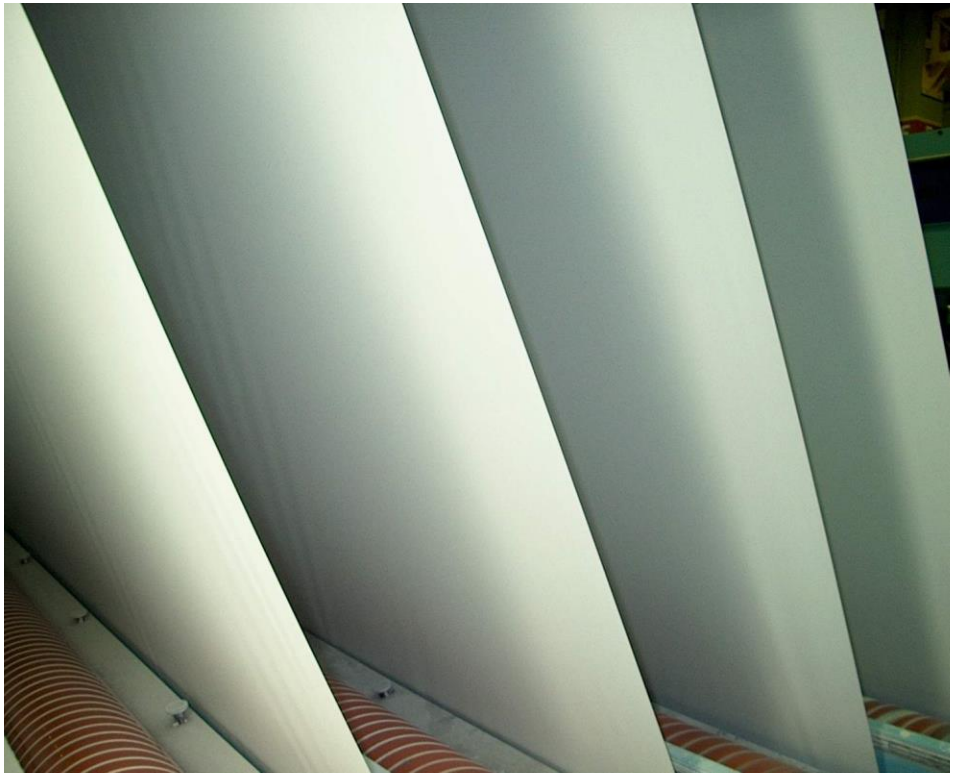
South America

The ABC... & ... U countries

Celso Foelkel

°Celsius Degree / Grau Celsius

2005 International Pulp Week



Montreal / Canada
May 2005

The players we are talking about

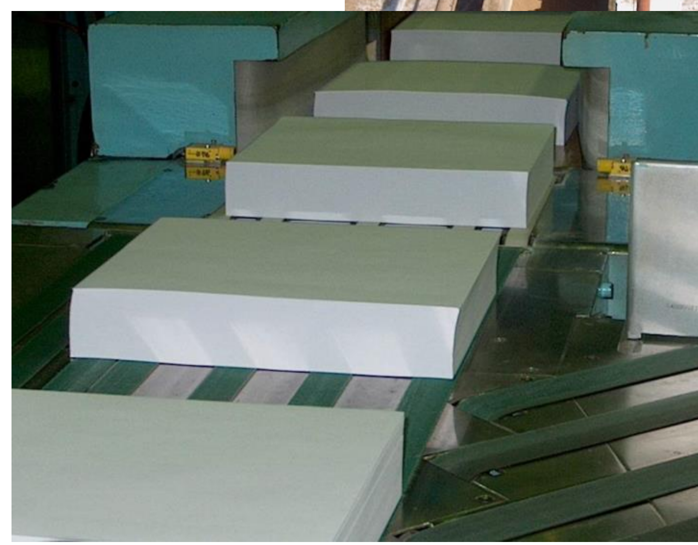
The players we are talking about

The soup of letters

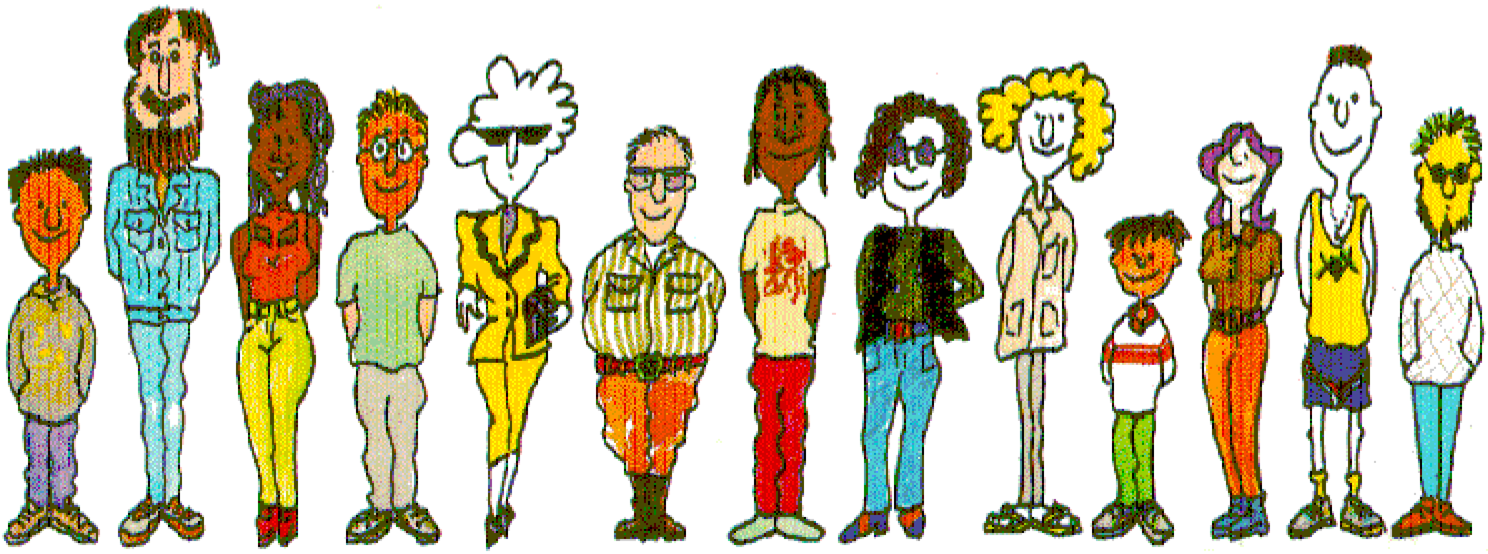
- **A** is for Ambitious or Aggressive
- **B** is for Big or Best
- **C** is for Confident, or Competitive, or Capable
- ......
- **U** is for Urgent or even Unbelievable

