

ABTCP SUPPLIERS & MANUFACTURERS GUIDE 2026/2027¹

THE PULP AND PAPER INDUSTRY IN BRAZIL

Pulp and Paper Market Overview

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Scan the QR code to access the infographic Overview of Brazil's Pulp and Paper Industry (2025-2026 edition)

Global Trends

Demographic trends, such as urbanization and middle-class growth, are driving global demand for pulp, while political instability is increasing uncertainty and affecting international trade. Environmental concerns and consumer preferences for recyclable materials are supporting growth in forest-based industries, including the pulp industry.

DEMOGRAPHIC TRENDS Population growth, middle-class expansion, and urbanization are increasing demand for pulp.	GEOPOLITICAL TRENDS Geopolitical tensions and developments involving major powers such as the United States, Russia, and China, as well as the Middle East and regional conflicts, may increase risk.
IMPACT ON GLOBAL PULP MARKETS Increasing urbanization and middle-class expansion are strongly correlated with rising incomes, which, together with population growth, generate greater demand for pulp across a range of end uses. Population growth alone does not necessarily translate into increased pulp demand; it must be accompanied by an increase in consumers' purchasing power.	IMPACT ON GLOBAL PULP MARKETS Intensifying competition for influence has fueled geopolitical tensions and created a more volatile and unpredictable operating environment for the pulp industry. Unexpected policy changes in the United States, China, and the European Union can quickly affect trade flows and global pulp inventories.

Global competition has shifted economic power toward emerging regions, while product sustainability remains a key consideration for consumers.

ECONOMIC TRENDS Global economic growth, combined with increased manufacturing activity and consumption in emerging regions.	CONSUMER TRENDS Changes in consumer behavior, including increased environmental awareness, are creating demand for pulp.
IMPACT ON GLOBAL PULP MARKETS Demand for pulp and paper is increasing particularly in regions experiencing industrialization and in emerging markets. Increased manufacturing activity and rising wealth in emerging regions are translating into growing demand for packaging and hygiene products.	IMPACT ON GLOBAL PULP MARKETS Demand for pulp-based products is increasing. E-commerce and food delivery services are creating demand for new packaging solutions. Despite growing environmental awareness, the trend toward overconsumption continues.

Growing environmental awareness and technological advances are accelerating the shift from plastics to pulp-based materials.

ENVIRONMENTAL TRENDS Climate change is becoming increasingly evident, with extreme weather events occurring more frequently.	TECHNOLOGICAL TRENDS Digitalization is reducing the need for printing while enabling faster production and improved quality.
IMPACT ON GLOBAL PULP MARKETS Demand for renewable and recyclable solutions, including fiber-based packaging, is increasing, driven by growing environmental awareness. Greater corporate transparency is also required.	IMPACT ON GLOBAL PULP MARKETS Digitalization is putting pressure on print media and printed products, as reflected in declining consumption of printing and writing papers. At the same time, digitalization enables faster production and improved quality. Innovative barrier solutions will continue to be researched and developed.

¹ This overview presents consolidated or preliminary annual data through 2025, supplemented by information available through August 2026. Projections beyond 2026 are estimates and are subject to revision.

According to the latest projections from the United Nations (UN), the world population is expected to continue growing over the coming decades, with most of this growth concentrated in Africa and Asia. The combination of population growth, urbanization, and rising incomes is expected to drive demand for hygiene products, packaging, and other pulp-based materials. Against this backdrop, the global urban population is projected to increase by approximately 2.5 billion people, with most of this expansion occurring in Asian and African countries. Across these continents, birth rates are generally expected to remain positive while life expectancy continues to rise, contributing both to population growth and to the strengthening of domestic markets.

Currently, approximately 56% of the world's population lives in urban areas, a share projected to reach 68% by 2050. Urbanization increases the generation of recyclable waste and raises paper recovery rates, creating favorable conditions for production facilities located near densely populated urban centers.

Population growth alone, however, does not guarantee market expansion, as it also depends on increased purchasing power.

As incomes rise, households tend to allocate a larger share of their spending to travel, dining out, branded products, and more sophisticated services, while also increasing demand for hygiene products and more sophisticated packaging.

