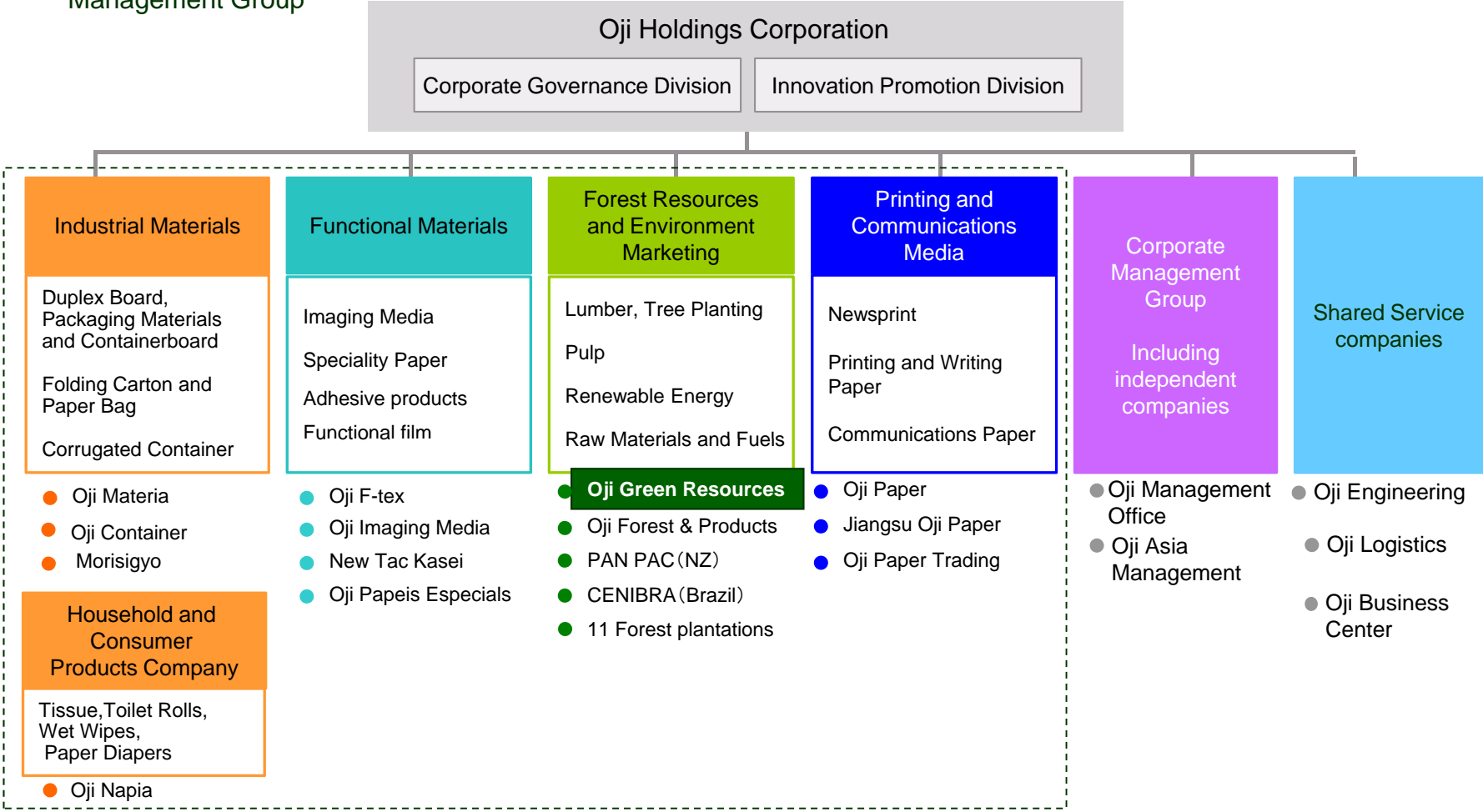
Lumber



Power Generation

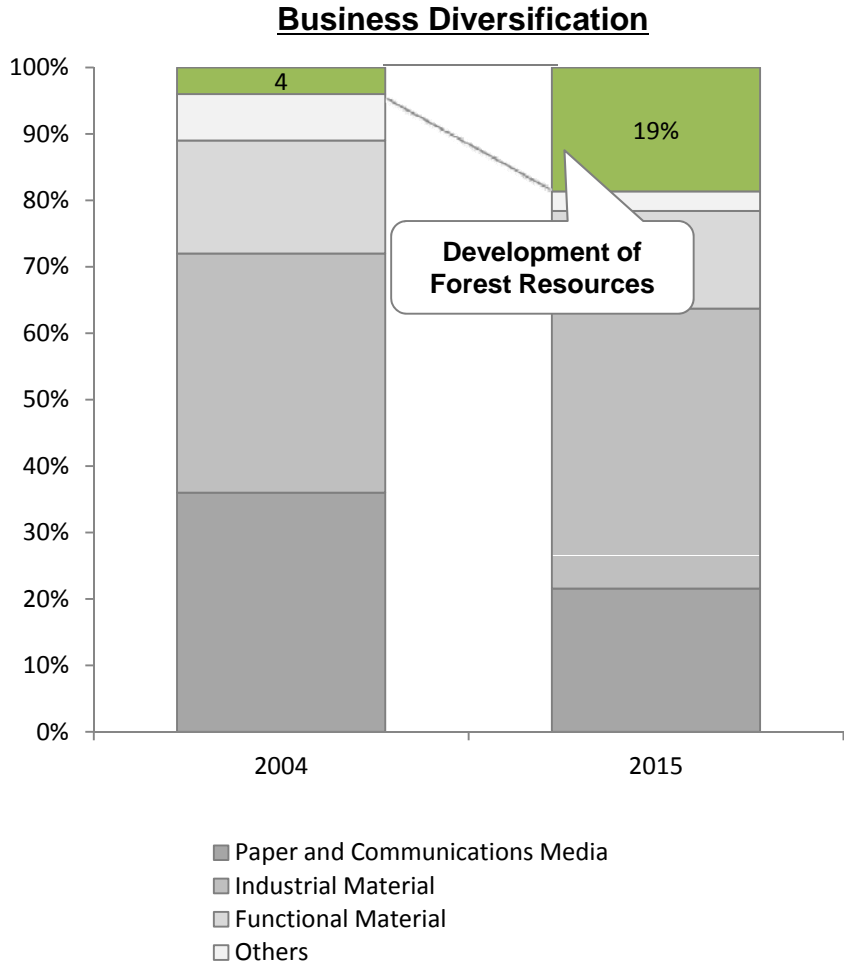
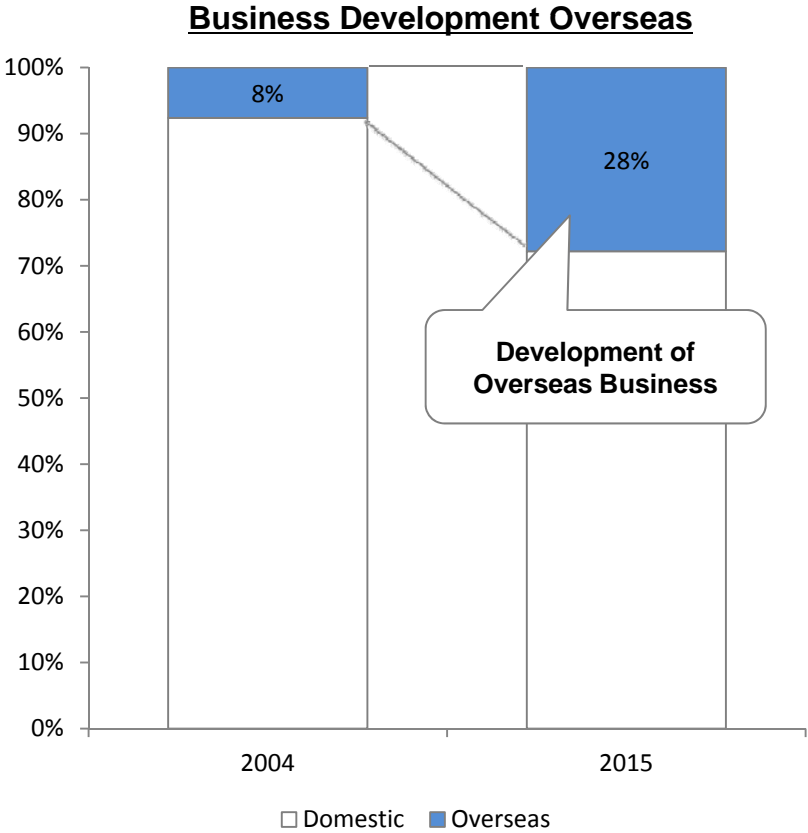
Organization Chart

