



The Bamboo in Brazil



Hangzhou, P. R. China

Introduction

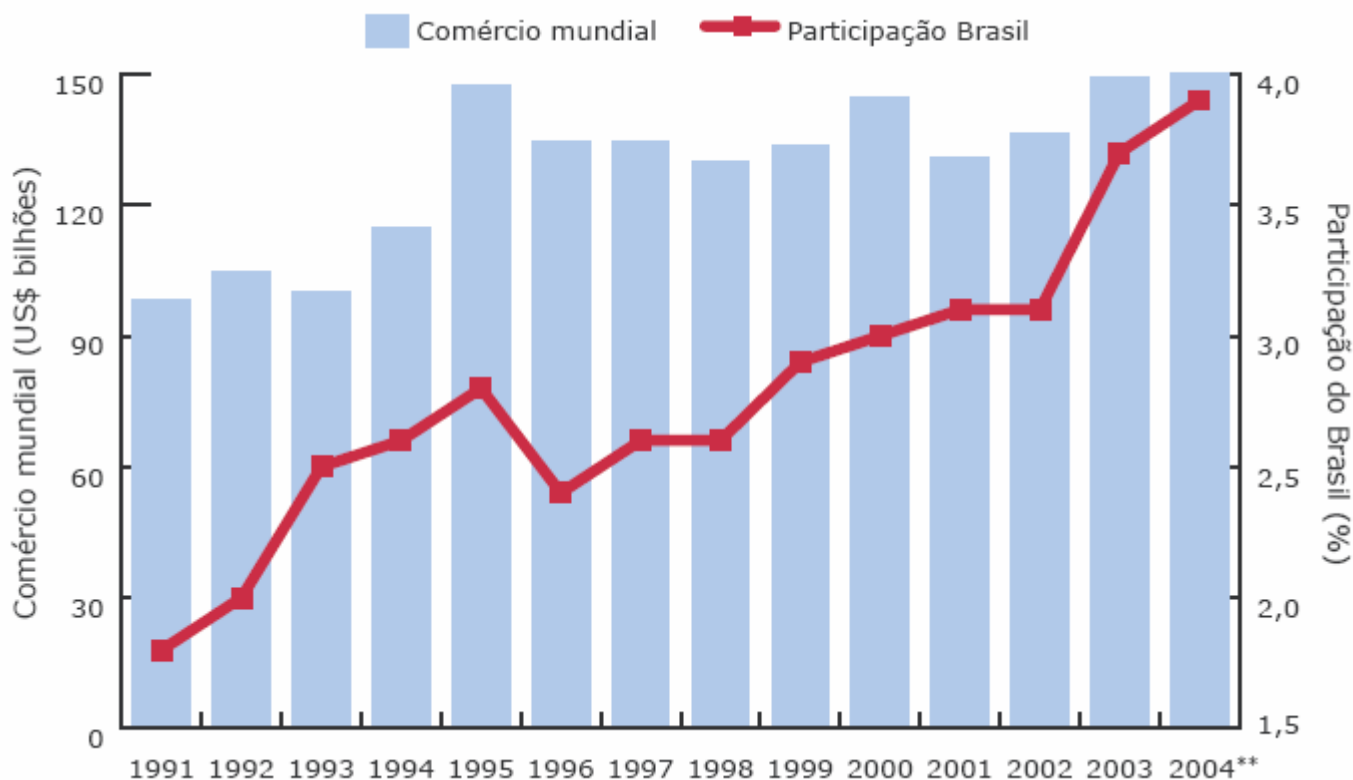


- Area: 8.5 millions Km²
- Almost half of South America
- Population: 170 Millions
- 55% Europeans descendent (Portugal, Germany, Italy, Span)
- 38% mulato
- 6% Africans
- Capital: Brasília
- São Paulo is the biggest city (17 millions)
- GDP percapta US\$ 4.060
- Language: Portuguese

