BRAZIL – WORLD-LEADING PRODUCER AND EXPORTER OF PULP AND PAPER

AN OVERVIEW OF THE BRAZILIAN PULP AND PAPER INDUSTRY

February 2016
São Paulo, Brazil
Brazilian industry is the world’s 4th largest in pulp production, and 9th in paper production

World-leading producer and exporter
High forest productivity
Developed industry

1.1% of Brazil’s GDP
BRL 61bn in 2014

- Exports grew 12.6% in 2014
- Pulp and paper industrial GDP is growing above Brazil’s GDP
- Brazil has a forest productivity higher than Sweden, US and China

Source: IBGE, IBÁ
BRAZIL IS A LEADING PRODUCER OF PULP AND PAPER WITH A HIGH FOREST PRODUCTIVITY
BRAZILIAN EUCALYPTUS HAS A SHORT ROTATION PERIOD OF 7 YEARS

### PULP PRODUCTION RANK

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Production (MT*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>57,42</td>
</tr>
<tr>
<td>2</td>
<td>China</td>
<td>18,88</td>
</tr>
<tr>
<td>3</td>
<td>Canada</td>
<td>17,29</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
<td>16,46</td>
</tr>
<tr>
<td>5</td>
<td>Sweden</td>
<td>11,50</td>
</tr>
</tbody>
</table>

### PAPER PRODUCTION RANK

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Production (MT*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>106,61</td>
</tr>
<tr>
<td>2</td>
<td>United States</td>
<td>72,88</td>
</tr>
<tr>
<td>3</td>
<td>Japan</td>
<td>25,12</td>
</tr>
<tr>
<td>4</td>
<td>Germany</td>
<td>22,10</td>
</tr>
<tr>
<td>5</td>
<td>Sweden</td>
<td>11,49</td>
</tr>
<tr>
<td>9</td>
<td>Brazil</td>
<td>10,40</td>
</tr>
</tbody>
</table>

### FOREST PRODUCTIVITY WORLDWIDE (HARDWOOD)

<table>
<thead>
<tr>
<th>Country</th>
<th>Currently</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>5,5</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>18,8</td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Australia</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Uruguay</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Brazil</td>
<td>41</td>
<td>70</td>
</tr>
</tbody>
</table>

TO SUPPLY A PULP PLANT OF 1,5 MT/YEAR CAPACITY, SWEDEN WOULD NEED A 720 000 HA FOREST WHILE BRAZIL WOULD NEED 140 000 HA

**SOURCE:** IBÁ
Brazilian manufacturers are leaders within the global pulp industry.

**COMPANY PULP PRODUCTION CAPACITY**
(Million Tons/Year)

- Mitsubishi
- Marubeni
- Altri
- International Paper
- Klabin
- ENCE
- Cenibra
- UPM
- APP/ Sinar Mas
- Stora Enso
- CMPC
- Arauco
- Suzano
- Eldorado
- RGE/ APRIL
- Fibria

**LARGEST BRAZILIAN PLAYERS IN REVENUE**

- **FIBRIA**
  - Net Revenue: 7 084
  - Forest Base: 969 thousand hectares
  - Headquarter: São Paulo
  - Focus: Eucalyptus Pulp

- **SUZANO**
  - Net Revenue: 7 265 MBRL
  - Forest Base: 897 thousand hectares
  - Headquarter: Bahia
  - Focus: Eucalyptus Pulp

- **KLABIN**
  - Net Revenue: 4 894 MBRL
  - Forest Base: 450 thousand hectares
  - Headquarter: São Paulo
  - Focus: Paper and Cardboard

**FIBRIA, SUZANO AND KLABIN ARE THE LARGEST PULP AND PAPER COMPANIES IN BRAZIL CONTROLLING 65% OF THE MARKET**

*Source: Pöyry 2014, Valor, Companies’ Websites*
BRAZILIAN PULP PRODUCTION GREW 37% FROM 2007-14
17 MILLION TONS OF PULP WERE PRODUCED IN 2014, OF WHICH 86% IS HARDWOOD

