

Sustainable forest utilization in Chile

status and prospects

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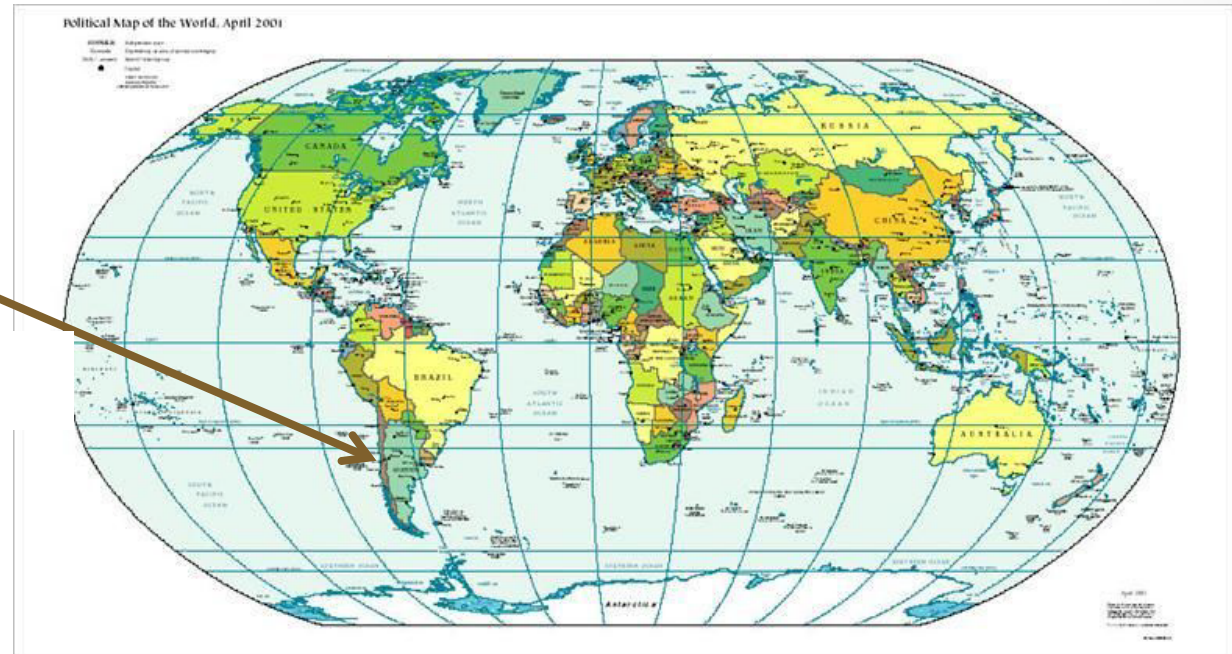
Geographic Location of Chile

17°



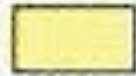
33° Santiago

56°



4.287 km long, 180 km wide (average)
75,6 million hectares
16,5 million habitants