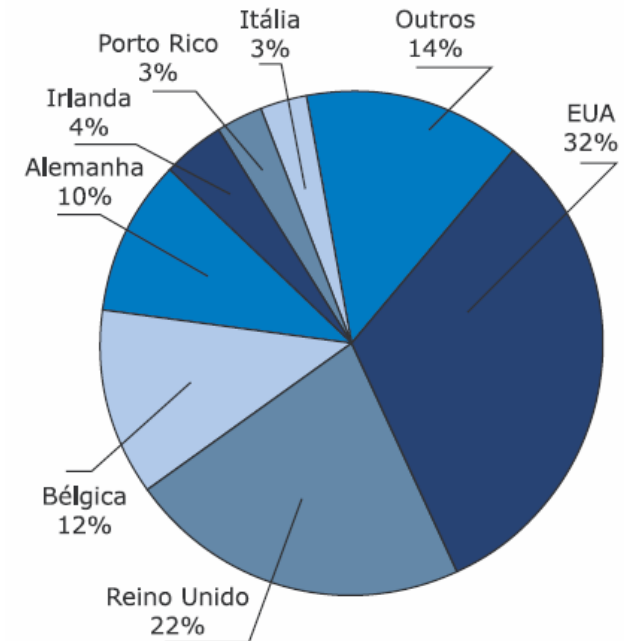
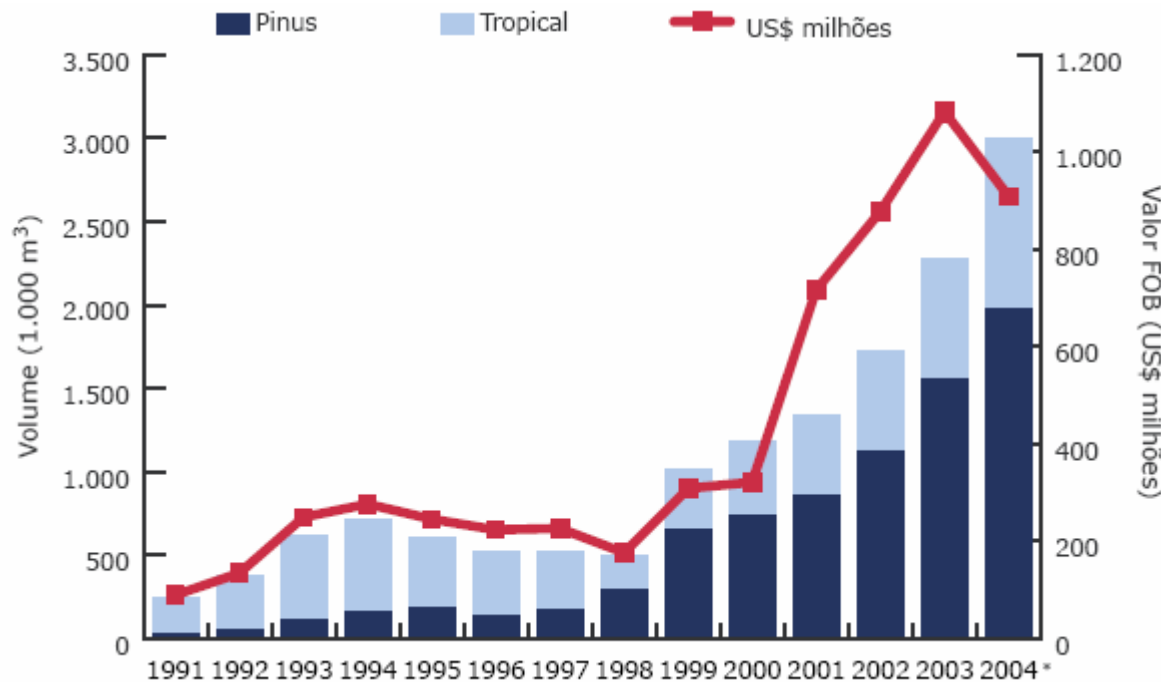
- US\$ 10 billions per year
- 5% RIP (Rough Internal Product)
- 457 Millions Hectares

Forest	Área (Hectares)
Native Trees	450 Millions
Pinus /Eucaliptus	5 Milions
Others	2,5 Millions

