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## Chile

# **Solid Wood Products**

## Annual

2006

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## **Report Highlights:**

Chile's forest production will continue to increase as more trees are reaching harvesting age. Exports also are expected to grow both in volume and in value in 2006, as prices for forest products are rising again.

Includes PSD Changes: No Includes Trade Matrix: Yes Unscheduled Report Santiago [CI1] [CI]

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#### **Executive Summary**

Total output of Chile's forest sector grew again in 2004. The area devoted to commercial forestry increased again, by over 56,000 hectares. Exports increased from \$3.40 billion in 2004 to \$3.50 billion in 2005.

For 2006, both the volume and value of total forest production and exports is expected to continue growing, as prices for some products like lumber and wood pulp are recovering.

Development of Chile's forest products sector has occurred mainly through expanded commercial planting, with excellent adaptation of radiata pine and eucalyptus. Future growths will occur as a result of developing the relatively untouched and unmanaged native forests in southern Chile. However, this is contingent on the contents of the proposed native forest legislation, which has been stalled in Congress for several years.

#### **Forest Situation**

A total of 133,783 hectares were planted in CY2005, which increased the total planted area nationwide by 56,323 hectares. Of the total planted area in 2005, a little over 73,000 hectares correspond to new-planted area and almost 61,000 hectares are reforestation. Total yearly-planted area has increased again after some years of slowdown due to a number of factors, including less favorable planting and tax incentives in the new forestry law (DL 701), the high cost of land relative to neighboring countries, and the disruptive activities of ecologists. Nevertheless, total forest production will continue to expand as private tree farms reach harvest able age.

Chile's development of an important forest products sector is due in great part to the success of radiata pine. Radiata pine matures in 20-24 years in Chile; with thinning it can be available for use after just 15 years, compared to 30 years in New Zealand and Australia, and 40-60 years in North America and Europe. Since the pine grows so quickly in Chile, the wood is very soft.

Tale 1 - Annual Coniferous Growth Rate				
Country	Growth Rate (M3/ha/yr)			
Chile	24.0			
New Zealand	20.0			
United States	3.0			
Sweden	2.9			
Canada	2.2			

Table 2 - Total Chilean Radiata Pine and Eucalyptus Planting						
December 2005						
	(In Hectares)					
Region	Eucalyptus	Radiata Pine				
I (Northern border)	309	-				
II	2	-				
111	1,325	1				
IV	1,839	6				
V	36,340	11,013				
Metropolitan	10,968	993				
VI	24,786	63,204				
VII	24,934	369,932				
VIII	187,276	608,374				
IX	150,825	253,976				
Х	86,453	117,070				
XI	-	-				
Total *	525,057	1,424,569				
* Limited planting exists in Regions XI and XII						
Source: Chile's Forestry	Institute (INFOR)					

Table 3 - Radiata Pine: Distribution by Age   (Hectares)						
Age in Years	1965	1980	1990	2000	2005	
0-5	19,663	303,994	325,626	433,861	354,198	
6-10	52,612	192,220	344,426	276,435	302,118	
11-15	86,233	76,959	369,240	319,025	340,970	
16-20	69,858	51,974	142,772	297,982	253,697	
21-25	27,003	44,655	40,307	120,231	137,689	
26-30	4,395	33,898	10,363	17,742	24,060	
31 or more	921	13,239	9,365	8,841	10,836	
Source: Chile's Forestry Institute (INFOR)						

Eucalyptus is the second largest planted species in Chile. Planting has increased at a more rapid pace than for radiata during the last few years, because Eucalyptus products command higher prices and can be harvested even sooner than radiata pine. As of December 2005, over 525,000 hectares have been planted. Eucalyptus has great potential in Chile, since it can be harvested after only 10 to 15 years. The growth capacity for Eucalyptus is up to 30 CUM per hectare per year.