EXPORTS ARE STIMULATING THE PRODUCTION OF PULP, WHILE PAPER SUPPLIES MOSTLY THE DOMESTIC MARKET

* VERY HIGH YIELD (>95%). USED IN PRINTING PAPER
BRAZIL EXPORTS 64% OF ALL PULP PRODUCTION
THIS ACCOUNTS FOR 10 MILLION TONS OF PULP

PULP BALANCE OF TRADE (THOUSAND TONS)

EXPORTS DESTINATION AND MAIN PRODUCT, 2014

BRAZILIAN CURRENCY DEVALUATION WILL CONTINUE TO BOOST PULP EXPORTS IN 2016

SOURCE: IBÁ

* PAPER IMPORTS INCLUDE MAINLY: COATED PAPER OR PAPERBOARD (PRINTED, COLORED, DECORATED), NEWSPRINT AND PRINTING PAPERS.
EUCALYPTUS REPRESENTS 72% OF PLANTED AREA
PINUS REPRESENTS 22%

PLANTED AREA (ha) AND DESTINATION SEGMENT

<table>
<thead>
<tr>
<th>State</th>
<th>Eucalyptus</th>
<th>Pinus</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minas Gerais</td>
<td>1 400 232</td>
<td>39 674</td>
<td>5 313</td>
<td>1 445 219</td>
</tr>
<tr>
<td>São Paulo</td>
<td>976 186</td>
<td>123 996</td>
<td>90 147</td>
<td>1 190 329</td>
</tr>
<tr>
<td>Paraná</td>
<td>224 089</td>
<td>673 769</td>
<td>16 255</td>
<td>914 113</td>
</tr>
<tr>
<td>Mato Grosso</td>
<td>803 699</td>
<td>7 135</td>
<td>23 000</td>
<td>833 834</td>
</tr>
<tr>
<td>Bahia</td>
<td>630 808</td>
<td>6 499</td>
<td>34 000</td>
<td>671 307</td>
</tr>
<tr>
<td>Santa Catarina</td>
<td>112 944</td>
<td>541 162</td>
<td>6 645</td>
<td>660 751</td>
</tr>
<tr>
<td>Rio Grande do Sul</td>
<td>309 125</td>
<td>184 585</td>
<td>103 592</td>
<td>597 302</td>
</tr>
<tr>
<td>Others</td>
<td>1 101 570</td>
<td>12 177</td>
<td>309 569</td>
<td>1 423 316</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5 558 653</td>
<td>1 588 997</td>
<td>588 521</td>
<td>7 736 171</td>
</tr>
</tbody>
</table>

FORESTRY INDUSTRY IS LOCATED IN SOUTHERN STATES SUCH AS SÃO PAULO, PARANÁ AND SANTA CATARINA

SOURCE: ABRACELPA, IBÁ

LEGEND
- Pinus planted area
- Eucalyptus planted area
- Forestry industrial area

* MANAGEMENT GROUP THAT AIDS INSTITUTIONAL INVESTORS IN MANAGING THEIR TIMBERLAND INVESTMENTS
YET, BRAZILIAN PULP AND PAPER INDUSTRY FACES CHALLENGES REGARDING COST-EFFICIENCY

MAIN CHALLENGES FOR THE PULP AND PAPER INDUSTRY

**Costs**
- Brazilian forestry sector experienced a higher increase of costs (7.9%) compared to rest of Brazilian economy (6.4%) in 2014. Reasons involve energy and infrastructure high costs, besides a gap between labor productivity and salary increase

**Resources**
- Increase of energy cost and lack of water. Companies want to invest in efficient technology and reuse
- 67% of the energy used by industrial plants is produced within the sector. Main source is black liquor (70%)

**Infrastructure**
- Brazil presents low investments on infrastructure when compared to average global spending on infrastructure, which generates increase in the production cost

**Regulation**
- Both foreign companies and Brazilian companies with a majority share of foreign capital are limited on the land area they may acquire*
  - Companies need special approval from INCRA, a public entity responsible for acquisition of land