Expansion of the middle class in developing economies is expected to stimulate demand for hygiene products, packaging, and higher-value-added goods. World Data Lab estimates indicate that 106 million new consumers will join the global middle class by 2030, adding US\$2 trillion to global consumption. A study by Visa in partnership with

Oxford Economics concluded that more than half of global consumption growth over the next decade is expected to be driven by middle-class expansion, particularly in emerging markets, with significant implications for demand for more sophisticated products, health and hygiene products, and sophisticated packaging.

Economic overview

The global economy is currently facing challenges associated with escalating trade tensions, geopolitical fragmentation, and heightened policy uncertainty. This environment reduces the predictability of the economic outlook and pulp markets, which remain subject to factors such as:

- Geopolitical disputes with the potential to disrupt global supply chains;
- The strengthening of globalization or deliberate moves toward deglobalization;
- Exchange-rate volatility and its impact on terms of trade;
- Advancing sustainability agendas and regulatory changes, with potential impacts on demand for forest products;
- Greater instability in currency exchange rates;
- Global stability, amid unpredictable actions by Russia and tensions in the Middle East;
- Structural changes in China's economy, including slower gross domestic product (GDP) growth, an aging population, and the transition from an export-oriented model toward domestic consumption, hampered by cautious consumer spending and a slowdown in the infrastructure sector; and
- The continued evolution of digitalization and structural changes in the communications sector.

Most central banks in both advanced and emerging economies entered 2026 taking a cautious approach

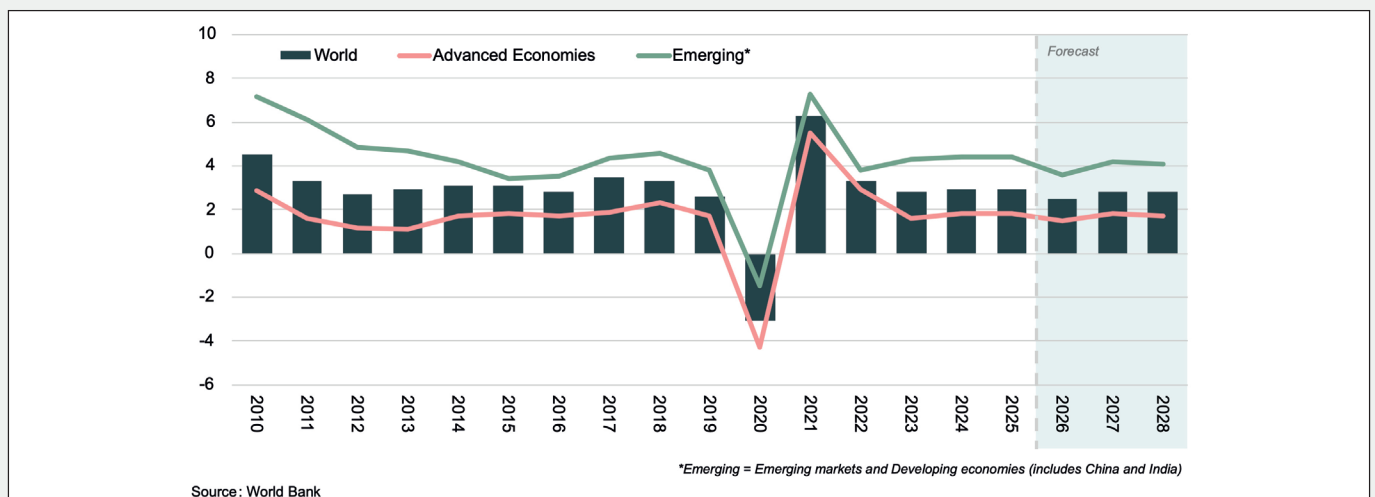


Figure 1. Contribution to global growth (2010–2028e)

to monetary policy amid persistent disruptions, with significant pressure on energy commodity and fertilizer prices as a result of the closure of the Strait of Hormuz.

The World Bank projects global growth to accelerate from 2.5% in 2026 to 2.8% in 2027 and 2028, supported by easing energy commodity prices, lower inflationary pressures, and the normalization of trade flows.

Ongoing armed conflicts, economic fragmentation, extreme weather events, and rising protectionism are factors that could alter the projected outlook.