Pulp Mills & Pulp Markets ?

State-of-the-art mills



People



Reliability

Determination & Skills

"People, who plant forests, believe in the future"

CF, May 2005

Forest plantations

Forest plantations

The plantation forest model

•Utilization of rural farmers land areas (less expensive and enlarged social benefits)

•Utilization of low quality soils (degraded pastures, not competing for agricultural lands)

•Involvement of local partners as many as possible

The virgin pulp based model

- Substantial growth in virgin pulp and not in paper: oriented to “market share” growth

- Most of EBITDA formation comes from the pulp side: paper does not add too much further

- Worldwide distribution of pulp a lot easier than paper

- Domestic paper recycling allows virgin pulp surplus for exports

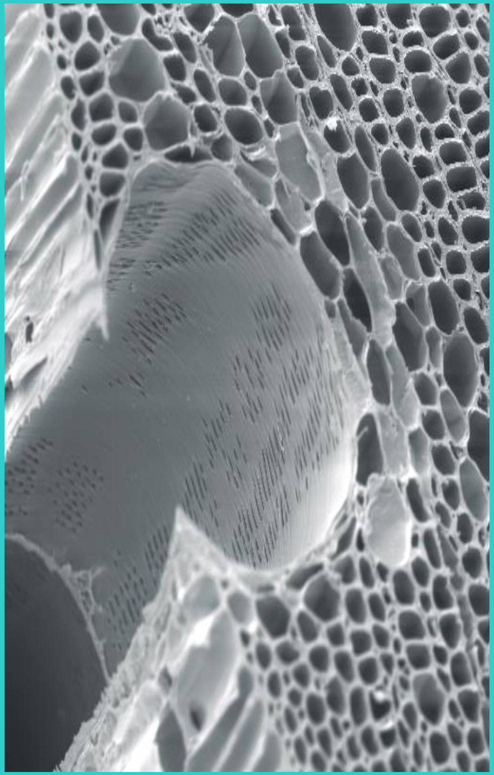
Competitiveness

Determination & Skills

"People, who build competitive mills, deserve to play the best markets"