- Business domains are classified into the five companies: Industrial Materials, Functional Materials, Forest Resources and Environmental Marketing, Printing and Communications
- In addition, there are two groups to support business domains: Shared Service companies and Corporate Management Group



Diversification of Business

Developing business overseas and diversifying business in response to changing business environment





Outlook of Oji's Forestry Business

Forest Resources & Environment Marketing Company



Forest Plantation & Lumber

- [Major Business]
- ◆ Forest Plantation
 - ◆ Lumber, Chip Sales
 - ◆ Log Processing



Pulp

Developing new applications of pulp in addition to ordinary use for paper



New Business

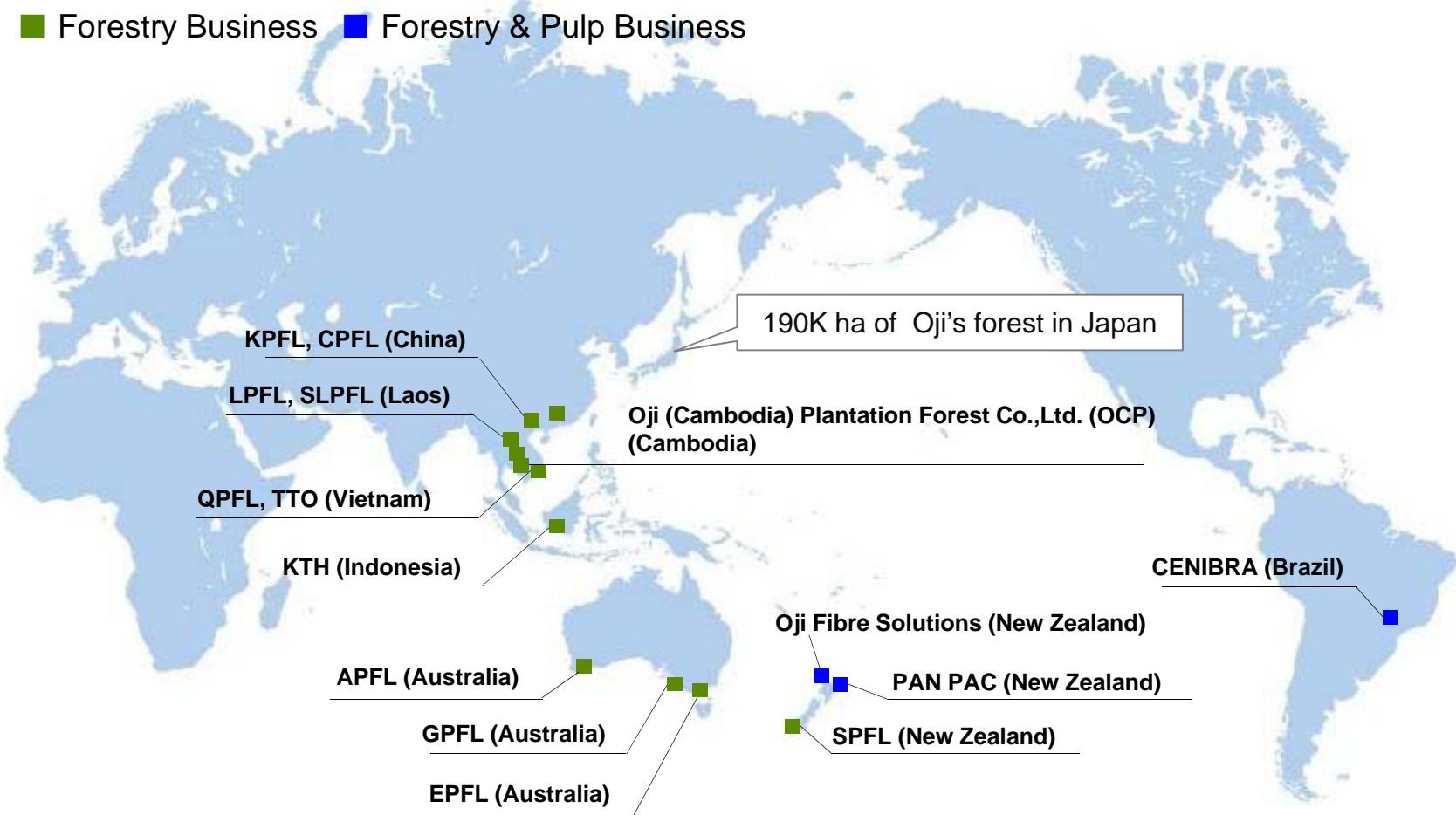
- [Major Business]
- ◆ Renewable Energy
(Woody Biomass, Hydro Power, Solar Power)
 - ◆ Bio Refinery