Protectionism and the reorganization of trade flows

U.S. tariff policy has become an additional source of uncertainty for international trade in pulp, paper, and converted products. The effects on Brazil's industry, however, vary across segments. Bleached hardwood market pulp, Brazil's leading pulp export, was spared the highest additional tariffs, reflecting its importance as a raw material for U.S. tissue production. Certain grades of paper, cartonboard, and dissolving pulp, on the other hand, remain more exposed to the tariff measures, with potential impacts on margins, export volumes, and commercial strategies.

The additional tariffs imposed by the U.S. government on Brazil took effect on July 22, 2026, and remained applicable to the paper industry's affected segments in September 2026. The measures combine an additional 25% tariff imposed under Section 301 following a U.S. investigation into Brazilian policies related to payment services, including Pix,

ethanol, e-commerce, preferential tariffs, anti-corruption enforcement, intellectual property, and deforestation, with an additional tariff of up to 12.5% which the U.S. government based on allegations concerning forced labor in global supply chains. The Brazilian government has challenged the grounds for and proportionality of these measures, maintaining that the policies in question are consistent with Brazilian law and the country's international commitments. Depending on the product and its tariff classification, the combined additional tariffs may reach 37.5%.

Effective tariff rates vary according to the product, tariff classification, and the applicable U.S. measure. Accordingly (Table 1), the impacts should be assessed individually for market pulp, dissolving pulp, paper, cartonboard, and converted products.

In addition to their direct effects, U.S. tariffs may alter the competitive position of U.S. suppliers and redirect products to other markets. Greater restrictions on Chinese products entering the United States, combined with the expansion of Asian production capacity, are likely to intensify the search for alternative markets. In Brazil, this trend is increasing competition in segments such as printing and writing papers, cut-size paper, coated papers, specialty papers, and cartonboard, potentially putting pressure on prices, margins, and the country's industrial capacity utilization rates.

Against this backdrop, Brazilian producers have requested that the government adopt trade defense measures, including temporary increases in import

Table 1. Impacts of the U.S. Tariff Policy on Brazil and in the United States

Indicator / Segment	Impact on Brazil	Impact on the United States
Bleached Hardwood Pulp (BHKP)	Largely unaffected. Shipments remain stable, with no additional tariffs imposed.	Supply remains secure for tissue manufacturers.
Dissolving Pulp	Margins under pressure, reducing competitiveness relative to global competitors.	Industrial input costs for chemical and textile applications increased by approximately 25%.
Packaging Papers / Cartonboard (Cartonboard / HS 4810)	Significant pressure on the domestic market. The closure of the U.S. market to Chinese products redirected large volumes of Asian cartonboard into Brazil at low prices. Ibá has petitioned Gecex to raise import duties to 35% to safeguard the margins of local converters.	Higher supply chain costs. Packaging manufacturers and converters face rising costs for cartonboard and corrugated packaging, while food producers and retailers experience inflationary pass-through effects across the distribution chain.
Printing & Writing Papers (Graphic Papers / Cutsize / Coated Papers)	Sharp increase in imports, with concerns over dumping practices. Imports of cutsize papers (A4/A3 sheets) and coated papers from China surged by 160% in volume. The industry has petitioned the Ministry of Development, Industry, Trade and Services (MDIC) for tariff increases to 30%-35%, as well as investigations and the possible imposition of anti-dumping duties if dumping, injury, and causation are established.	Market disruption. Printers and publishers have reduced sourcing from China due to tariff surcharges, leading to localized supply bottlenecks and a need to secure alternative suppliers, particularly in Europe.
Logistics / Agribusiness Supply Chain	Indirect reduction in demand for corrugated packaging as a result of trade barriers affecting agribusiness exports.	Inflationary pressure on imported consumer goods using Brazilian packaging.

Source: AFRY

tariffs and the initiation of antidumping investigations. These instruments are distinct in nature: tariff increases are intended to address significant increases in imports, while an antidumping investigation must establish the existence of dumping, injury to the domestic industry, and a causal link between the two before additional duties may be imposed. In the segment of decorative paper originating in China, an investigation initiated in June 2025 resulted in a preliminary affirmative determination of dumping and injury to the Brazilian industry, but without a recommendation to impose provisional antidumping duties as of the latest stage reported.