- Growing of Brazilian participation in timber world trade



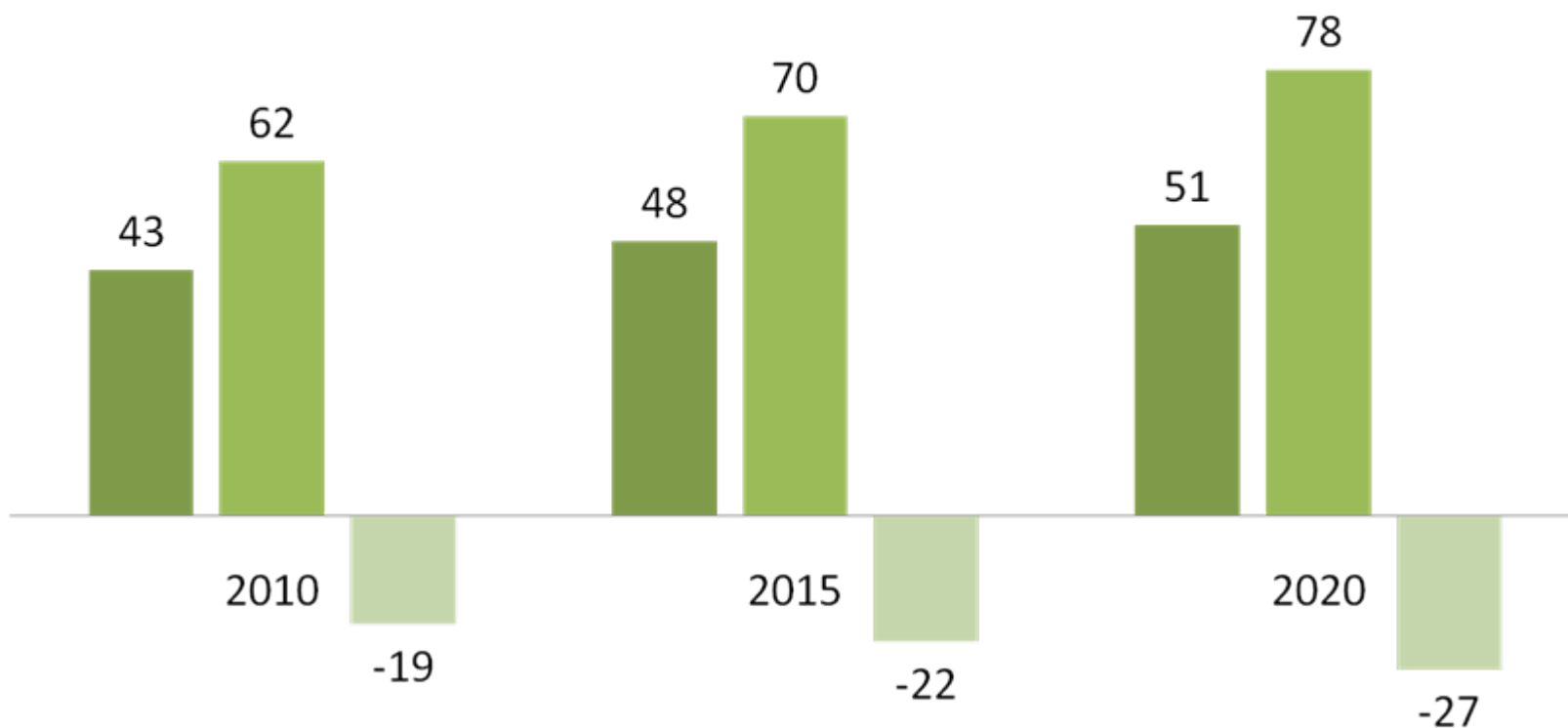
Growing of Brazilian exportation of plywood





Deficit of Timber Production in Brazil (Pines – Millions of m³)

■ Offer ■ Demand ■ Balance





- The available timber supply of the world is shrinking. The trend is toward lower quality and more expensive timber for the manufacture of wood products.
- End-users of wood-based products have realized the serious danger to the environment if certain natural forest stands are depleted.
- Since demand for wood products shows no sign of abating, alternative products must be developed.



- The agriculture industry could adopt bamboo for cultivation in plantations, thus promoting bamboo as an environmentally friendly and renewable building material of the future. Brazil has the basic resources to support a bamboo industry. Nearly all of the bamboo harvested is consumed domestically. Bamboo offers a multitude of different end-products and has a high potential for development.