Present estimates put total native forests at 13.6 million hectares. Out of this total, 4 million hectares are protected as forest reserves and 5 million belong to private enterprises and under protection. According to industry, an estimated 4 million hectares are considered to be productive. The exploitation of the mostly over-mature native forest consists primarily in selective cutting, mainly wood for chip production. Chilean native forests possess numerous tree species that have no known European or North American counterpart.

## Forestry Subsidy Program

Law Decree (DL) 701, which is mainly designed to assist small farmers now, subsidizes planting costs by as much as 90 percent for the first 15 hectares, but only 75 percent of plantings thereafter. It also subsidizes 15 percent of the planting costs for larger farmers, when they plant land, which has been severely eroded, or land that can only be used for reforestation. A maximum of \$15 million dollars yearly is destined for this purpose. Special land tax exemptions are also part of the program. During 2005, a little over 16,000 hectares qualified for the planting subsidy, with payments totaling \$10.0 million. There are no subsidies for trimming and forest management. During the life of this program, from 1974 to the end of 2005, the Chilean government has paid \$255.4 million in subsidies.

Table 4 - DL - 701 Payment Summary							
	Subsidy Amounts Area Subsidized (US\$ Million) (Hectares						
	Period	Period Total Tota					
Trimming	1983-05	12.8	408,287				
Management	1978-05	28.2	7,108,259				
Reforestation	1976-05 214.4 1,161,320						
Source: Chile's Forestry Institute (INFOR).							

#### Native Forest

The proposed law, called "Law for the Recovery and Promotion of the Native Forest" has been sitting in Congress since 1992. The bill has gone through lengthy discussions and still has not been approved, mainly due to differing views among the various government agencies involved. This law is expected to provide a framework for the sustainable management of Chile's extensive native forests.

#### Trade Policy

Chile has signed trade agreements with many countries, among them Mexico, Canada, European Union, United States, South Korea and EFTA. However, no significant changes are expected to occur in terms of trade because some of these countries are not Chile's most important forest products trading partners and others already had low tariffs for wood and wood products before the agreements were signed.

#### **Forest Production**

Total log production increased to 45.8 billion CUM in 2005, up from 44.3 billion in 2004. Economic recovery observed in the world, mainly in South East Asia and China, together with an improvement in the Chilean economy explains another year of expansion. Further expansion is expected in 2006, as more tree farms reach maturity and are harvested. Additionally, industry expects a slight but positive increase in demand for higher value added forest products.

A little over 71 percent of Round wood output is used by the forestry industry. The remainder is used for firewood. Commercial utilization of Round wood includes pulp, wood chips, sawn wood and lumber production. At least one half of Chile's population uses firewood in their homes for heating and cooking purposes.

Tree farm thinning is the main source of Round wood for pulp logs. Wood chips are mainly a by-product of sawmill operations.

Table 5 - Chile: Log Production					
		t Area and Ha.)	Log Harvest (1,000 M3)		
	Planted	Native			
1997	1,882	7,123	34,056		
1998	1,914	7,123	31,672		
1999	1,952	7,123	33,972		
2000	1,989	13,404	36,568		
2001	2,037	13,404	37,789		
2002	2,074	13,404	37,791		
2003	1,998	13,404	39,132		
2004	2,079	13,457	44,344		
2005	2,135	13,564	45,770		
Source: Ch	nile's Forestry Ir	nstitute (INFOR)			

#### **Forestry Trade**

## Exports

In 2005, Chile's forest product exports totaled \$3.50 billion, up from \$3.40 billion the year before. This amount represents 9 percent of total Chilean exports. As the global economy shows sign of recovery and a new wood pulp plant is scheduled to begin operating, the forest industry forecasts exports will expand further to \$3.7 billion in 2006. Industry sources believe that new investments in the forestry sector are a sign that export will rise further. Industry sources forecast that forestry exports could exceed US\$6 billion by 2010.