CF, May 2005

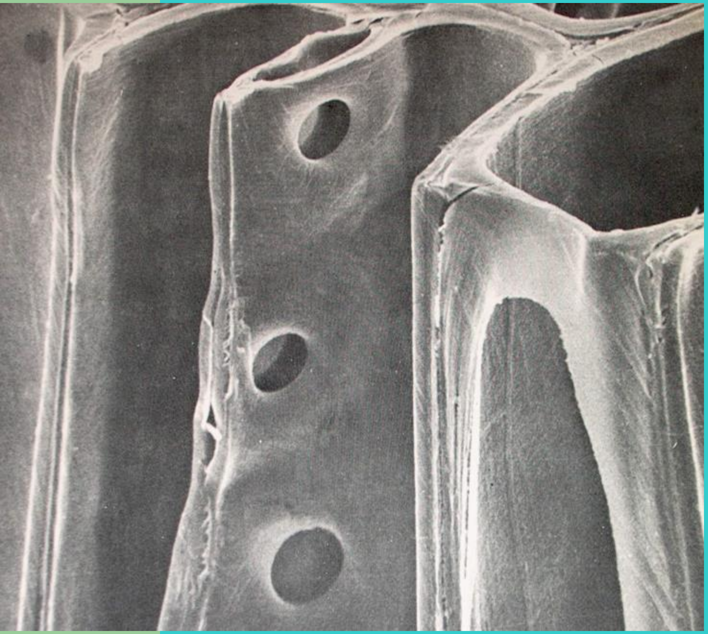
Eucalyptus

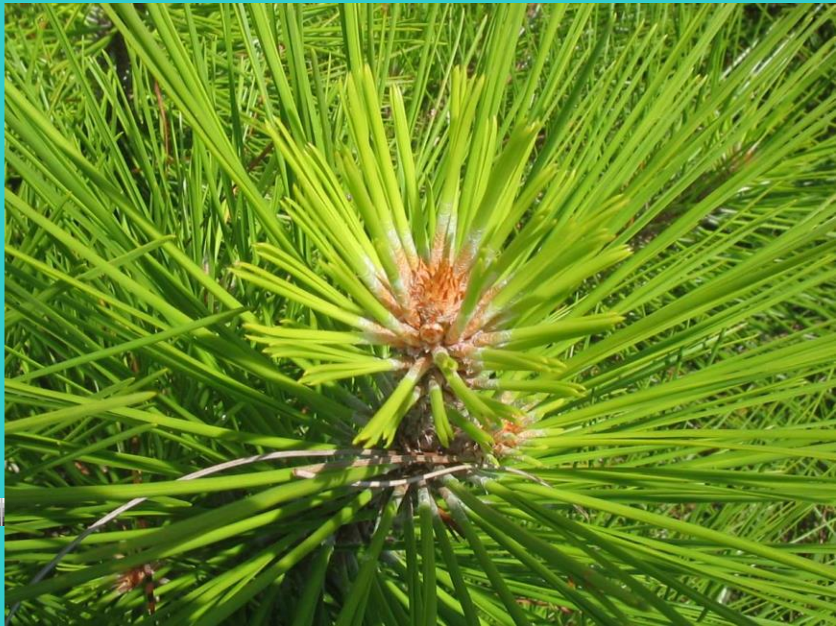


Low-cost wood
and
superior quality

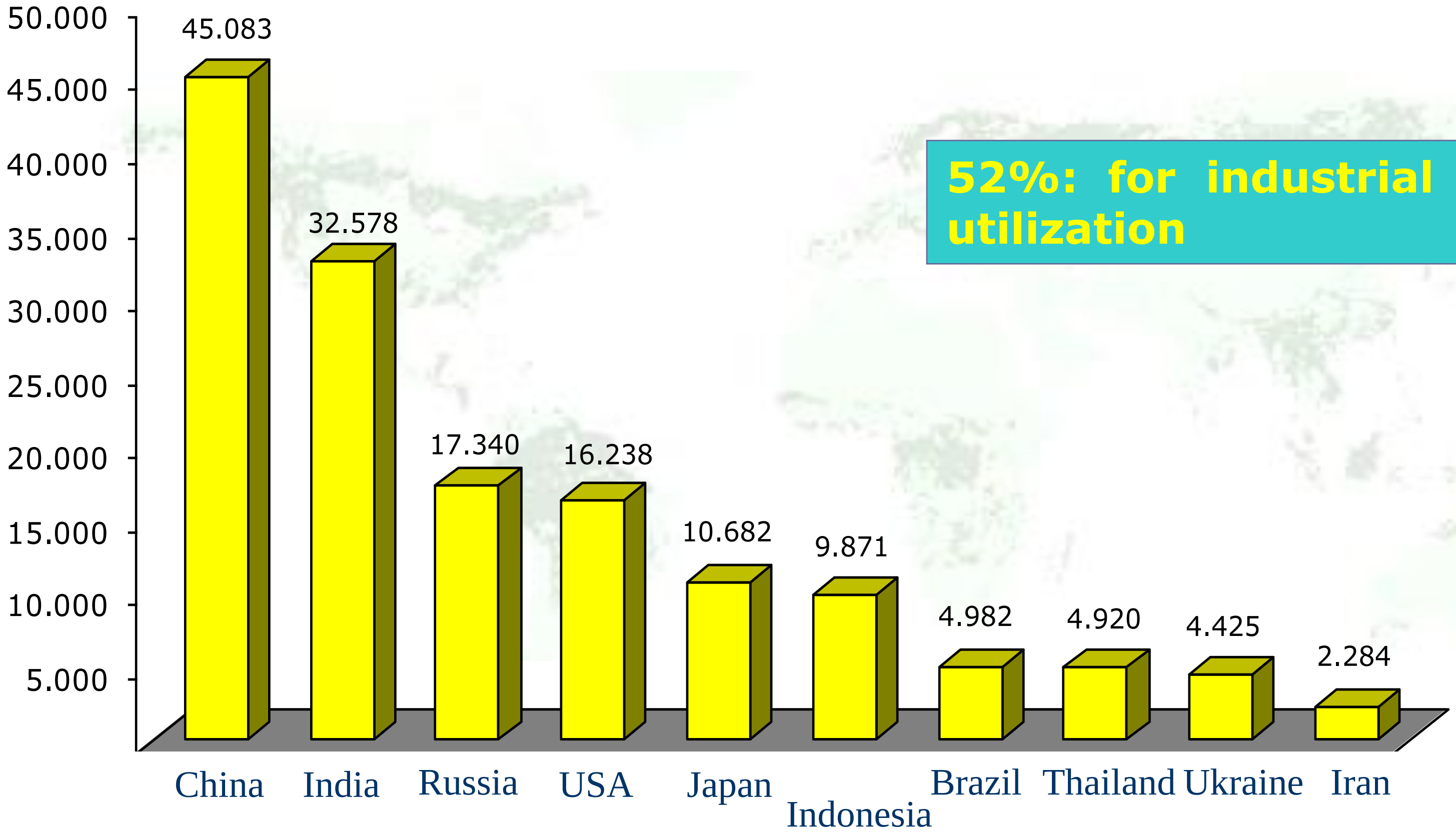
Pines

Low-cost wood
and
superior quality





Plantations: 187 million hectares worldwide



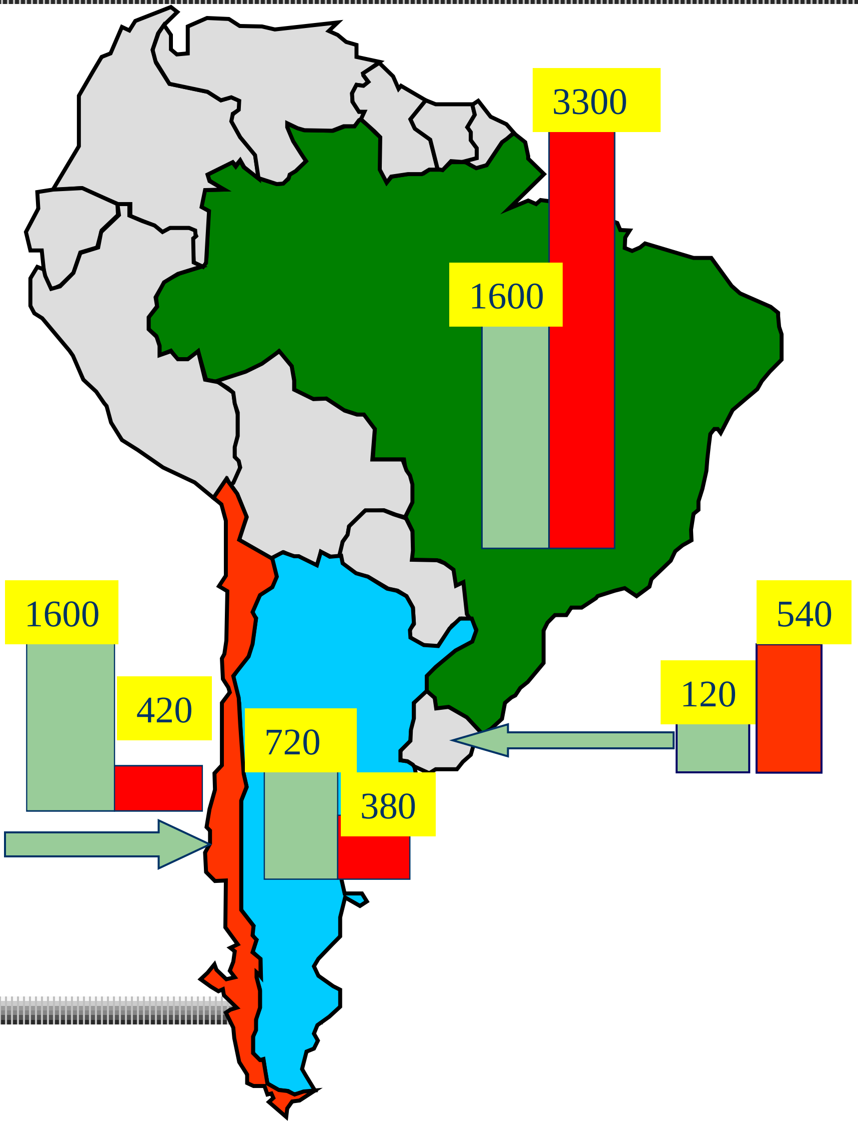
52%: for industrial utilization

Source: FAO

ABC & U plantation areas

In thousand hectares

Total: 11,880 ha
Softwoods (green): 4,040 ha
Hardwoods (red): 7,840 ha



World Market Pulp Supply and Demand Forecasts

- BHKP is increasing capacity at 3.8% / year, however demand grows up to 4.5% / year
- BSKP is increasing capacity at 1.9% / year
- Total market pulp demand growth expected to be 2.7% / year
- Latin America average growth in market pulp capacity is being 6 % / year in the long term.

Sources of data: BRACELPA, 2003 & PPPC, 2004

BSKP variable costs

	Chile	Sweden	Finland	US South	France/ Germany	Canada East	BC Interior	BC Coast	WORLD WEIGHT AV
Wood	99	246	276	142	270	204	134	134	173
Chemicals	35	36	40	37	44	45	47	50	41
Energy	9	16	8	21	14	21	42	45	24
Variable costs	**143**	**299**	**324**	**200**	**328**	**270**	**222**	**228**	**239**
Labour	18	50	43	58	56	74	66	104	59
Maintenance	8	19	16	19	20	35	23	35	22
Other mill costs	28	26	17	92	32	31	86	52	58
Fixed Costs	**55**	**95**	**77**	**168**	**108**	**140**	**175**	**192**	**139**
OPERATING COSTS fob mill	**198**	**394**	**401**	**368**	**436**	**410**	**397**	**420**	**378**
