

By Thais Santi - Special para *O Papel*

## ASIA – CHAPTER 2



This issue presents chapter 2 of the new international series: The Sector around the World, introduced by *O Papel* magazine in the August 2016 issue. In this journey through the five continents, we first stopped in the Americas and have now landed in Asia. Next up, we will visit Europe and Africa, concluding our expedition with Oceania, in January 2017.

**A**fter visiting the pulp and paper sector in North and Latin America in Chapter 1, we now stop in Asia, the largest continent in the world with more than 44 million km<sup>2</sup> and a population of 4.4 billion inhabitants distributed in 48 countries and territories. Asia's forest area is also expressive: roughly 129 million hectares of planted forests, according to 2015 data published by the Food and Agriculture Organization of the United Nations (FAO).

The biggest economy in Asia is China, followed by India and Japan. According to FAO data, three main regions (North America, Western Europe and the developed region of Asia-Pacific) are the main producers and consumers of forest products, accounting for 23% of jobs generated in the sector, with 60% of production exported.

The developed region of Asia-Pacific expanded considerably over the last decade, thanks to its low cost of labor, abundant forest resources, economic growth, domestic demand, positive economic development policies and investments in the sector. With major GDP

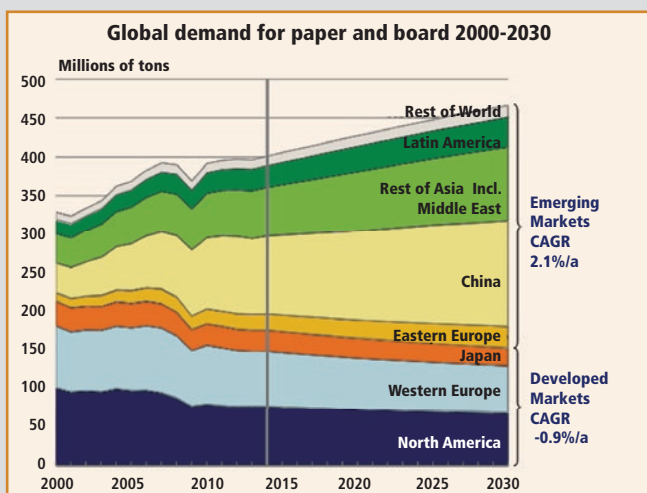
representativeness, Asia's pulp and paper market stands out with an annual production of 184.754 million tons of paper and 142.549 million tons of pulp, according to Pöyry data (2014).

Today, the biggest production capacity of paper and board in Asia is concentrated in China, Japan, India and Indonesia. The same occurs with pulp production, as shown in the graphs. It is important to point out that a large portion of paper production is to supply the internal market. Of total paper produced, only 11% was exported in 2015, and the region imported another 15% that same year to satisfy its demand.

With regards to pulp production, the Asian continent exported 8% to produce paper (virgin fiber, recycled fiber + non-wood fiber). At the same time, the continent imported 44% of pulp production to produce paper (virgin fiber, recycled fiber + non-wood fiber). With this, these figures represent the importance of the region for the global market, with 34% of production and 46% of the sector's global apparent consumption.



According to Manoel Neves, economic studies manager at Pöyry, a specialized consultancy contributing to The Sector around the World series, the region's growth perspectives will be responsible for 95% of pulp's incremental volume for paper production through 2030. **(See graph on global paper demand 2000-2030)** In this scenario, the three biggest producers of paper, board and pulp are: Asian Pulp and Paper (APP), OJI Holding Group and Nine Dragons. **(See details of each company in the "Top 3 – Asia" table and also read about capacity expansion projects through 2020 in the region)**



Source: Pöyry

### China

China's planted forest area totals 69.33 million hectares, which amounts to 36% of forests in the country. This industry is developing rapidly, generating a very diversified portfolio of products and services that range from wood and its panels, pulp, firewood, fungi and flowers to medicinal products, boosting the creation of jobs and local economic development.

In 2013, total production of China's forestry industry amounted to 4.46 trillion yuans. Forestry production is ranked #1 worldwide with 27 products, from bamboo and its products, to wood-based panels, paper, board and resin, totaling US\$126 billion in trade. *(Reference: Forestry in China report published in 2014 by the State Forestry Administration of the People's Republic of China)*

### Japan

In Japan, two-thirds of its area are forests, totaling 25 million hectares, of which 40% is planted. Inventories, which have increased roughly 100 million m<sup>3</sup> per year, now total roughly 4.9 billion m<sup>3</sup>, according to the country's Annual Planning Report of the Ministry of Agriculture, Forests and Fishing (MAFF).

According to the Japan Paper Association, the pulp and paper industry employs 182 thousand workers. Pulp and paper shipments, including conversion in 2014, yielded 7 trillion yens, accounting for 2.3% of the entire manufacturing industry.

Japan is the third biggest producer of paper and board, next to China and United States, with its industry oriented at satisfying domestic demand. In 2015, exports and imports totaled 1.358 million tons and 1.551 million tons, respectively.

### India

India's paper industry is responsible for roughly 3% of global production. The estimated business volume of this industry amounts to roughly US\$8 billion, generating approximately 500 thousand direct and 1.5 million indirect jobs.

According to data from the Indian Paper Manufacturers Association (IPMA), the country utilizes a variety of raw materials, such as wood, bamboo, recycled fiber, bagasse, wheat straw and rice husk, among others. In terms of share in total production, approximately 24% is wood-based, 65% is recycled fiber and 11% is agricultural waste. It is one of the fastest-growing paper markets in the world, in consonance with its economic growth.