Table 6 - Chile's Forestry Export by Destination   (US\$ Million, FOB)								
Country	2003 2004 2005							
United States	642.3	998.0	950.4					
China	230.5	354.1	371.0					
Mexico	179.0	239.6	306.9					
Japan	259.2	298.4	280.0					
Italy	120.0	137.0	158.0					
Netherlands	98.4	152.5	134.4					
South Korea	95.3	113.8	122.5					
Others	899.2	1,103.3	1,172.2					
Total Exports	2,524.0	3,396.6	3,495.4					
Source: Chile's Fores	stry Institute (I	INFOR).						

Table 7 - Chile's Forest Product Export by Major Commodity   (US\$ Million, FOB)							
Commodity/Product	2003	2004	2005				
Sawn wood	275.0	334.8	413.1				
Wood Chips	130.1	137.3	160.4				
Plywood and Boards	199.0	238.9	309.9				
Round Wood Logs	13.0	12.1	3.9				
Other	932.0	1,343.6	1,270.1				
Total Forest Product Exports	1,549.1	2,066.7	2,157.4				
Wood Pulp	881.9	1,211.5	1,204.6				
Newsprint	93.0	118.4	133.4				
Total Forest Sector Exports	2,524.0	3,396.6	3,495.4				
Source: Chile's Forestry Institute (	(INFOR).						

#### Imports

Chile's forest product imports totaled \$839 million in 2005, up from \$742 million in 2004. For 2006, another expansion of imports is expected as the Chilean economy keeps growing mainly in the construction sector.

Chile has an across the board import duty of 6 percent. Additionally Chile has signed free trade agreements with several countries, among them: Mexico Venezuela, Colombia and Ecuador. All wood product imports from these countries are duty free. Additionally, most imports from the United States and Mercosur countries are duty free.

Most imports come from Brazil (19 percent), Argentina (18 percent) and the United States (14 percent). Paper, cartons and other manufactured products are the main imported products (67 percent), followed by furniture and parts (7 percent), cork and barrels for the wine industry follow with 5 and 4 percent respectively.

#### Wood Chips

Although wood chip output in 2004 expanded slightly again when compared to the previous year, exports fell, as more chips went to domestic pulp production. Domestic demand for wood chips has increased as a result of a new pulp plant starting production and other plants increasing their production in response to rising wood pulp prices. Smaller amounts of wood chips were made available for export to Japan, Chile's only export market for wood chips.

Table 8 - Chile's Wood Chip Production     (In Thousand Metric Tons)						
Year	Total					
1997	4,926	2,199	1,791	935		
1998	4,487	2,031	1,338	1,112		
1999	4,837	2,241	1,016	1,544		
2000	5,091	2,380	719	1,968		
2001	5,257	2,372	386	2,464		
2002	5,057	2,527	156	2,375		
2003	5,691	2,874	5	2,810		
2004	5,814	3,139	2	2,673		
2005	6,337	3,243	18	3,076		
Source: Chile's F	orestry Institute					

Chile has a large number of chipping facilities with widely varying capacities. Most facilities are located in Region VIII (Concepcion). Close to 50 percent of Chile's wood chip production is exported and all of it goes to Japan's paper and pulp industries.

Table 9 - Chile's Wood Chip exports for 2005						
Туре	Volume Thousand MT	Value Million US\$	Unit Value US\$/MT			
Radiata Pine	71.9	2.4	33			
Eucalyptus	2,919.0	158.0	54			
Native Forest	0.0	0.0	0			
Total 2,990.9 160.4 54						
Source: Chile's Fores	try Institute (INFOR)					

Export Trade Matrix					
Country	Chile				
Commodity	Wood Chips				
Time Period	Jan-Dec	Units:	M.T.		
Exports for:	2004		2005		
U.S.	C	U.S.	0		
Others		Others			
Japan	2703082	Japan	2837642		
		China	81362		
Total for Others	2703082		2919004		
Others not Listed	C		0		
Grand Total	2703082		2919004		

## Softwood Logs

Total softwood log production expanded again in 2004. In 2005, this expansion will continue as even more trees become available for harvest. Although softwood log production will keep expanding in the coming years, exports are expected to fall due to increased domestic demand for logs by the processing industry. The pulp industry will require more logs for pulp production as new plants come on line. There also is a strong demand by the growing local milling industries for logs for lumber, for further processing into value added products. Softwood logs for pulp are exported to Japan and softwood logs for lumber are exported to South Korea.