EXPENSIVE ENERGY, POOR INFRASTRUCTURE AND CONFUSING REGULATION ARE PROBLEMS SHARED BY MOST INDUSTRIES IN BRAZIL

*LAND ACQUISITION IS RESTRICTED ACCORDING TO LAW 6.634/79
IN 2014 INVESTMENTS HAVE FOCUSED ON EFFICIENCY AND CAPACITY EXPANSION

FOREST INVESTMENTS, 2014 (BBRL)

- Planting
- Machines & equipment
- Land acquisition
- Roadways
- R&D

Expansion of production capacity
- Forest production
- Industry

Investments 2012-2020

- Double the forestry base
- Increase the size of industrial facilities
- Construction of new plants

= 23 Billion USD

THERE ARE OPPORTUNITIES FOR SWEDISH COMPANIES SUPPLYING COST-EFFICIENT TECHNOLOGY FOR THE PULP & PAPER INDUSTRY

SOURCE: IBÄ, DESK RESEARCH AND INTERVIEWS
THE PULP AND PAPER INDUSTRY OFFERS GREAT OPPORTUNITIES FOR SWEDISH COMPANIES IN BRAZIL

**Investments**
- High investments focused on capacity expansion
- Investments grew 8% in 2013, against other sectors
- Investments in energy efficiency and reuse

**Players**
- Large producers, capable of investing
- Brazilian players among the most productive in the world

**Demand**
- Recent economic slowdown
- Lower commodities price on international market

**Market**
- Economic slowdown may affect investments
- Poor infrastructure for roads, energy, ports and airports, and high energy cost
- Increase of costs (inflation)

**Business in Brazil**
- Difficult and excessively bureaucratic regulations
- Complex tax system
- High import tariffs, besides other taxes

**What challenges should companies be ready to face?**
- Difficult and excessively bureaucratic regulations
- Complex tax system
- High import tariffs, besides other taxes

**Which opportunities make Brazil interesting?**
- Large production of pulp and paper, and large market
- Advantages: climate and land availability
- Recent growth of exports, mainly of pulp
- Devaluated currency is stimulating exports

LARGE AND GROWING PULP AND PAPER COMPANIES IN BRAZIL HAVE AN INCREASING DEMAND FOR TECHNOLOGY
OVERVIEW OF BUSINESS SWEDEN SERVICES

OUR INDUSTRY FOCUS

ICT
HEALTH CARE & LIFE SCIENCE
MATERIALS & MANUFACTURING
SECURITY
CREATIVE INDUSTRIES
ENERGY & ENVIRONMENT
TRANSPORT SYSTEMS

OUR CUSTOMERS

SWEDISH COMPANIES EXPANDING INTO BRAZIL
LOCAL SUBSIDIARIES OF SWEDISH COMPANIES
SWEDISH GOVERNMENT

OUR MARKET OFFERING

MARKET ENTRY STRATEGY
supplier SEARCH
MARKET ANALYSIS
IMPORT ANALYSIS
ACQUISITION SUPPORT
STAKEHOLDER MANAGEMENT
SOURCING ANALYSIS
BUSINESS SUPPORT OFFICE *
RECRUITING

OUR STRENGTH

EXPERIENCED TEAM WITH INDUSTRY FOCUS
UNIQUE OWNERSHIP PROVIDE ACCESS TO THE SWEDISH GOVERNMENT & FUNDING STRUCTURE
GLOBAL PRESENCE
LOCAL & SWEDISH PERSPECTIVE TO BUSINESS OPPORTUNITIES
ACCESS TO HIGH LEVEL AUTHORITIES & BUSINESS NETWORKS IN BRAZIL

* BSO SERVICES INCLUDE: OFFICE PLACE & SERVICE, ADMINISTRATION, COMPANY ESTABLISHMENT (INCL LEGAL ADDRESS), DELEGATE MANAGER AND FINANCIAL ANALYSIS
CONTACT US

BUSINESS SWEDEN IN BRAZIL

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