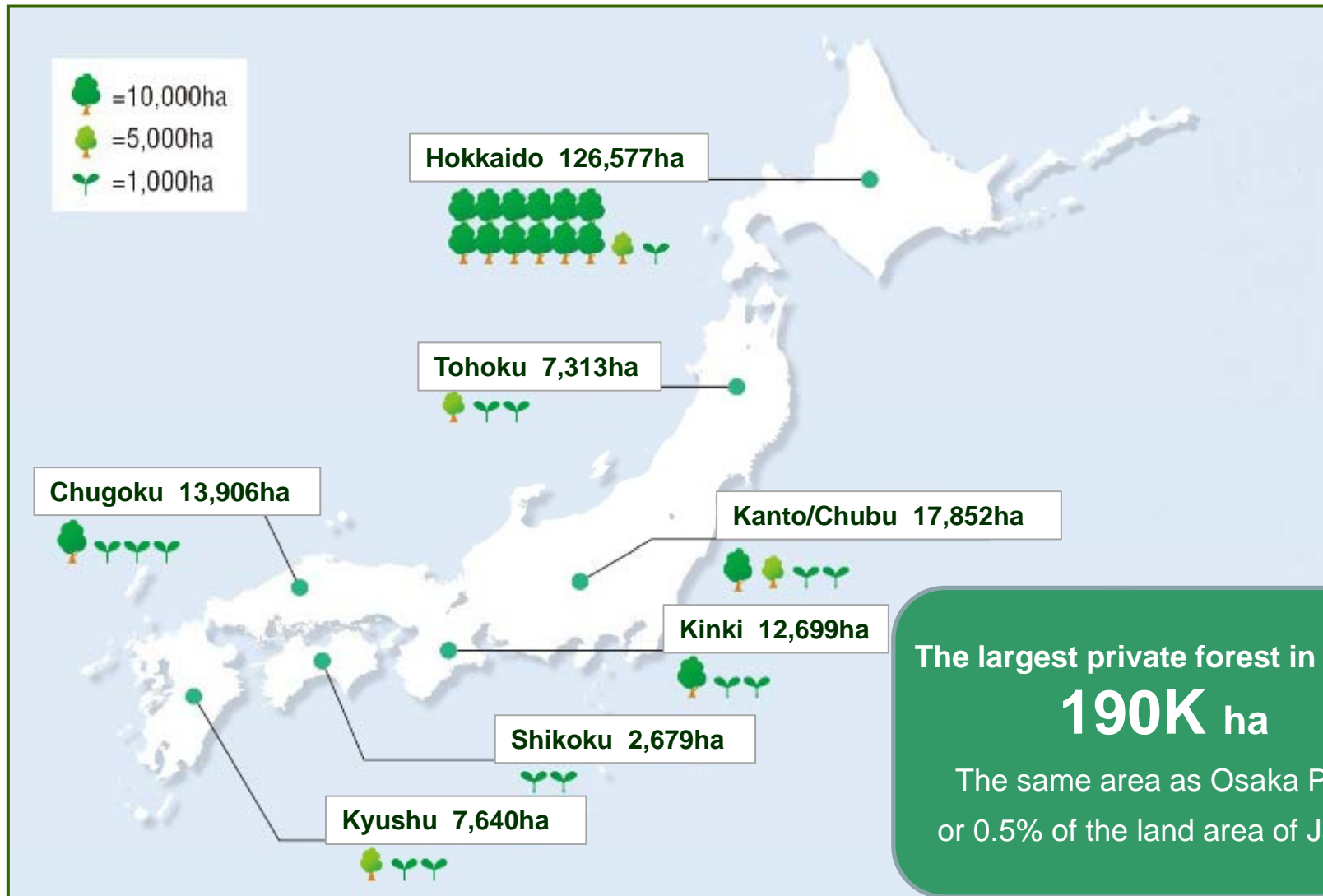
Location of Forest Business

Forestry businesses are operated across 10 countries

■ Forestry Business ■ Forestry & Pulp Business



Outline of Oji's Forest in Japan



Outline of Oji's Forest outside of Japan

	Country	Region	Company	Est.	Tree Species	Planted Area* (ha)	Harvest Cycle (years)	Harvest	Forest Certificate
Plantation	NZ	South Island	SPFL	1992	Euc.	9,747	15	2004	FSC
	Australia	Western Australia	APFL	1993	Euc.	15,809	10	2003	FSC
		Victoria	GPFL	1997	Euc.	5,210	7	2002	FSC
	Vietnam	Binh Dinh Province	QPFL	1995	Aca.	9,881	12	2010	
		Phu Yen Province	TTO	2011	Aca.	2,293	6	2007	
	Laos	Central Laos	LPFL	2005	Euc. & Aca.	18,438	10	2012	
		South Laos	SLPFL	2010	Euc. & Aca.	3,928	7	2017	
	Indonesia	Kalimantan	KTH	2012	Euc. & Aca.	23,708	6	2008	
	Cambodia	Kampong Chunang Province	OCP	2002	Aca.	401	10	2011	FSC CW
	China	Guanxi Zhuang Autonomous Region	CPFL	2002	Euc.	2,616	10	2022	
Huizhou Guangdong		KPFL	2005	Euc.	4,648	7	2020		
Plantation & Forest	Brazil	Minas Gerais		1973	Euc.	151,635	6		FSC, PEFC
	NZ	North Island		1971	Radiata pine	34,601	30		FSC
Total						282,915			

- The figure is the portion in terms of Oji's ownership as of the end of the fiscal year 2015
- For the project Oji owns more than 50%, the planted area is counted as 100% of the project area and for that of less than 50%, it is counted as the project area x Oji's ownership ratio."



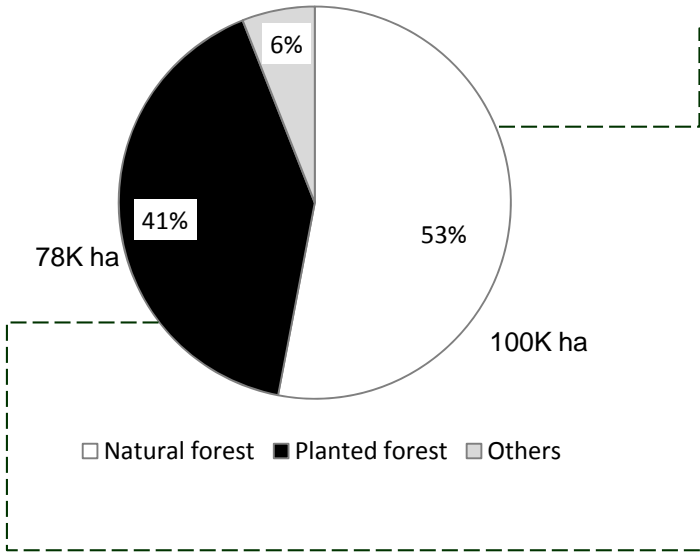
Introduction of Oji's major forest and plantation and its business model