For Brazilian producers, the overall impact is likely to vary depending on their product portfolios and exposure to the U.S. market. Companies focused on market pulp remain relatively protected, while manufacturers of paper and specialty grades face greater exposure to U.S. tariffs and competition from products redirected from other markets. In this environment, commercial flexibility, geographic sales diversification, innovation in higher value-added products, and the judicious use of trade defense instruments are becoming increasingly important risk-management components.

We are navigating a new regulatory environment. Recent U.S. tariff measures introduced new challenges into the global supply chain, requiring the Brazilian industry to adapt its commercial strategies rapidly.

Global pulp market

Global demand for bleached hardwood kraft pulp (BHKP) reached approximately 43 million metric tons in 2024. Growth has been driven primarily by the expansion of tissue production, lower availability of white recovered paper, and the increasing use of hardwood fibers in the production of cartonboard and packaging papers, applications that have traditionally relied more heavily on softwood fibers. These trends have spurred significant investment in new production capacity over the past decade.

Between 2026 and 2035, global demand for BHKP is expected to continue growing, with Asia and North America making the largest contributions to growth. Latin America and Asian countries, excluding China, account for the main exportable surpluses, primarily earmarked for the Chinese, European, and North American markets.

China will continue to play a key role in these dynamics. Since 2021, the decline in Chinese imports of recovered paper has altered the country's fiber mix. Some of the recovered paper previously destined for the Chinese market has been redirected to countries such as India, Indonesia,

and Thailand, while China's domestic industry has increased its use of domestically recovered materials and virgin fiber. Despite improvements in domestic collection, recovered volumes have not yet fully offset the drop in imports. At the same time, China has expanded its integrated pulp production capacity in recent years.

The search for more competitive raw materials has also encouraged the partial substitution of BSKP with BHKP, including in the production of paper grades that traditionally relied exclusively on softwood fibers. This trend particularly benefits eucalyptus pulp used in the production of tissue, cartonboard, and packaging papers, although the expansion of integrated pulp production in China poses a risk to growth in international trade.

In the short term, the global pulp market continues to face a challenging environment. Between 2023 and the first half of 2026, slowing demand, excess supply, cost pressures, and heightened uncertainty required adjustments to production and investment. Over the longer term, however, the outlook remains positive, supported by population and income growth in developing countries, rising per capita consumption, the replacement of fossil-based materials, and demand for hygiene products and sustainable packaging. The development of cellulosic textile fibers is also expected to expand the market for dissolving pulp.

Consumption by region

In 2025, the global consumption of pulp used in paper production, excluding fluff pulp and dissolving pulp, was estimated at approximately 180 million metric tons. China accounted for approximately 52.3 million metric tons, or 29% of the total, followed by North America at 44.2 million metric tons. Western and Eastern Europe combined accounted for approximately 24%.

China and India are expected to remain important

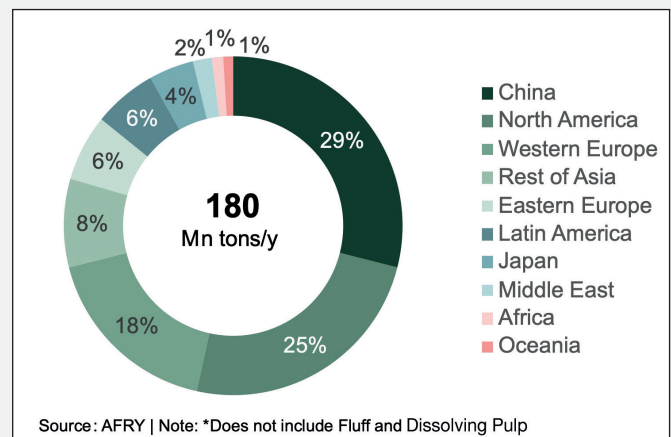


Figure 2. Pulp consumption for paper by region (2025)

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drivers of long-term growth. However, the concentration of incremental consumption in these markets increases the industry outlook's exposure to the economic performance and investment decisions in the region.