Ocean freight	45	16	35	59	25	60	79	63	52
Marketing & sales	9	18	8	21	11	5	8	8	13
TOTAL DELIVERED CASH COSTS cif	**253**	**427**	**444**	**448**	**472**	**475**	**484**	**491**	**443**

Source: Hawkins Wright , 2004

BHKP variable costs

US$/tonne	Brazil	Indonesia	US South	Portugal	Sweden	France/ Belgium	Canada East	Finland	Spain	WORLD WEIGHT A
Wood	71	102	128	188	212	178	158	243	219	132
Chemicals	28	17	37	59	40	60	30	38	41	33
Energy	10	14	23	6	19	13	24	2	11	14
Variable costs	**109**	**134**	**188**	**253**	**270**	**252**	**211**	**283**	**270**	**179**
Labour	8	13	40	49	51	65	50	41	49	30
Maintenance	12	13	31	22	15	14	23	16	19	18
Other mill costs	24	25	50	37	18	35	35	19	36	31
Fixed Costs	**44**	**52**	**122**	**107**	**84**	**113**	**108**	**77**	**104**	**79**
OPERATING COSTS fob mill	**153**	**185**	**310**	**360**	**354**	**365**	**319**	**360**	**374**	**258**
Ocean freight	44	37	53	18	17	17	73	38	26	43
Marketing & sales	17	12	10	5	19	11	7	8	15	12
TOTAL DELIVERED CASH COSTS cif	**214**	**234**	**373**	**383**	**390**	**393**	**399**	**406**	**415**	**313**

Source: Hawkins Wright , 2004

Eucalyptus market pulp in 2004

- Brazil .... 5.475 M tonnes
- Spain .... 1.235 M tonnes
- Portugal .... 0.925 M tonnes
- Chile .... 0.695 M tonnes
- Thailand .... 0.470 M tonnes
- South Africa .... 0.250 M tonnes
- Norway .... 0.185 M tonnes
- China .... 0.170 M tonnes
- Morocco .... 0.135 M tonnes
- New Zealand .... 0.055 M tonnes
- Others .... 0.050 M tonnes
- Total 9.645 M tonnes