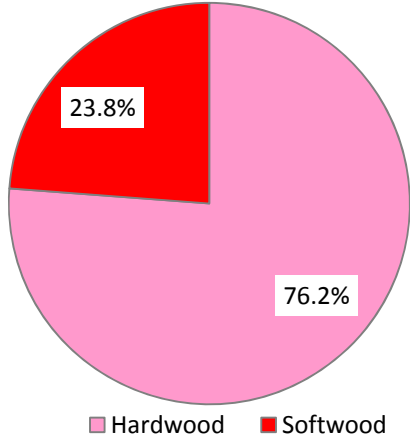
Oji's Forest in Japan

Japan: Composition of Oji's Forest by tree species

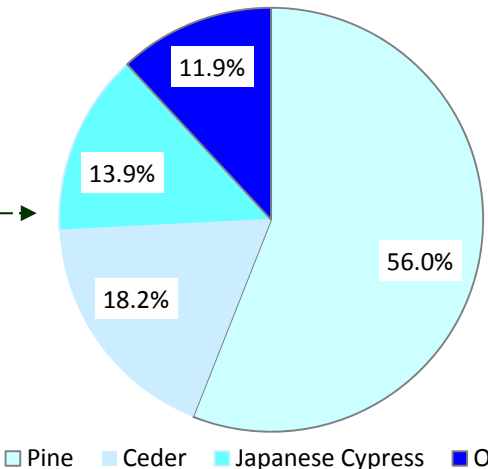
Composition of Oji's Forest (190K ha)



Composition of Oji's Natural Forest (100K ha)



Composition of Oji's Planted Forest (78K ha)



Japan: Forest Certification in Japan

- About 170K ha of Oji's forest is certified by SGEN (Sustainable Green Ecosystem Council)
- In June 2016, SGEN and PEFC agreed mutual certification.



View of Mr. Fuji from Oji's forest

About 170K ha of Oji's forest is certified by SGEN



Japan: Processing of Log and Sales

Sales of log



Log accumulation (Cedar)



Log transportation (down the stream)



Sales at log market or sawmill

Processing at Oji's sawmill



Sawmill (Miyazaki Pref.)



Sales of product (Cedar squared log)

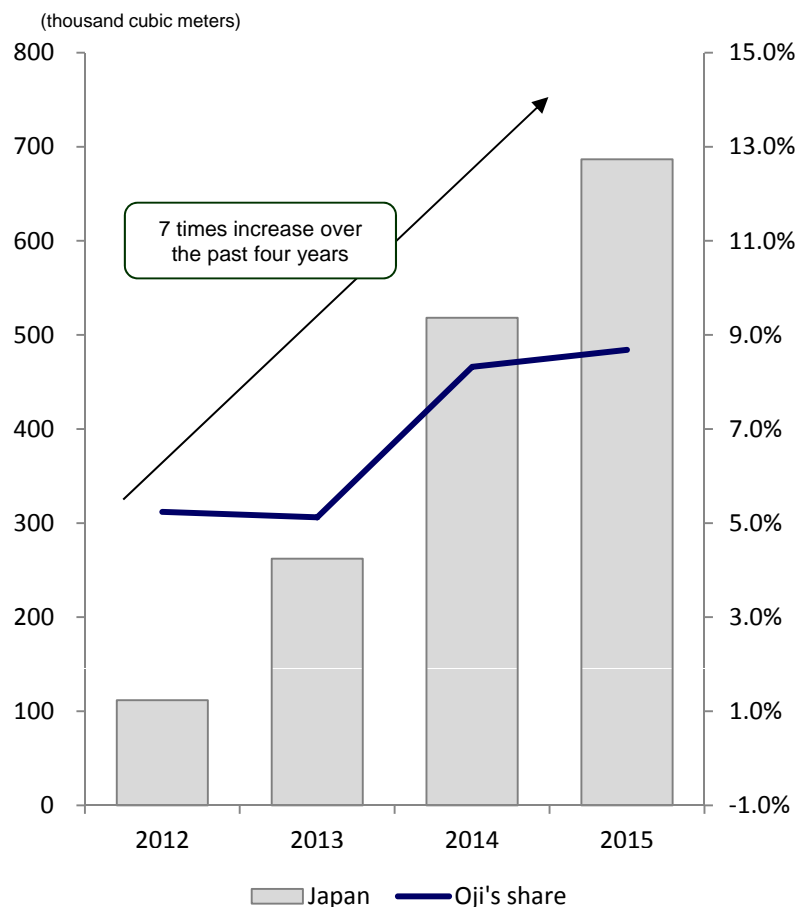
Japan: Export of Cedar Log



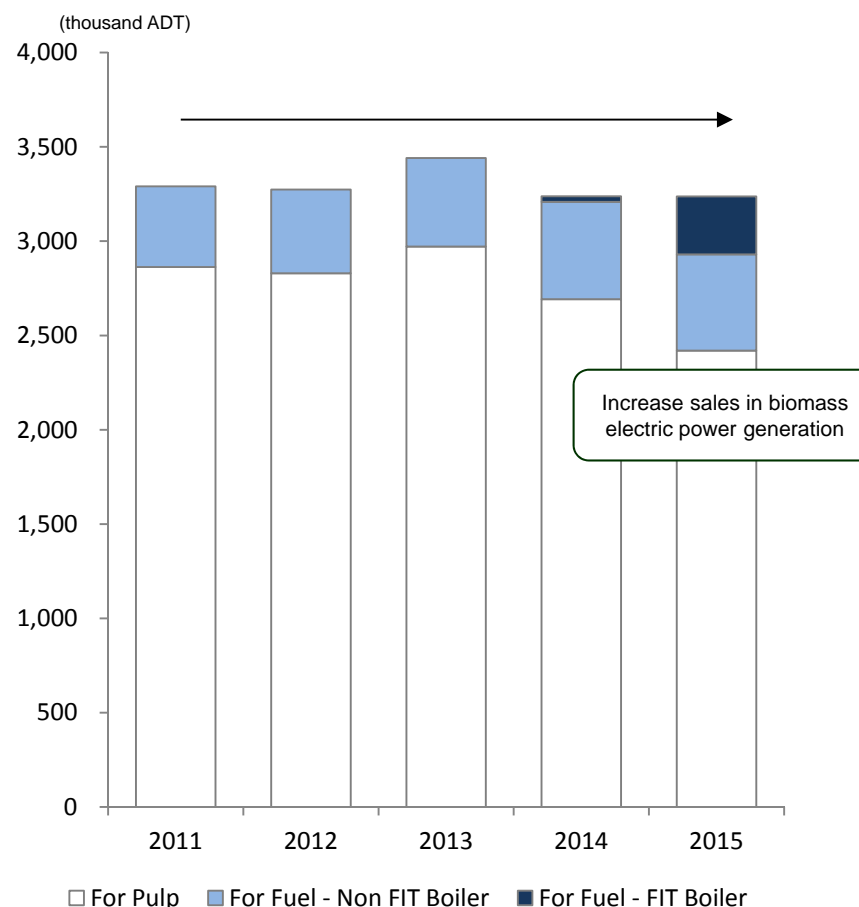
Japan: Cedar Log for Export and Domestic Market

- Volume of log export increased sevenfold over the past four years with Oji's share reaching to 9%
- Sales increase of chip in biomass electric power generation offset decrease in pulp use