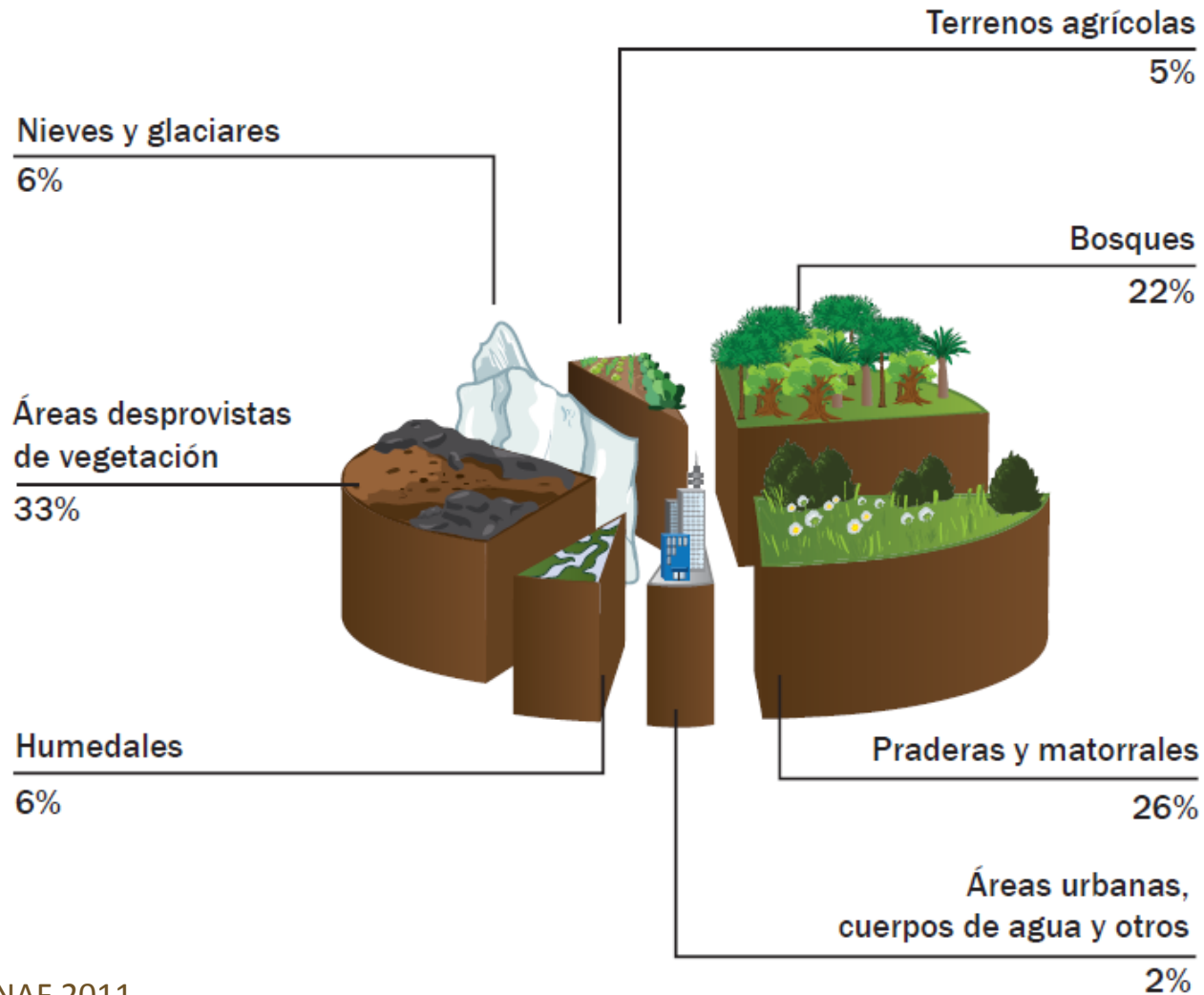
Vegetation Zones



Desert or alpine barrens; glaciers
in the south



Land Use today



History

- Around 13.000 years b. C. first settlement (Diaguitas, Mapuche, Alakaluf, Yamaná, ..)
- Influence of the Inkas in the north in the 15th century
- Since 1540 and for more than two centuries extends the Colony period.
- The natural resources use (esp. mining) was concentrated in the northern part of the country. Resources were considered as endless and nobody was afraid about their sustainability
- Forest destruction continued until the first half of the 20th century

History 20th century

- Introduction of numerous species, including *Pinus radiata* and *Eucalyptus globulus* by Federico Albert
- 1932 First forest law (promotion and protection)
- First establishment of National Parks and Forest reserves
- 1930-1949: 163.000 ha planted (mainly *Pinus radiata*)
- 1974: Plantation promotion law D.L.701
 - State incentives for afforestation and soil recuperation up to 75% of direct costs
- 1998: D.L. 701 extension (focus on small farmers)
- 2008: Native Forest law (recovery and promotion)

Institutional framework



Corporación Nacional Forestal
since 1970

Functions:

- Forest legislation administration
- National Protected Areas administration.
- Support of Small and Medium Forest Owners
- Control of fires, pests and diseases



Instituto Forestal
since 1961

focused on research,

development and innovation:

- Forest economic information
- Continuous forest inventory
- Genetic conservation and improvement
- Climate change and water supply
- Support to the small and medium industry