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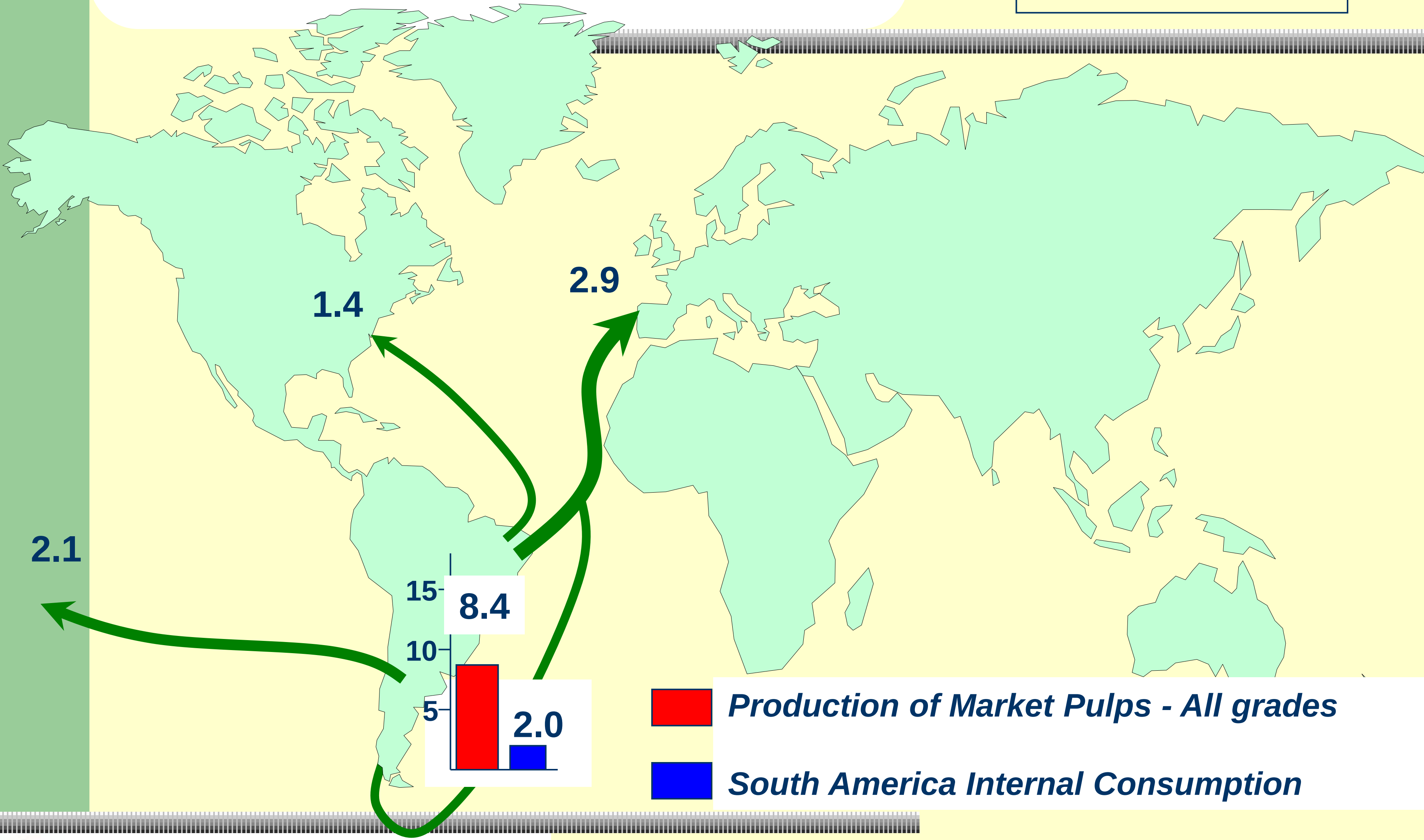
Source: PPPC, 2005