### Indonesia

Indonesia has the eighth largest tropical forest area in the world (behind Brazil and the Democratic Republic of the Congo) and the largest forest area in Southeast Asia. Roughly 52% of its territory is covered by forests, according to FAO data. The total area amounts to 110 million hectares, of which 60% are permanent preservation areas.

Indonesia's pulp and paper industry contributes roughly 1.2% to the country's GDP and around 6% of industrial production, employing approximately 250,000 people directly in production operations and accounting for 5.5% of the country's exports.





## Top 3 Asia Producers of Paper and Board + Market Pulp

	OJI (Annual Report 2014/2015)	Nine Dragons (Annual Report 2014/2015)	APP (Annual Report 2014/2015, company website and Economic Contribution of Indonesia's Forest Base Industries study – ITS Global)
<b>Description of company</b>	Founded more than 140 years ago, the OJI Group has always been the leading pulp and paper industry in Japan	Established in 1998 in China, by a couple of business people who already exported wastepaper from the USA to China, Nine Dragons became the biggest paper producer worldwide, using wastepaper from different parts of the globe	The APP Group was created in 1972 with the founding of its first company Tjiwi Kimia, which was initially a caustic soda producer. At present, it has operations in Indonesia and China, being one of the main pulp and paper producers in the world
<b>Products</b>	Containerboard, boxboard, packing paper, corrugated containers, folding cartons, paper bags, tissue, specialty papers, pulp, forestry products, newsprint, printing/communication paper	Kraftlinerboard, testlinerboard, high performance corrugating medium, white top linerboard, coated linerboard, coated duplex board, printing and writing	Food packaging, kraft premium papers, printing and writing, tissue, office and school products
<b>Production</b>	2.4 million tons of pulp	13 million tons of paper, distributed among all products	19 million tons between pulp, paper, packaging and conversion
<b>Forest base/raw material</b>	190 thousand hectares of planted forests in Japan and another 280 thousand in other countries: Cambodia, Indonesia, Vietnam and Laos, being responsible for generating 100% of raw material used in plants	95% of raw material used comprises wastepaper imported from various parts of the world. The other 5% corresponds to pulp purchased in the market	100% of the wood used to produce pulp is purchased from planted forests owned by Sinar Mas Forestry, which also belongs to the APP Group. Sinar Mas Forestry's forest base amounts of approximately 2.3 million hectares
<b>Global footprint (plants)</b>	14 countries	China	Indonesia and China
<b>Production units</b>	46	6	7
<b>Employees</b>	33,688	17,000	37,589

(Source: Pöyry, april/2016)



**ASIA (48 COUNTRIES AND TERRITORIES)**

**Forest area:** 593 million ha

**Planted forests:** 129 million ha

(FAO, 2015)

**Paper Production:** 184.754 thousand t/y

**Total Pulp Production:** 142.539 thousand t/y

**Virgin Fiber Pulp Production:** 29.566 thousand t/y

(Pöyry, 2014)



**Production Capacity in Asia – Paper and Paperboard - 2016**

Rank	Country	Capacity 1,000 t/y	%
1	China	129.160	56
2	Japan	32.377	14
3	India	15.952	7
4	Indonesia	12.856	6
5	Korea	11.629	5
6	Taiwan	5.769	2
7	Thailand	5.560	2
8	Turkey	5.056	2
9	Vietnam	2.342	1
10	Malaysia	2.159	1
	Subtotal:	222.860	97
	Others:	7.920	3
	Total:	230.780	100

Source: Pöyry

**Production Capacity in Asia – Total Pulp - 2016**

Rank	Country	Capacity 1,000 t/y	%
1	China	29.202	40
2	Japan	19.119	26
3	Indonesia	8.357	12
4	India	5.954	8
5	Korea	3.007	4
6	Thailand	1.450	2
7	Vietnam	831	1
8	Taiwan	802	1
9	Malaysia	608	1
10	Iran	585	1
	Subtotal:	69.915	97
	Others:	2.283	3
	Total:	72.198	100

Source: Pöyry

**Production Capacity in Asia – Market Pulp - 2016**

Rank	Country	Capacity 1,000 t/y	%
1	China	7.512	54
2	Indonesia	3.520	25
3	Japan	1.409	10
4	Thailand	295	2
5	Vietnam	264	2
6	Korea	230	2
7	Malaysia	150	1
8	India	135	1
9	Taiwan	80	1
10	Myanmar	70	1
	Subtotal:	13.665	99
	Others:	172	1
	Total:	13.837	100

Source: Pöyry

**Capacity Expansion Projects in Asia (through 2020)**

Company	Country	Segment
PT OKI/APP	Indonesia	Pulp
Vietracimex	Vietnam	Pulp
Chenming	China	Pulp
April Fine Paper	China	P&W
UPM	China	P&W
Sun Paper	China	P&W
Hubei Long Chen Paper	China	Packaging
Shandong Sun Honghe Paper	China	Packaging
Cheng Yang Paper Mill	Vietnam	Packaging
Zhanjiang Chenming Paper Pulp	China	Packaging
Guangxi Stora Enso Forest	China	Paperboard
Henan Xinxiang Xinya Paper	China	Paperboard

Source: RISI

**Note:** RISI, the top provider of information about the pulp and paper market, and contributor to *O Papel* magazine's The Sector around the World series, offers reports, databases and studies with detailed information about these projects, which can be accessed at <http://www.risiinfo.com/>