Forest Area by Forest Type



Plantación forestal
17%
2.872.007 ha

Bosque mixto
1%
123.756 ha

Bosque nativo
82%
13.599.610 ha

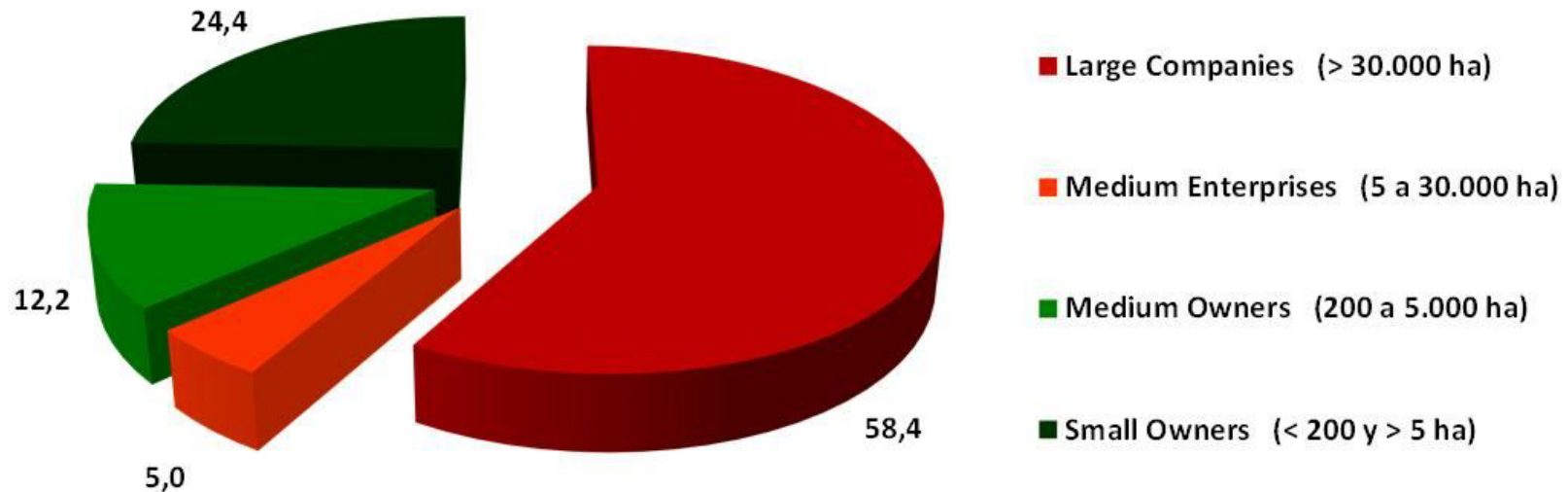
Planted Forest

AÑO	TOTAL	<i>Radiata Pine</i>	Eucalypts	Others
	(ha)			
1973	450.000	400.000		50.000
1980	794.510	716.939	33.200	44.371
1983	1.067.688	967.719	40.419	59.550
1985	1.188.635	1.040.250	51.173	97.212
1990	1.460.530	1.243.293	101.700	115.537
1995	1.818.185	1.379.746	302.248	136.191
2000	1.989.061	1.474.733	358.616	155.712
2005	2.125.099	1.419.300	552.338	153.461
2010	2.341.850	1.471.806	695.701	174.343
2011	2.394.866	1.480.803	740.360	173.703

(Source: INFOR, 2012)

Planted Forest

**Planted Forest Area by Owners Size
(%)**
Total: 2,4 MM ha 2011



Native Forest

Type of Structure	Hectares	%
Total	13.599.610	100,0
Adult Forest	5.912.235	43,4
Secondary Forest	3.808.769	28,0
Adult secondary Forest	892.822	6,6
Shrub Forest	2.985.784	22,0