Log Export In Japan and Oji's share

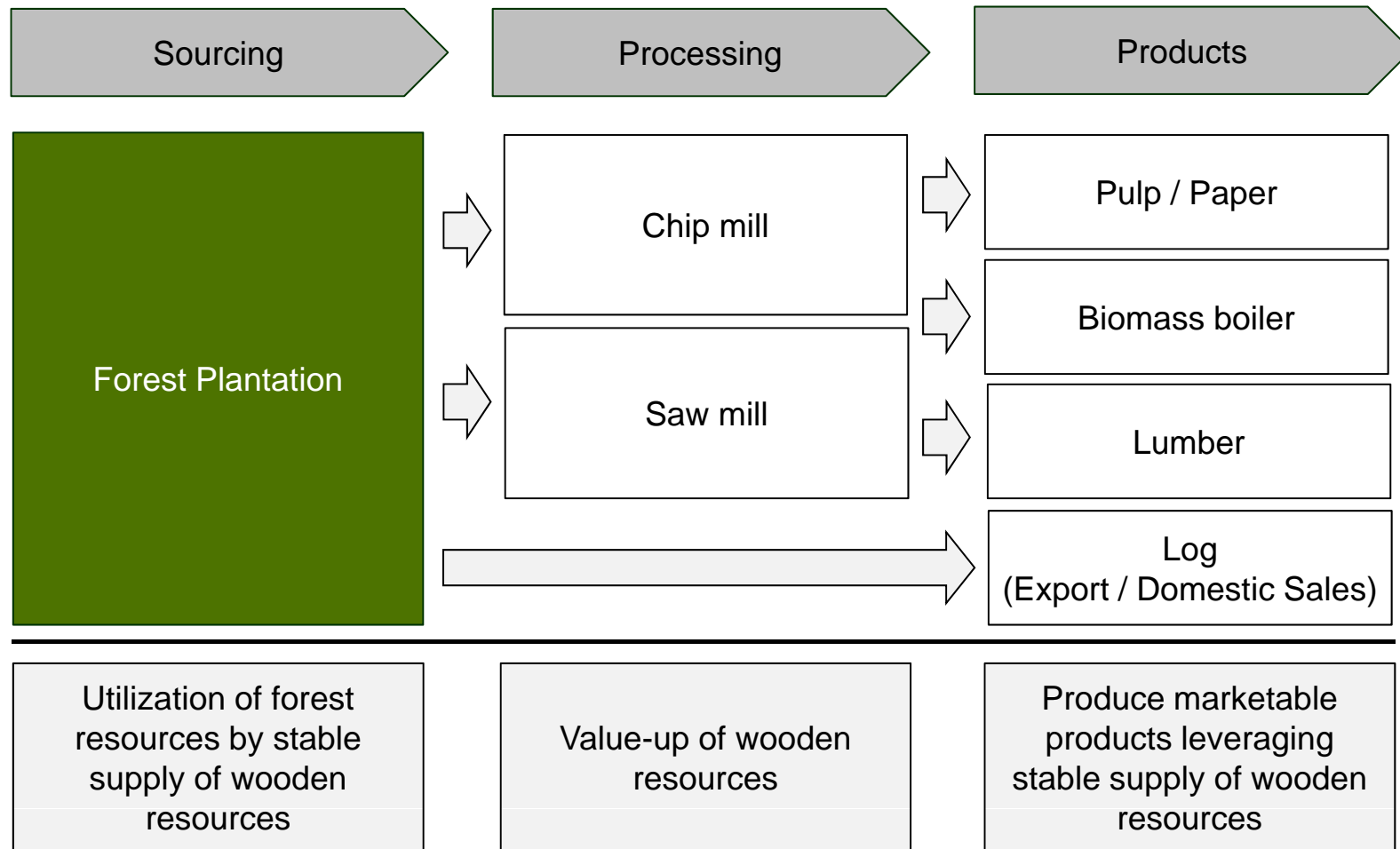


Wooden Chip Sales by Application



Japan: Cascade Use of Wood

Transforming traditional paper manufacturing company into integrated forestry business company