Industry concentration and leading producers

Latin America is the leading producer of paper-grade market pulp and the world's largest supplier of BHKP. This concentration largely reflects the location of fiber resources, the need for export logistics infrastructure, and the substantial investment required to build globally competitive mills. In 2025, Latin America accounted for approximately 37% of global paper-grade market pulp production and more than 60% of total BHKP production.

The four largest producers account for approximately 34% of production capacity, while the ten largest account for approximately 56% of global capacity. This concentration largely reflects the geographic location of fiber resources, the

need for export logistics infrastructure to serve consumer markets, and the substantial investment required to build a modern, competitive pulp mill at scale. The ten largest pulp producers are shown in **Figure 3**, while **Figure 4** shows the pulp grades produced by these companies.

Globalization has had a significant impact on the pulp and paper industry, driving increased investment in developing countries.

Global paper market

Urbanization is closely associated with waste generation, benefiting paper industries that rely on recovered paper in their production processes. Paper recovery rates tend to be higher in urban areas, leading to a growing number of production facilities located closer to densely populated areas.

Over the past decade, paper consumption has followed different trends across regions: growth has been more modest in North America, Europe, and Japan, and more

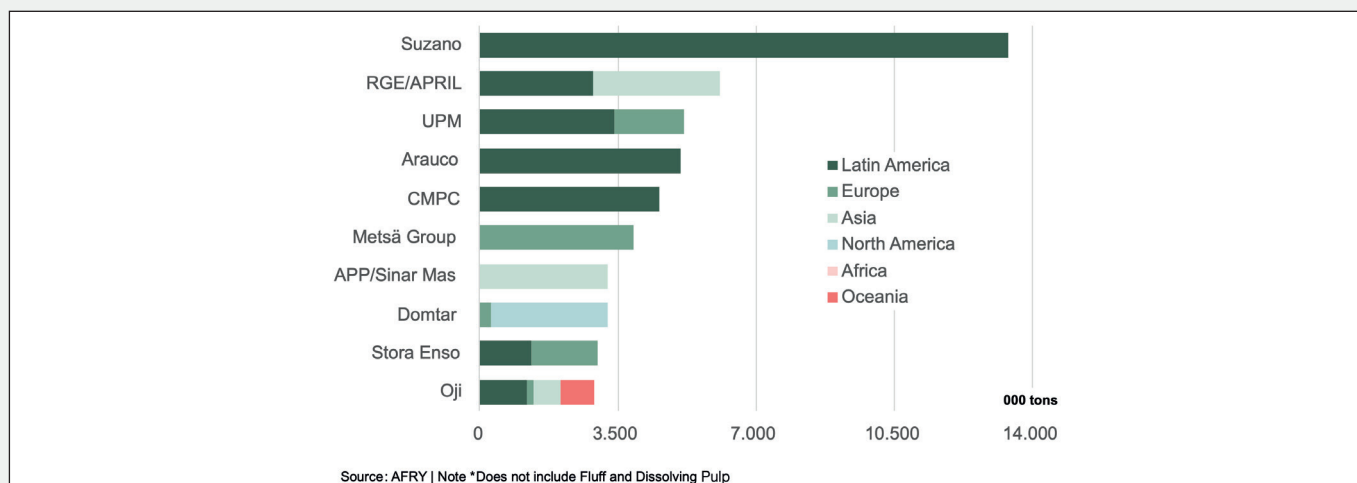


Figure 3. Top 10 global producers of paper-grade market pulp (country and company)