2004 South America Total Market Pulp

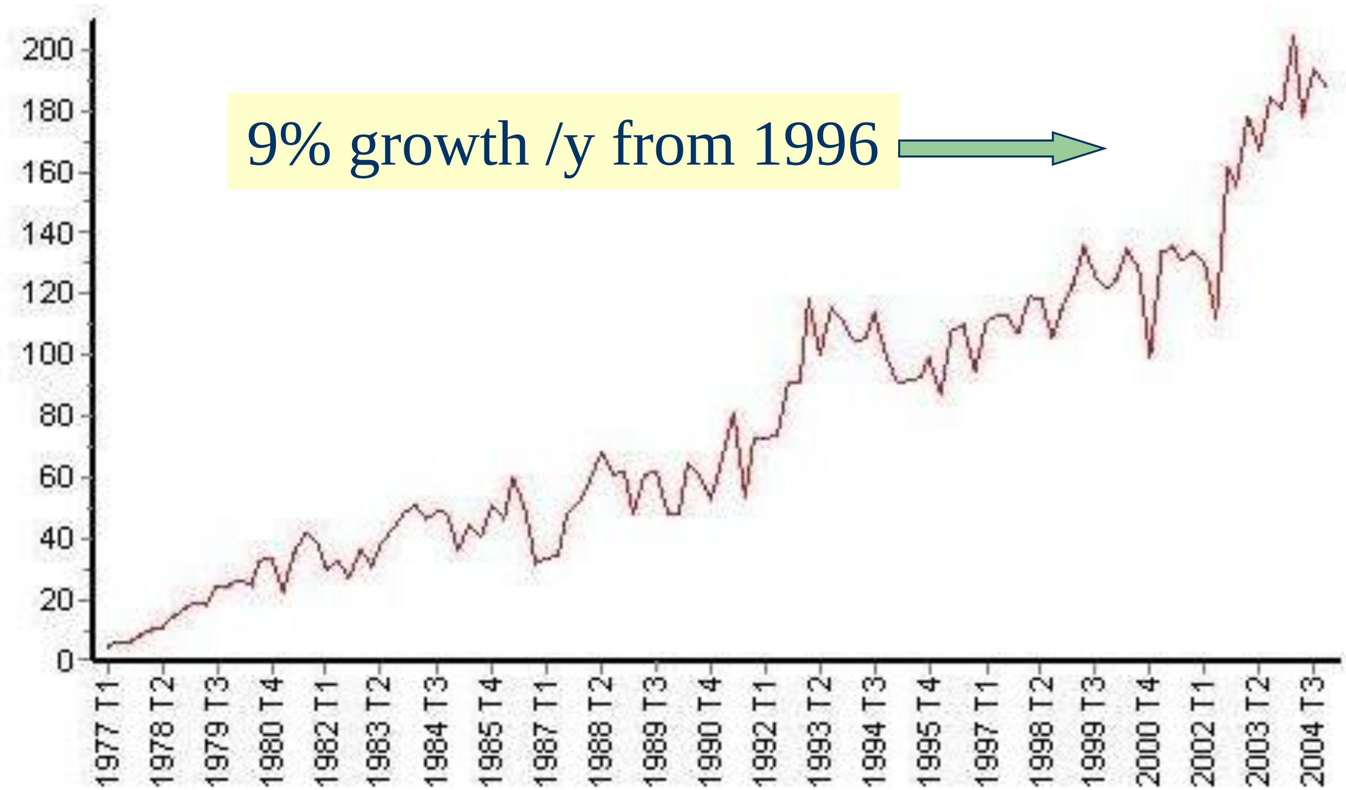
Million tonnes



BRAZIL

The B country

Growth

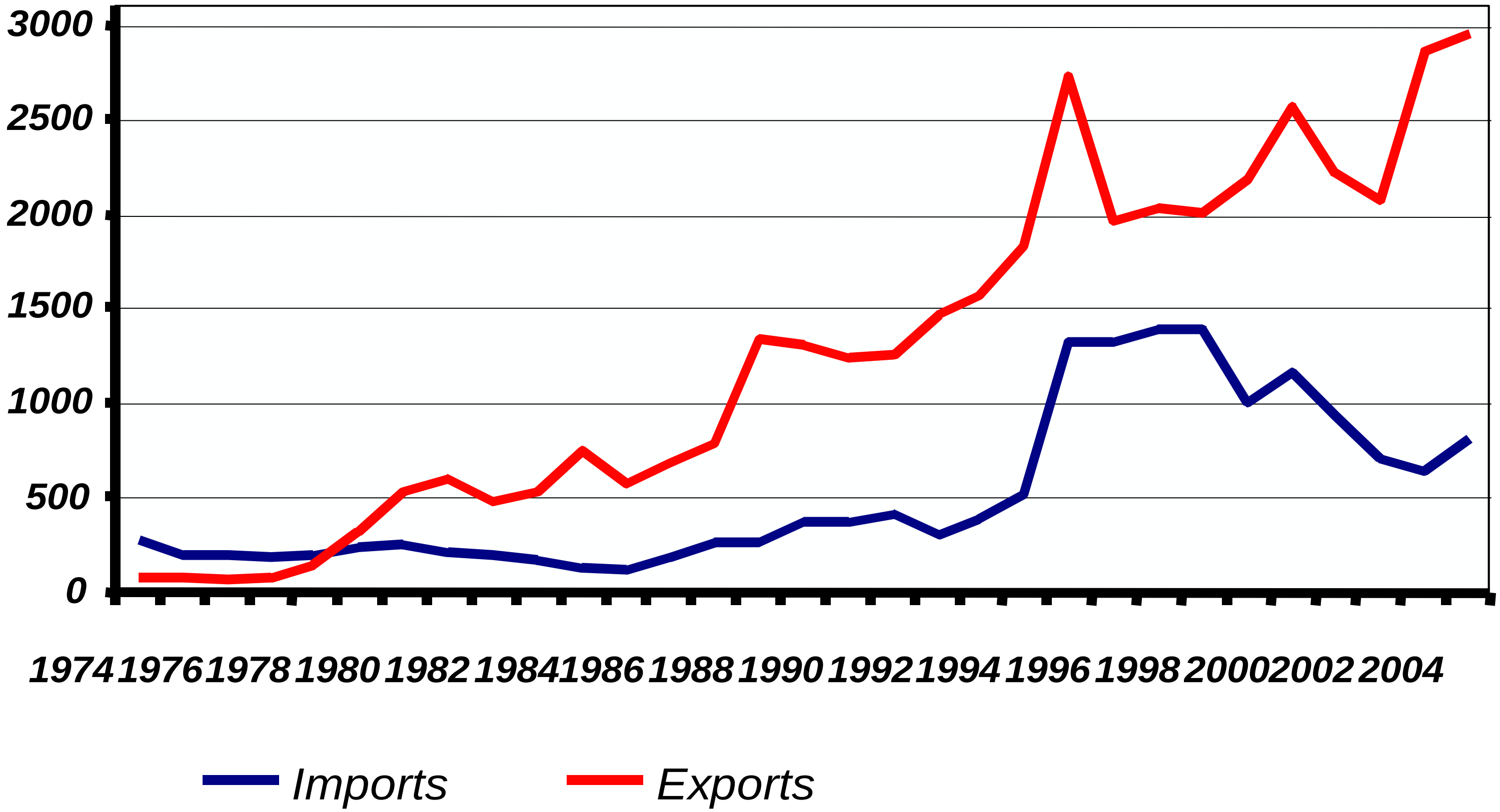


Brazilian P&P exports: 1996 = Index 100

Source: IPEA Data

Growth

Million US$



Brazilian P&P trade

Source: IPEA Data

Growth

Pulp Production Growth in Brazil

Year	Production (Million tonnes)
1970	0.7
1980	3.1
1990	4.5
2000	7.6
2004	9.1

5. 5 market pulp in 2004

Growth: 7.7% / year

BRACELPA - P & P expansion plan to Brazil

PULP	2002	2012	
	1000 t	1000 t	Growth %
•Production	8,000	14,500	81
• Exports	3,500	7,400	114

PAPER	2002	2012	
	1000 t	1000 t	Growth %
• Production	7,700	13,400	74
• Exports	1,400	2,000	43
• Country population (1,000)	176,000	190,000	
•Per capita consumption	38.2	50,0	32.0

Brazilian Investment Plan 2003-2012

	Pulp	Paper	Forestry	TOTAL
Total investments (US$ Billion)	7,3	5,2	1,9	14,4
Trade balance (US$ Billion)	21,5	8,9	-	30,4
New job generation (thousands)				60,7

CHILE

The C country

Chile

From 350,000 tonnes/y of pulp in 1970 to 3 million tonnes in 2004

From 300,000 hectares plantations in 1970 to 2.1 million ha in 2004

73% radiata pine

19% eucalyptus

Chile: “un país forestal”