Oji's Forest in Brazil

Brazil: Forest plantation at CENIBRA



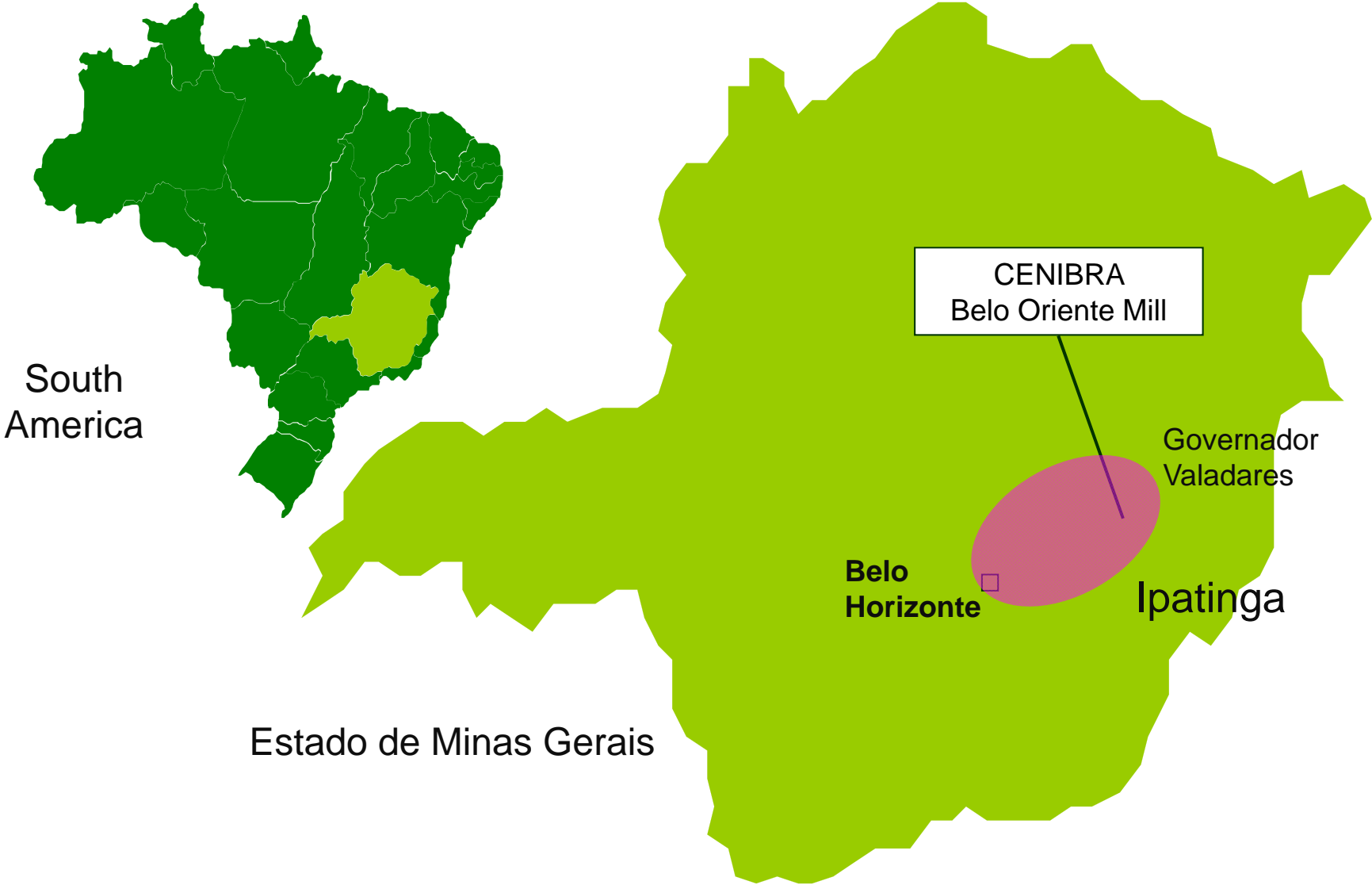
Nursery



Eucalyptus Urograndis



Brazil: Location of Mills



Brazil: Outline of CENIBRA

Outline of CENIBRA'S Pulp Mill

Location	Belo Oriente, Estado de Minas Gerais
Establishment	September 13 th , 1973
Start of Operation	March, 1977 (1 st line) December, 1995 (2 nd line)
Tree Type	Eucalyptus Grandis
Forest Certification	FSC-FM Certificate
Product	LBKP
Production	1.2 million ton per year
# of employee	4,884 (as of the end of December, 2015)



Brazil: Outline of CENIBRA's Forest

Area of Forest (as of the end of December, 2015)

Plantation	131K ha
Protected forest	104K ha
Forest road etc.	19K ha
<hr/>	
Total	254K ha

- MAI (including bark) is about 40 cubic meters / ha•year.
- Harvest Cycle is 6-year period.



Brazil: Pulp Product of CENIBRA





Oji's Forest in Oceania

Oceania: Forest Plantation



APFL Eucalyptus Globulus



SPFL Eucalyptus Nitens



GPFL Eucalyptus Globulus



Pan Pac Radiata Pine

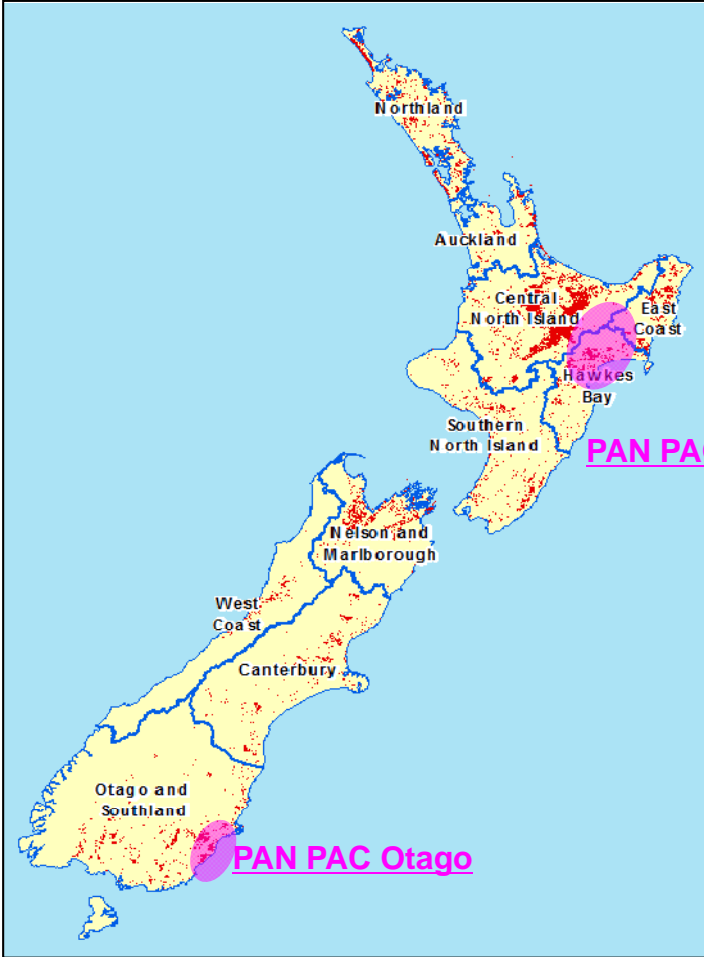
NZ: Outline of Pan Pac

Business outline of PAN PAC

Name	PAN PAC FOREST PRODUCTS
Establishment	May 1971
Shareholders	OJI GR 100%
Location	Napier, Northland, New Zealand
Project scale	34,000ha
Species	<u>Radiata Pine</u>
Harvest cycle	30 years
History	1971: Establishment 2001: <u>FSC-FM Certificate</u>