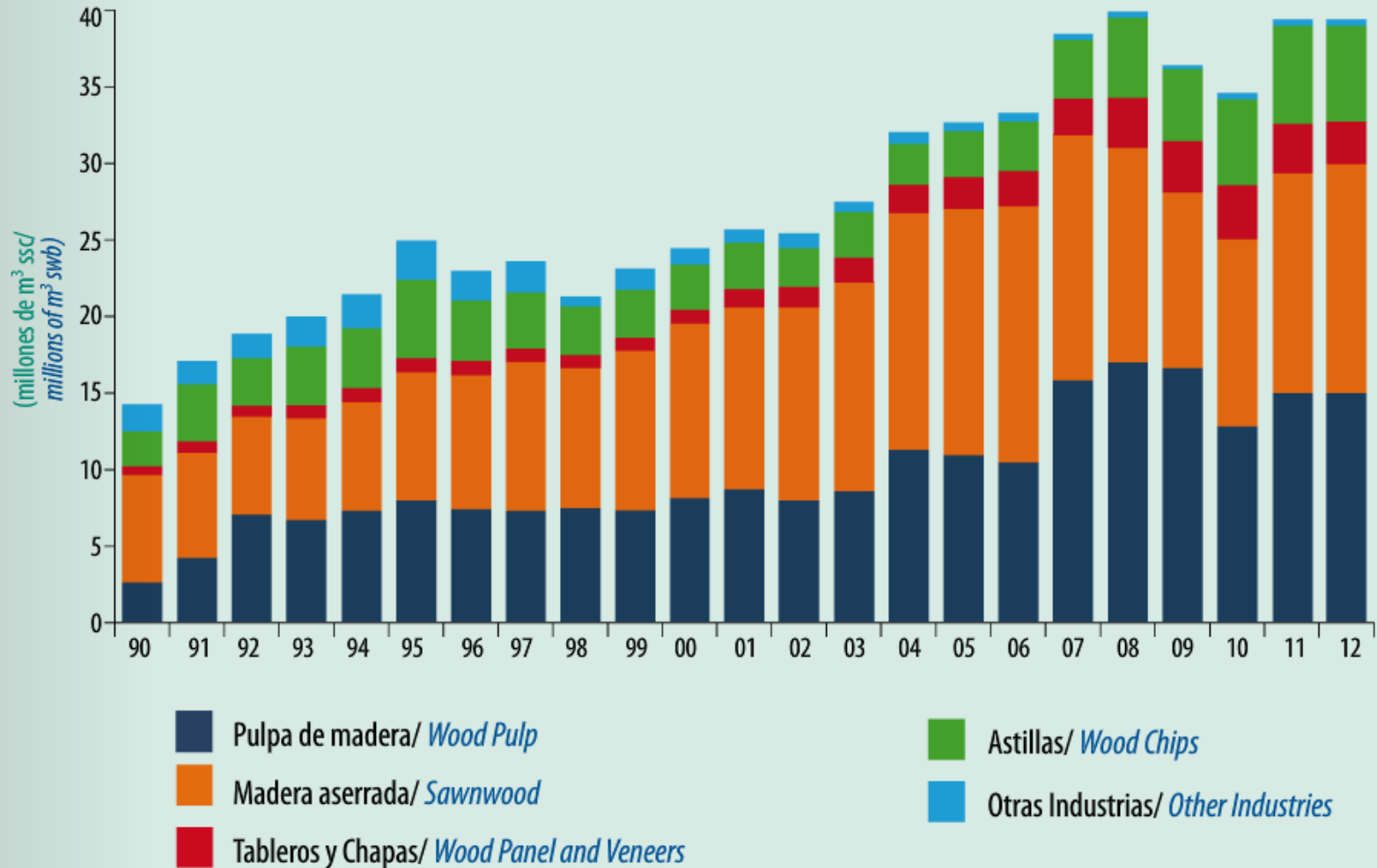
Protected areas

National Parks	9.140.330 ha
National Reserves	5.402.669 ha
Natural Monuments	26.897 ha
Total	14.569.896 ha