Table 10 - Average Softwood Log Prices								
	n	n	1	(US\$ per (		n	n	
	1980	1990	2000	2001	2002	2003	2004	2005
Export	54	49	46	48	47	46	49	57
Domestic	18	33	37	31	28	27	30	37
CH\$/US\$	39.0	304.9	539.5	634.9	688.9	691.4	609.5	559.8
Source: Ch	Source: Chile's Forestry Institute (INFOR)							

Table 11 – Softwood Log Production, Exports and Consumption					
Years	Production (Thous. CuM)	Exports (Thous. CuM)	Domestic Cons. (Thous. CuM)		
2000	12,033	159	11,874		
2001	12,769	156	12,613		
2002	13,908	276	13,632		
2003	15,051	173	14,878		
2004	17,128	185	16,943		
2005	17,703	64	17,639		

Export Trade Matrix				
Country	Chile			
Commodity	Softwood Logs			
Time Period	Jan-Dec Units: CuM			
Exports for:	2004		2005	
U.S.	C	U.S.		
Others		Others		
Japan	116946	Japan	62543	
So. Korea	68025	So. Korea	1614	
Total for Others	184971		64157	
Others not Listed	C		0	
Grand Total	184971		64157	

## Softwood Lumber

Although declining in importance relative to other sectors in the forest industry, saw milling is still the single largest consumer of logs, with pine logs making up close to 80 percent of total inputs. Close to a third of the lumber produced is exported. This is mostly the output from the larger state of the art sawmills. The remaining two-thirds is consumed locally. Production of softwood lumber is expected to keep growing in the next few years as availability of well-managed and knot-free trees increases. But exports are not expected to grow at the same rate, as the industry is trying to add value to its output by increasing its exports of manufactured wood products. However, in the long term, exports of softwood lumber should still rise as the availability of knot-free lumber increases. The increased availability of knot-free lumber is attributed to subsidized pruning and forest management under DL 701, which occurred up until the late nineties.

Softwood lumber expanded again in 2004, compared to the previous year, as a result of strong foreign demand. For 2005 and 2006, production is expected to increase as the availability of mature trees increases and investment in new milling facilities materializes.

Table 12 - Average Softwood Lumber Prices								
(US\$/CUM)								
	1980	1990	2000	2001	2002	2003	2004	2005
Export	113	126	137	127	129	130	141	157
Domestic	76	55	76	61	57	58	67	91
CH\$/US\$	39.0	304.9	539.5	634.9	688.9	691.4	609.5	559.8
Source: Chile's Forestry Institute (INFOR).								

Table 13 – Softwood Lumber Production, Exports and Consumption					
Years	Production (Thous. CuM)	Exports (Thous. CuM)	Domestic Cons. (Thous. CuM)		
2000	5,351	1,668	3,683		
2001	5,581	1,767	3,814		
2002	6,193	2,057	4,136		
2003	6,758	2,289	4,469		
2004	7,754	2,797	4,957		
2005	7,978	3,082	4,896		

Export Trade Matrix				
Country	Chile			
Commodity	Softwood Lumber			
Time Period	Jan-Dec	Units:	CuM	
Exports for:	2004		2005	
U.S.	540164	U.S.	577620	
Others		Others		
Mexico	616120	Mexico	806144	
Japan	462511	Japan	378113	
UA Emirates	256177	UA Emirates	333679	
Saudi Arabia	211629	Saudi Arabia	210893	
China	130119	China	137815	
Spain	115020	Spain	125207	
Могоссо	72571	Morocco	78328	
So. Korea	68578	Taiwan	75115	
Taiwan	66576	So. Korea	56575	
Kuwait	54183	Kuwait	48454	
Total for Others	2053484		2250323	
Others not Listed	203839		254504	
Grand Total	2797487		3082447	