From 35 million dollars exports in 1970 of forest products to 3 billion dollars in 2004 (40% is market pulp)

Eucalyptus wood availability will grow from today’s 4.7 million m^3 / year to 10 to 11 million m^3 em 2011

URUGUAY

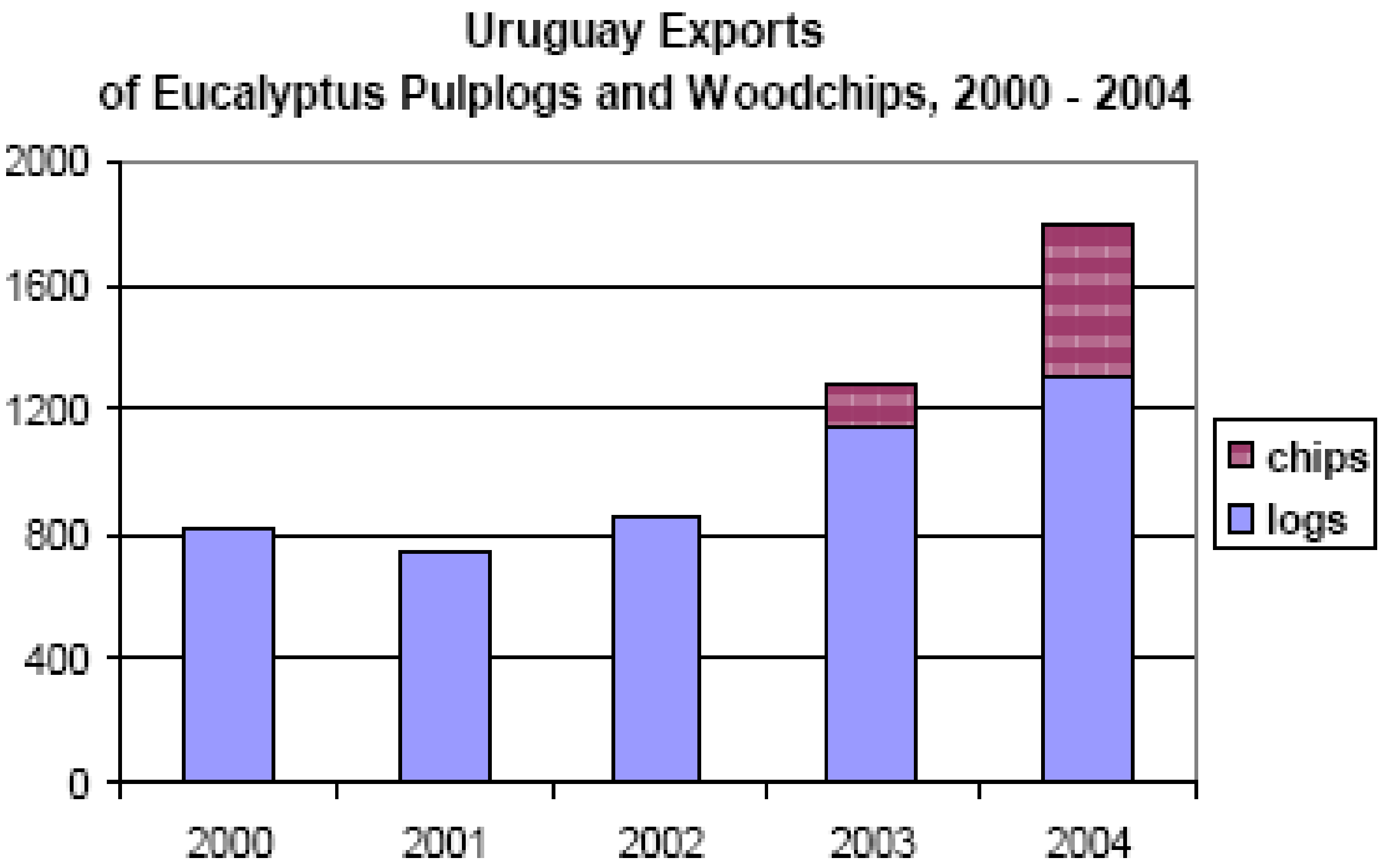
The U country

URUGUAY

Year	Wood Availability for Trade (Million m³)
1995	0.6
1996	0.7
1997	0.7
1998	0.8
1999	1.8
2000	1.9
2001	2.2
2002	4.0
2003	8.0
2004	7.8
2005	8.5
2007	9.8
2012	9.0

Uruguay

1,000 tons



Exports of wood for fiber processing

From South America:

1º ..... Chile : 2.9 million metric tonnes
2º ..... Brazil: 2.0 million metric tonnes
3º ..... Uruguay: 1,8 million metric tonnes
4º ..... Argentina: 1.7 million metric tonnes

Argentina

The A country

Argentina

2004 International Trade:

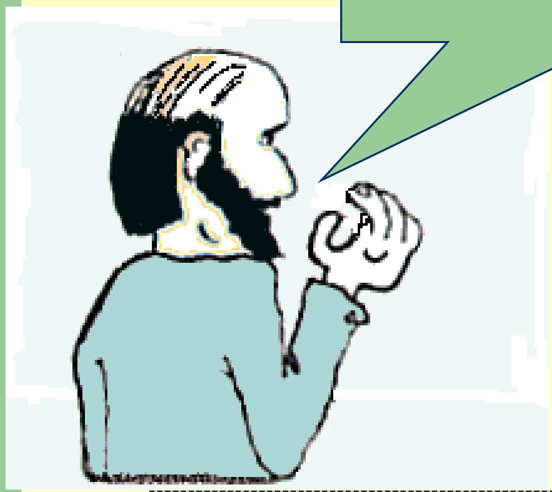
- Pulp exports: 260,000 tonnes (US$ 125 Million)
- Pulp imports: 127,000 tonnes (US$ 63 Million)

- Paper exports: 235,500 tonnes (US$ 260 Million)
- Paper imports: 628,000 tonnes (US$ 470 Million)