Bamboo in Brazil

- Brazil is the country with the biggest diversity and the highest rate of bamboo forest in all the America. There are 230 species representing 32% of Latin America species. The states of São Paulo, Minas Gerais, Santa Catarina, Bahia e Paraná have the biggest diversity of bamboo in Brazil
- Most comum species:
 - * *Guadua angustifolia*
 - * *Dendrocalamus giganteus*
 - * *Dendrocalamus asper*
 - * *Bambusa vulgares*
 - * *Bambusa tulitoides*
 - * *Phyllostachys aurea*
 - * *Phyllostachys pubescens*
 - * *Phyllostachys edulis*

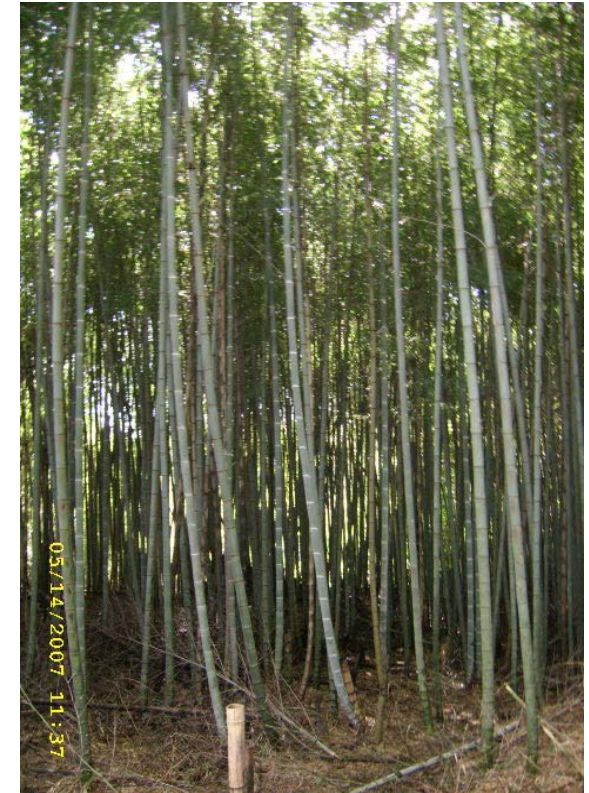
Bamboo in Brazil



Dendrocalamus giganteus



Guadua angustifolia



Phyllostachys pubescens

Bamboo in Brazil

- The largest area of bamboo in Brazil is in Acre state, where is found 8 millions hectares of the *Guadua* bamboo genera . Now a days all of that area, there is no industrial use.
- The largest area for industrial use of bamboo (*Bambusa vulgaris*) in Brazil is 100.000 hectares from Itapage paper and cellulose company. The annual production is 72.000 tons of paper and cellulose.

Bamboo in Brazil



Bamboo in Brazil

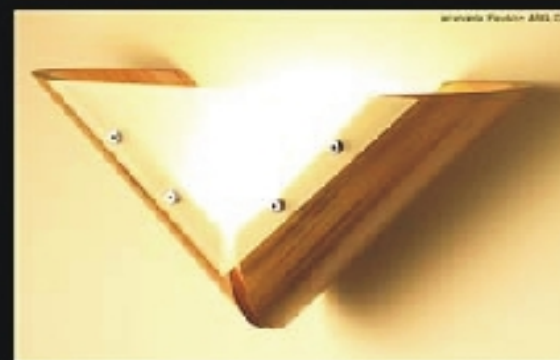
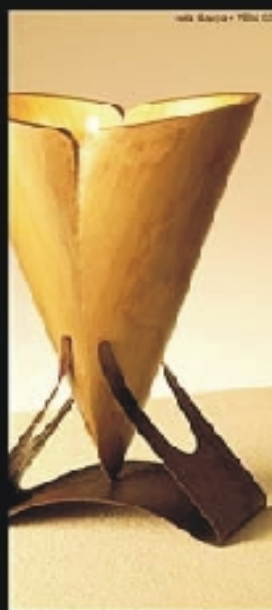


Bamboo in Brazil



- Others uses:
 - *Handcrafts
 - *Constructions
 - *Few companies making ply-bamboo









- Brazil shows a great potential for bamboo production but a few researches are made about its applications
- Since bamboo has a little environmental impact and has good physical and mechanical properties it is very interesting as a raw material for industrial design.



- Currently the interest of bamboo use as a raw material for timber production is increasing due the fact the land use issues have dramatically changed the timber supply outlook for our nation's forest products industry.
- The laws for native trees harvesting are each more strict .

What is necessary to increase the bamboo use in Brazil?

- Incentives from the government (started up already from Environment Ministry – Minister Marina Silva)
- Researches
- Increase the plantation area
- Developing of technologic for bamboo processing.



Thank you very much

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