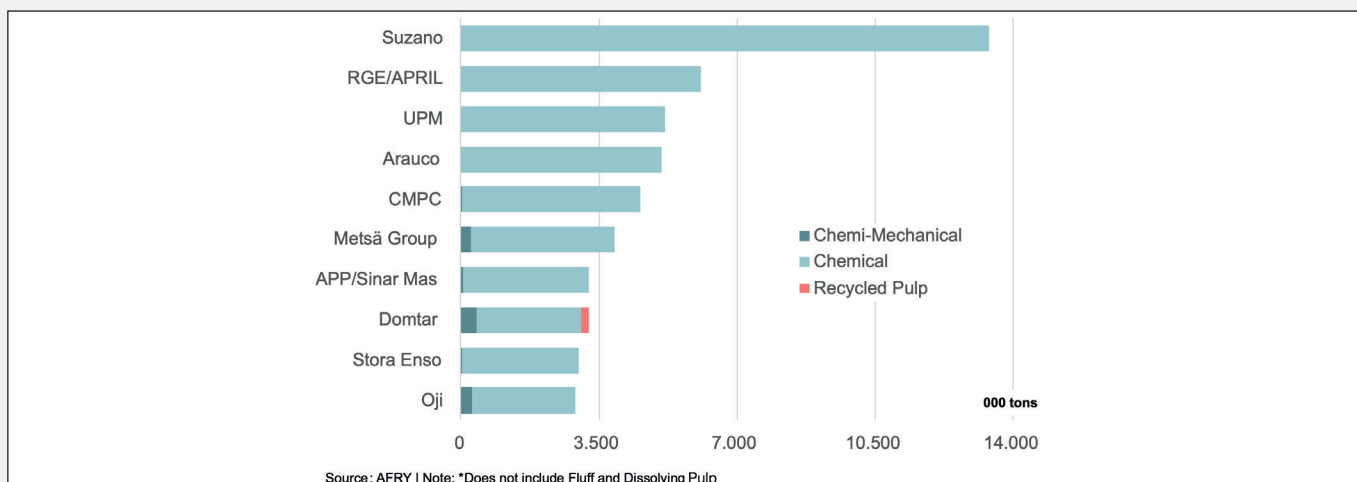


Figure 4. Top 10 global paper-grade market pulp producers by pulp grade

SECTOR OVERVIEW

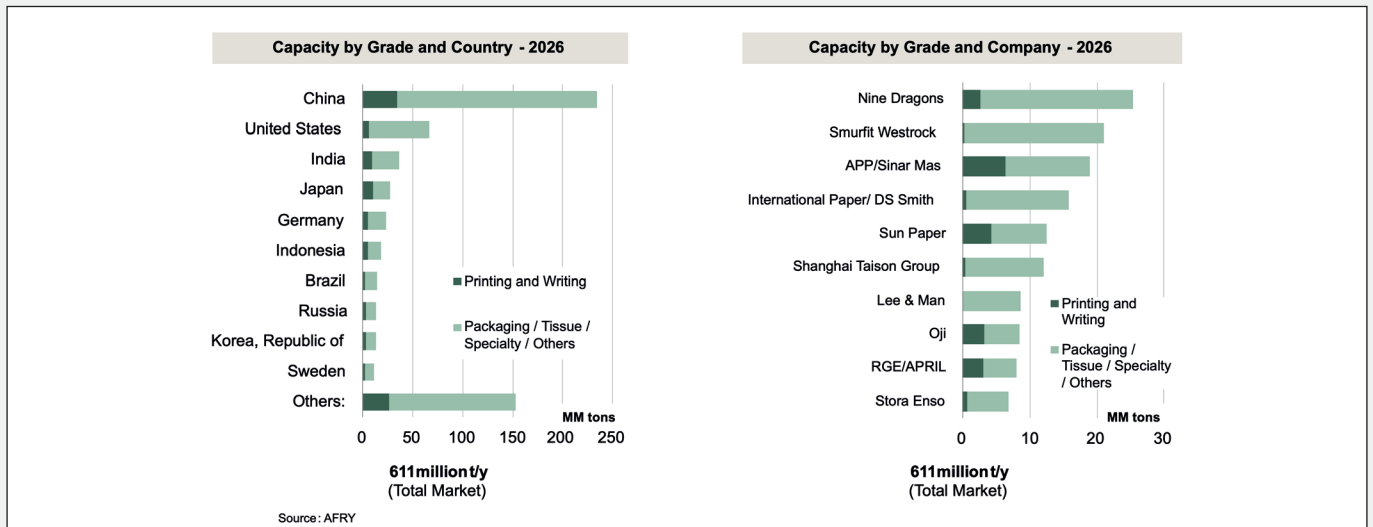


Figure 5. Top 10 global paper producers (country and company)

dynamic in the rest of Asia, Latin America, Africa, the Middle East, and Eastern Europe.