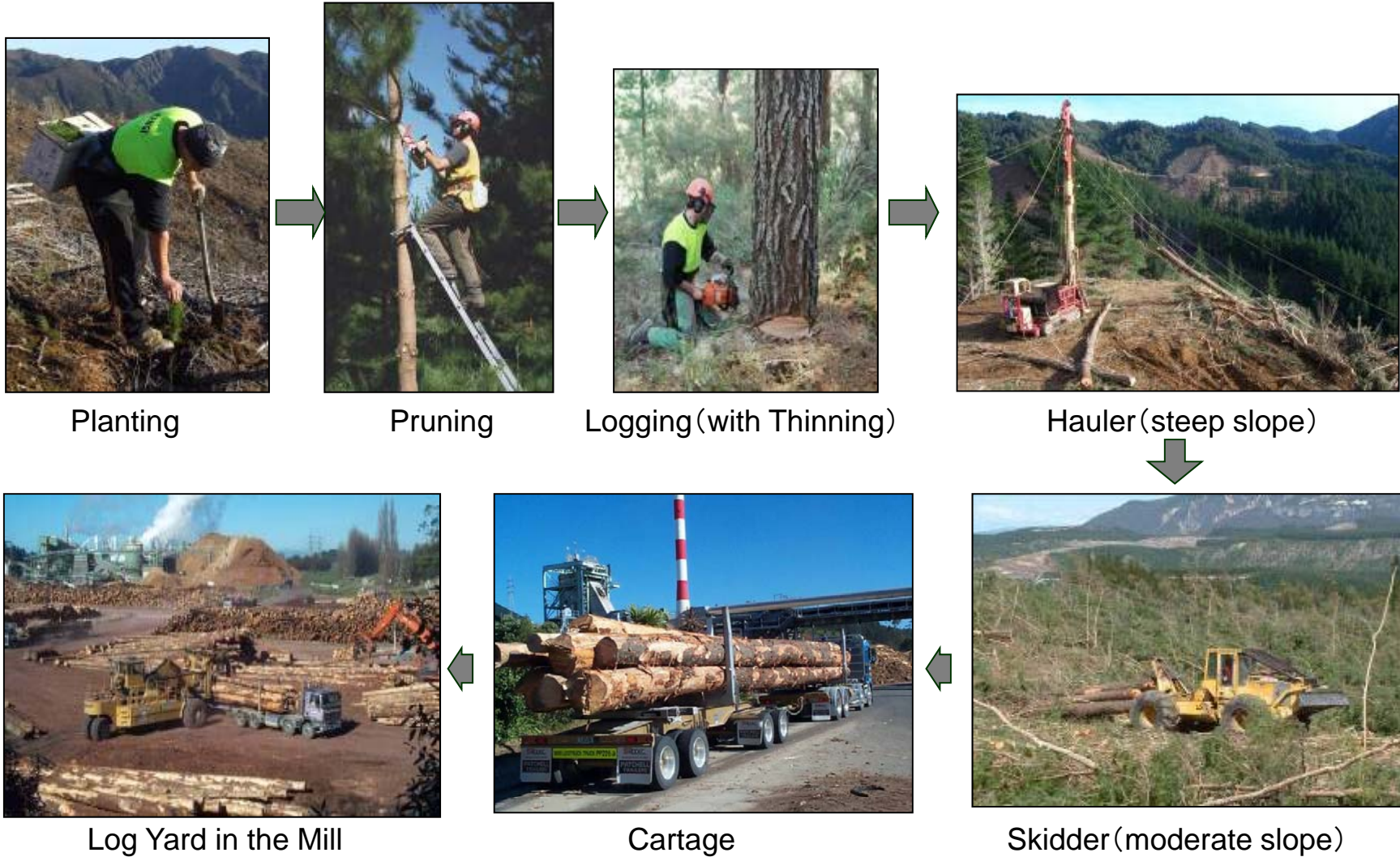


Plantation site



NZ: Business Overview of PANPAC

Forest Management



NZ: Business Overview of PANPAC

Lumber

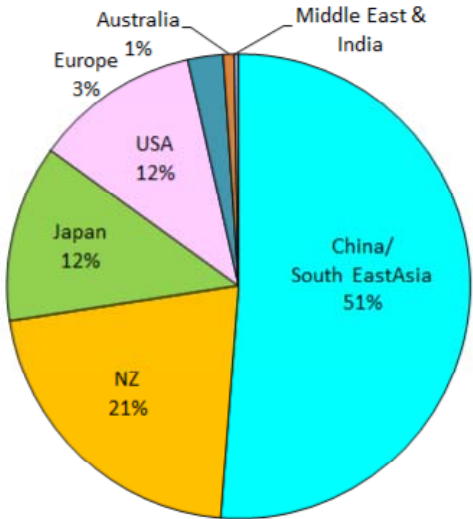
Annual Production Volume:

North Island : 420Km3

South Island : 55Km3

Total: 475Km3

Sales Region :



Products:

- Flitch (from Corewood)



Use : Pallet, Cable Drum, Packaging, Civil Work etc.

- Board



Use : Furniture, Appearance (Exterior and Interior) etc.

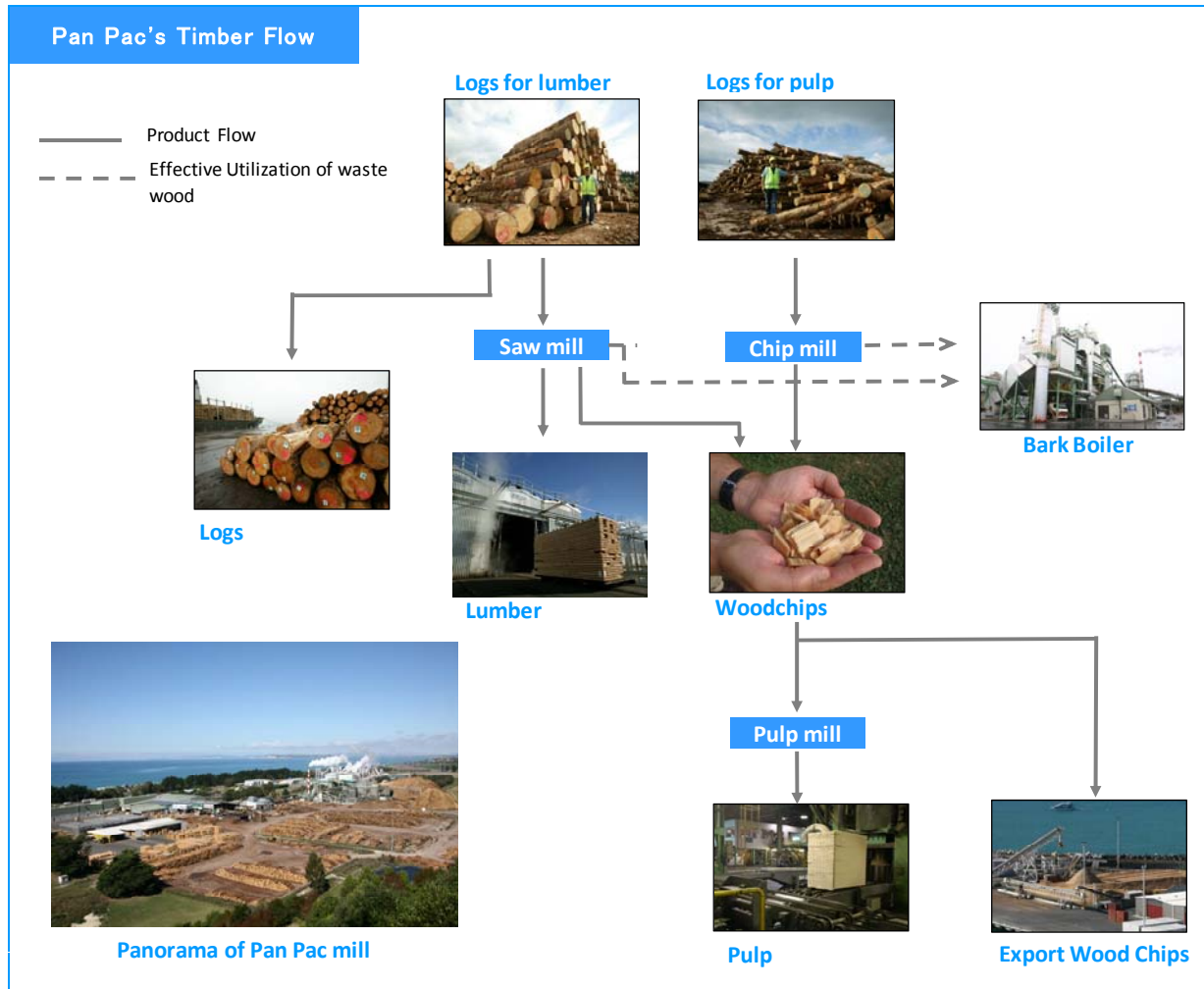
NZ: Business Overview of PANPAC

Wood from sustainably managed forest is totally utilized for lumber, pulp, chip and fuel.