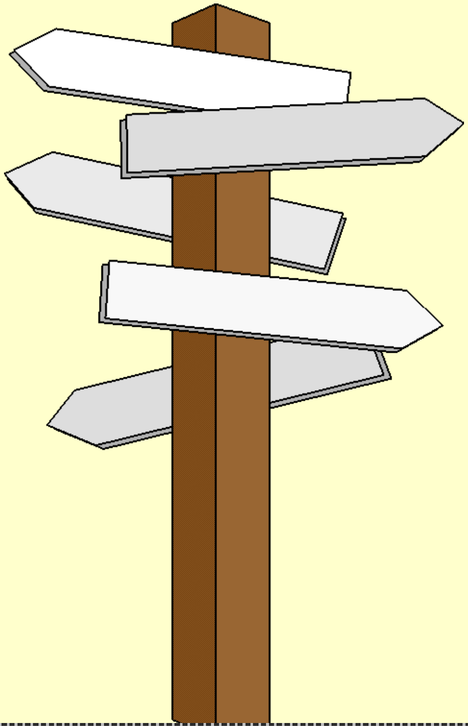
- Wood Exports: 250 Million US$

Source: AFOA, 2004

And now?



...and the next moves are...?



More market pulp possibly coming to the stream

- Argentina (growth based on foreign capital)
  - **Celulosa Argentina:** growth of Capitan Bermudez and Zarate mill productions to supply the internal market and/or owner company FANAPEL in Uruguay with “market pulp”
  - **Alto Parana** de-bottlenecking (?) or **Arauco** new plant in Argentina (?)
  - **CMPC** new pulp mill in the Corrientes province (?)

More market pulp possibly coming to the stream

- Brazil
  - **Aracruz** de-bottlenecking the Barra do Riacho mill (+125,000t/y) and Guaiba mill (+30,000t/y)
  - **VCP** adding extra capacity to the Jacarei mill (150.000 t/y) and planting eucalyptus to build a new facility till 2010 in Rio Grande do Sul (estimates of 1 million tonnes)
  - **Suzano Bahia Sul** adding a new plant in Mucuri/BA to raise eucalyptus market pulp from 532,000 to 1,544,000 t/y till 2008/2009. Paper growth will be modest (from 818,000 t/y to 861,000 t/y)
  - **Veracel** starting 2005 the state-of-the-art mill in Bahia with 900,000 t/y of eucalyptus market pulp

More market pulp possibly coming to the stream

- Brazil

  – **Cenibra:** a mill expansion plan has just been started from the today's 960,000 t/y to 1,160,000 t/y. Expected 2006/2007.

  – **Brancocel:** a project waiting the "go ahead", oriented to BCTMP from *Acacia mangium* (280,000 t/y) in Roraima

More market pulp possibly coming to the stream

- Brazil
  - **Ripasa**: a question-mark after taking over by VCP & Suzano, however it is certain to dry pulp to the market (about 250,000 t/y estimated 2006)
  - **Lwarcell;** expanding capacity from 120,000 t/y in 2004 to 180,000 in 2005 and 210,000 in 2006
  - **Jari:** de-bottlenecking and modernisation in the Monte Dourado mill to grow additional 60,000 t/y till 2008
  - **Bahia Pulp**: evaluating expansion of eucalyptus dissolving pulp capacity from 115,000 to 365,000 t/y till 2007/2008

More market pulp possibly coming to the stream

- Chile
  - **Arauco**: started its greenfield market pulp mill in Valdivia, manufacturing 700,000 t/y, being 60% radiata pine and 40% eucalyptus.
  - **Arauco:** Itata mill under construction. Start-up estimated to happen late 2006 / early 2007. Capacity 850,000 t/y (50% eucalyptus / 50% pine).
  - **CMPC:** a new line in Santa Fé is expected to run in 2006, adding 780,000 t/y of bleached eucalyptus pulp to the market
  - **CMPC:** some growth (90,000 t/y) is under evaluation to the Laja radiata pine kraft mill.

More pulp coming to the stream

- Uruguay
  - **Botnia** to build a large scale (~1 million t/y - 1.2 Billion dollars investment) eucalyptus pulp mill to start up in 2007/2008. Mostly of the pulp to be used by main owner UPM/Finland. The project has acquired Forestal Oriental/Shell, with close to 35,000 hectares of plantations.
  - **Ence** has approval to build a 480,000 t/y of eucalyptus market pulp (500 million dollars investment) in a forestry cluster processing lumber and also exporting wood chips.

More virgin market pulp coming till 2010 - 2012 (from ABC & U countries) ....

- Eucalyptus BHKP: 6,700 Thousand tonnes
- Pine: 685 Thousand tonnes
- BCTMP Acacia: 280 Thousand tonnes
- Dissolving pulp: 250 Thousand tonnes

Driving Forces for ABC & U countries

- Eucalyptus forests growth rates (average Brazilian main producers 45 m^3/ha.year and top clonal forests reaching 60 m^3/ ha.year)

- In Argentina Eucalyptus grow about 25-35 m^3/ha.year; in Uruguay 15 - 28 depending whether *E.globulus* or *E.grandis*; in Chile 20 - 35 also depending whether *E.globulus* or *E.nitens*)

- In Chile, *Pinus radiata* grows 30 m^3/ha.year; in Brazil, Uruguay and Argentina *Pinus taeda* has a growth of 20-30.

- Wood cost /ton of BK Pulp: US$ 65 - 90 (HW) ; 85 -120 (SW)

- Possibility of adding value along the forest base chain

Other Forces

- Competitive management
- Environmental awareness (IS0 14001, forest certification schemes: FSC and other local)
- 100% planted forests
- Excellent network and sources on the supplier side

International companies are also investing in South American wood-based projects

- Stora Enso
- Boise Cascade
- ENCE
- International Paper
- Norske Skog
- Weyerhaeuser
- Westvaco
- UPM
- Sateri
- ....and many others

Thanks and good luck

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