Some post-pandemic consumption patterns have become firmly established in Brazil and worldwide. The global paper industry continues to respond to demand for tissue, paper packaging, and corrugated packaging. E-commerce has become firmly established as a sales channel and remains an important driver for the industry. This trend has encouraged investment decisions, production adjustments, and innovations aimed at improving the experience of increasingly demanding and well-informed consumers.

The medium-term outlook for paper consumption in North America, Western Europe, and Japan varies by grade: consumption of printing and writing papers will continue to decline, while consumption of cartonboard, packaging papers, and tissue is expected to continue growing.

Printing and writing papers, which account for 20% of total consumption, are the most affected by technological change and are expected to continue declining. The remaining 80%, comprising other paper grades (cartonboard, packaging papers, and tissue), have a positive demand outlook, with consumption expected to grow globally.

Emerging markets are the main drivers of global paper consumption growth.

Leading global paper producers

Global paper production capacity currently stands at 611 million metric tons, with packaging papers and tissue accounting for particularly significant shares. **Figure 5** shows China and the United States as the world's largest paper-producing countries and Nine Dragons as the world's largest paper producer. Following completion of its merger, Smurfit Westrock became the world's second-largest paper producer in 2024.

OVERVIEW OF BRAZIL'S PULP INDUSTRY

Between 2005 and 2025, Brazil's pulp production grew by approximately 5.4% per year and is expected to continue expanding over the coming decades, albeit at lower rates.

Over the next decade, global population growth and rising average incomes are expected to continue driving global pulp consumption.

Table 2 shows trends in pulp production, imports, exports, and apparent consumption in Brazil between 2005 and 2025.

Table 2. Apparent consumption of pulp in Brazil (1,000 metric tons)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Production	10,352	11,180	11,998	12,697	13,315	14,164	13,992	13,977	15,127	16,465	17,370	18,773	19,527	21,085	19,691	20,953	22,505	24,969	24,251	27,530	29,439
Imports	310	326	292	325	359	412	392	411	430	416	407	357	211	180	253	185	165	140	139	158	206
Exports	5,441	6,161	6,484	7,040	8,229	8,375	8,478	8,513	9,430	10,614	11,528	12,901	13,199	14,722	14,726	15,628	15,689	19,149	18,060	18,570	20,725
Apparent Consumption	5,221	5,345	5,806	5,982	5,445	6,201	5,906	5,875	6,127	6,267	6,249	6,229	6,539	6,543	5,218	5,510	6,981	5,960	6,330	9,118	8,920

Source: Ibá | Note: includes mechanical pulp and fluff pulp; excludes dissolving pulp.

SECTOR OVERVIEW

In 2005, 53% of Brazilian pulp production was exported. By 2025, this share had increased to 70%, consolidating Brazil's position as the world's largest pulp exporter.

Brazilian pulp imports are relatively insignificant compared with domestic production. Exports, on the other hand, have grown consistently since 2005.

Given the cost competitiveness of eucalyptus pulp produced in Brazil, technological efforts are underway to replace imported pulp with domestically produced grades, including in the corrugated box market.

Brazil has also gained prominence in the global dissolving pulp market. Dissolving pulp is used as a raw material in the food and pharmaceutical industries and, most notably, in the textile industry.

Fluff pulp production is now well established in Brazil, having replaced a significant share of imports and become an important export product.

Figure 6 shows trends in Brazilian pulp production. In 2025, the country reached a record pulp production of 29.4 million metric tons, driven by the expansions of Bracell (2021) and LD Celulose (2022) and the startup of Suzano's Cerrado Project in Ribas do Rio Pardo, Mato Grosso do Sul (MS), in July 2024.

According to the announced schedule, Arauco's new mill in Inocência, Mato Grosso do Sul (MS), is expected to have a nominal capacity of 3.5 million metric tons per year, with startup scheduled for late 2027.

Approximately 89% of the pulp produced in 2025 was bleached eucalyptus kraft pulp (BHKP), while 1% was unbleached eucalyptus kraft pulp (UBHKP). Pine pulp (BSKP and UBSKP) accounted for 8% of total production.

High-yield pulp (HYP) accounted for the remaining 2% and were produced from both eucalyptus and pine fibers. This breakdown is shown in **Figure 7**.

Pine pulp grades (BSKP and UBSKP) and mechanical pulps are mostly consumed internally by the producing companies or sold in the Brazilian market.