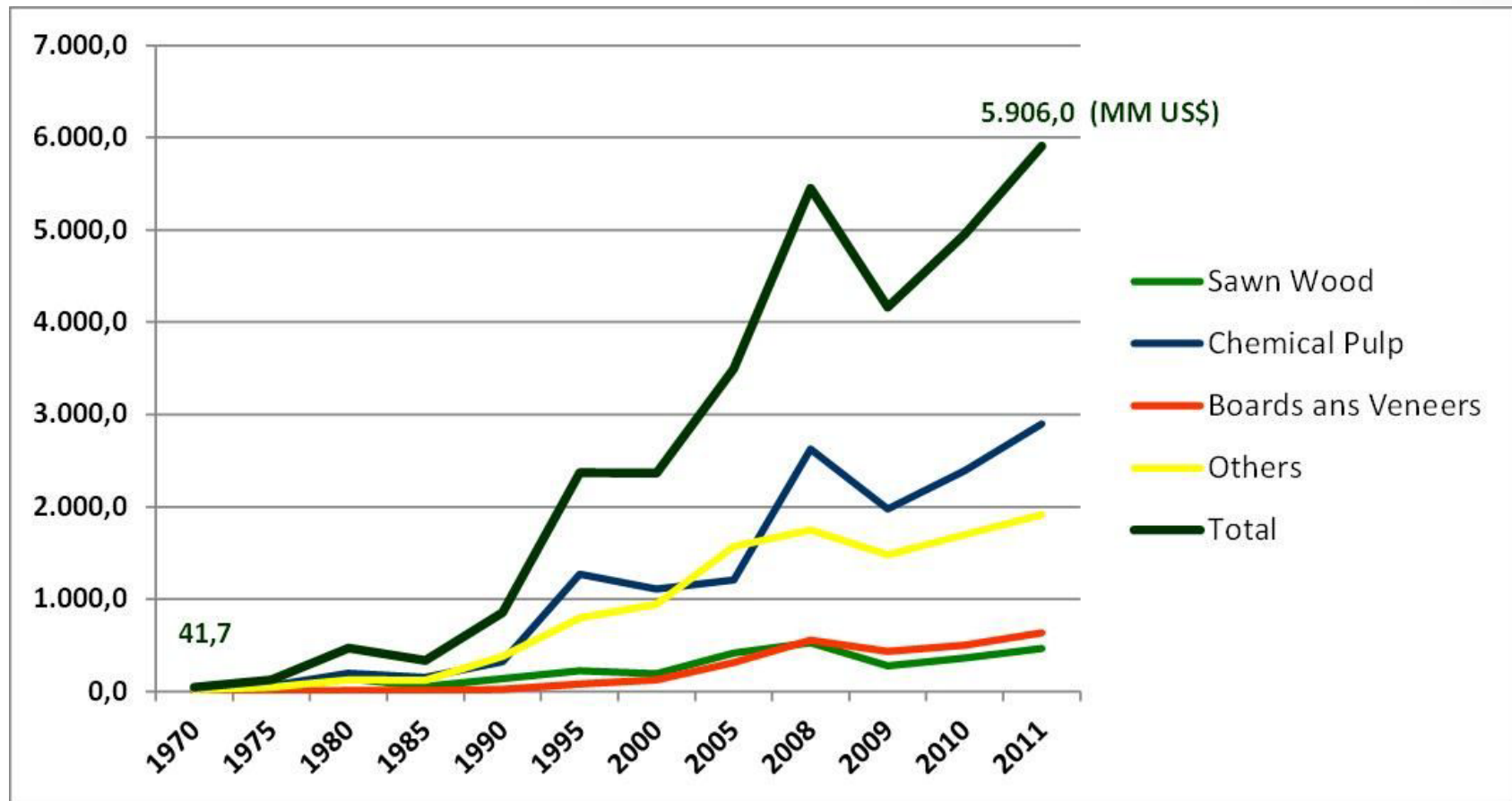
Native Forest

- State owns around 35 % (protected areas)
- Big and medium size owners around 60 %
 - Arauco 400.000 ha, Park Pumalin 290.000 ha
- Small owners only around 5 %
- Use of the native forest mainly for firewood – around 9 million m³ (total consumption around 14 million m³)
- Influence of German silviculture methods through:
 - around 500.000 Chilean's descend from Germans
 - Project GTZ/DED/KfW for the conservation and management of the native forest (1996-2006). Together with 4000 small forest owners (area of 150.000 ha)

Roundwood consumption



Export of forest products



Share of the Gross Domestic Product (GDP) is 2,6 % (2011)

Prospects

Targets:

- Native forest recovering (1,5 – 2 mil. ha)
- Small owners more active incorporated
- Technology and economical gaps to be reduced
- Small and medium forest enterprises higher association

Problems:

- No infrastructure in rural areas
- Native forest has a poor quality
- Conflicts between Mapuche and big companies

Thank you for your attention!