Pulp:
BCTMP and others 300,000ton/a

<BCTMP>





Oji's Forest in Indonesia

Indonesia: Business outline of KTH

Business outline of KTH	
Name	PT. Korintiga Hutani (KTH)
Shareholders	Korindo Group 65.66%、 OJI HD 34.34%
Location	Pangkalan Bun, Central Kalimantan, Indonesia
Planted area	69,000 ha
Species	<u>Eucalyptus pellita, Acacia mangium</u>
Harvest cycle	6 years
History	1998: Establishment (2010: OJI participated) <u>2013: Start Operation of Chip Mill, Veneer (Mar)</u> <u>FSC-CW Certificate (May)</u> <u>Start Operation of Saw Mill (Dec)</u>



Overview of Plantation



Logs of Aca. mangium



Biomass Boiler and Chip Mill

Indonesia: Business outline of KTH



Indonesia: Forest Plantation at KTH

Outline of Forest

- Term of operation 43 years (1998-2041)
- Area 92,000 ha
- Planned area 69,000 ha
- Forest road 2,300 km
- # of employee 900
- # of contractor 3,000
- Seedlings 25 million per year



Distant view of forest

Indonesia: Overview of KTH mills

Outline

Area 335 ha. (on the right bank of Kumai River)

Started operation from April, 2013

Capacity of each business

Chip	1 million GMT per year
Log Production	more than 1.3 million GMT per year
Lumber	12 thousand cubic meters per year
Biomass power electricity generation	7.3 MW
Pellet	100 thousand ton per year
PKS (Palm Kernel Shell) export	100 thousand ton per year (near future)

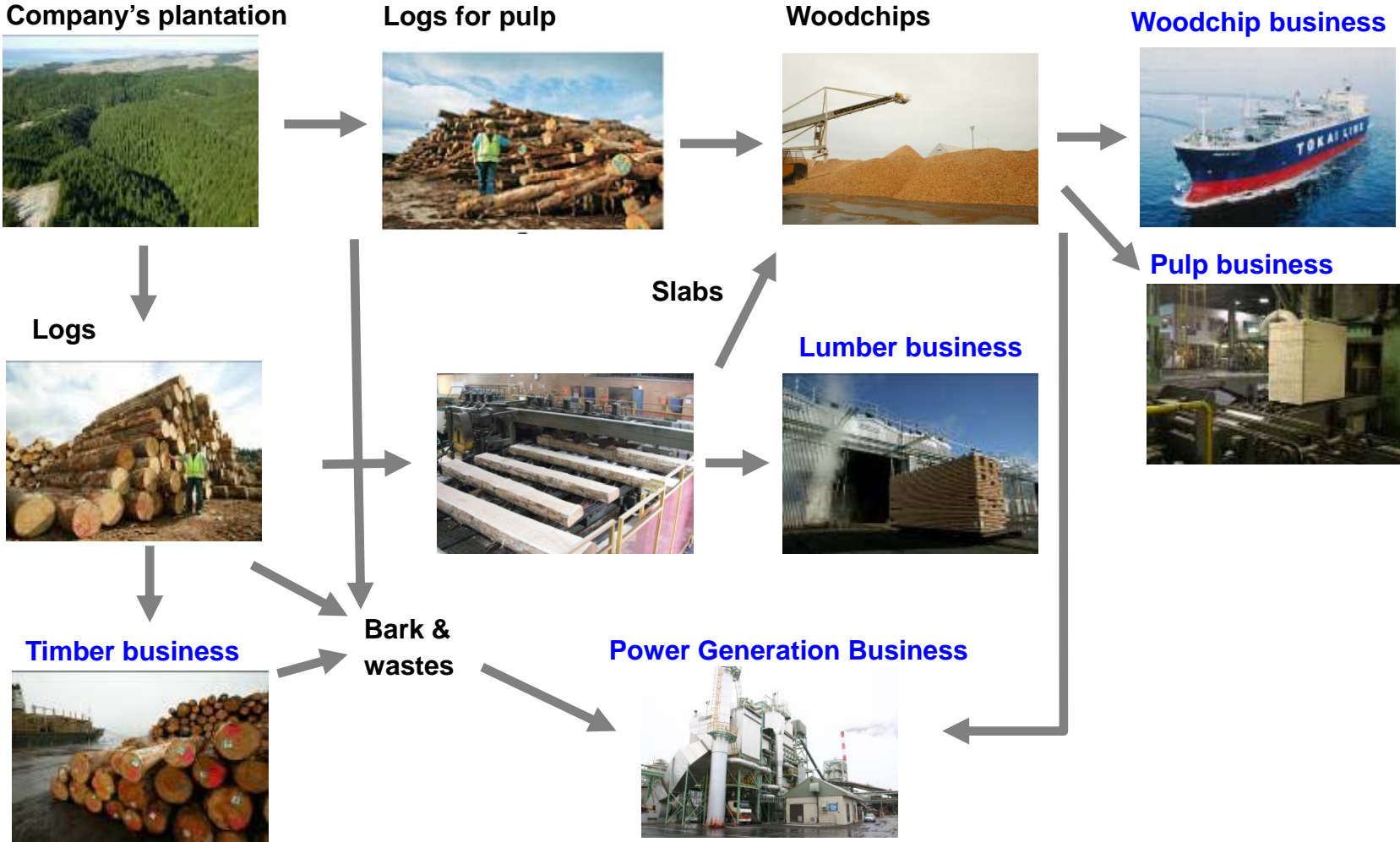




Strategy for future

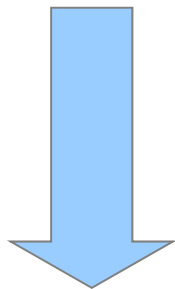
Strategy: Cascade Usage of Logs

Cascade Usage of Logs and Integrated Business



Strategy: Selection and Concentration

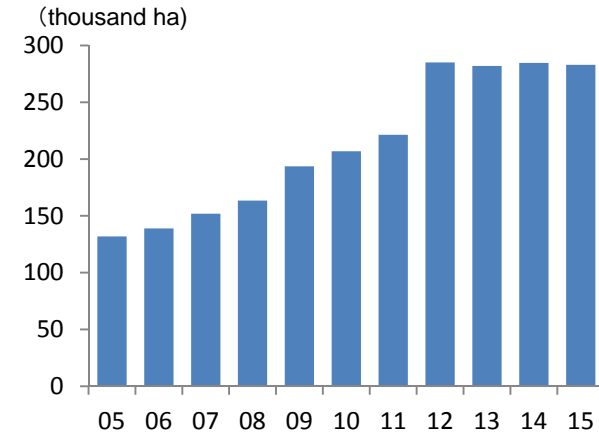
- Developed domestic plantations to utilize abundant forest resources, but it became economically unreasonable to use due to high economic growth in Japan after WW II .
- Began overseas plantations in Brazil and New Zealand in 1970s
- Expanded forest plantations in Australia, South East Asia and China in 1990s to secure logs for Japan



- Progress of digitalization and domestic population decrease pushed down the demand for P&W paper in Japan
- The downward trend drove Oji make a structural shift

- Going forward, develop integrated forestry business globally by carrying out selection and concentration

Forestry Area Overseas



Paper and Paperboard Production