Bleached hardwood kraft pulps (BHKP), a category that includes eucalyptus pulp, often referred to as bleached eucalyptus kraft pulp (BEKP), are highly competitive in international markets. In addition to supplying the domestic market, these pulps are produced primarily for export.

Brazilian pulp production by destination

Pulp production in Brazil has expanded significantly over the past two decades, supported by productivity gains, new mill projects, and export growth.

Between 2005 and 2025, the apparent consumption of pulp in Brazil grew at a compound annual rate of 2.7%. Over the same period, the industry's trade surplus by volume grew by 7.2% per year. BHKP accounts for

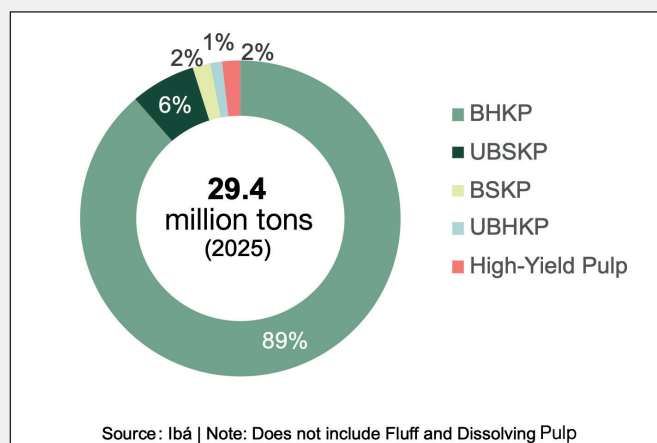


Figure 7. Brazilian pulp production by grade (2025)

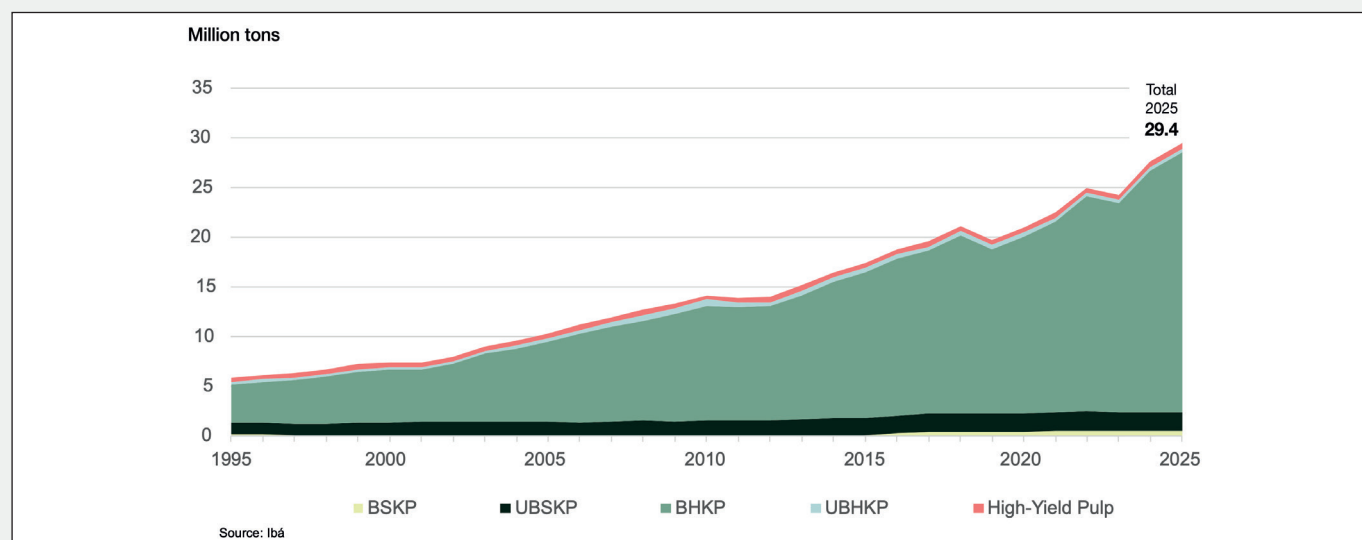


Figure 6. Brazilian pulp production by grade (1995–2025)

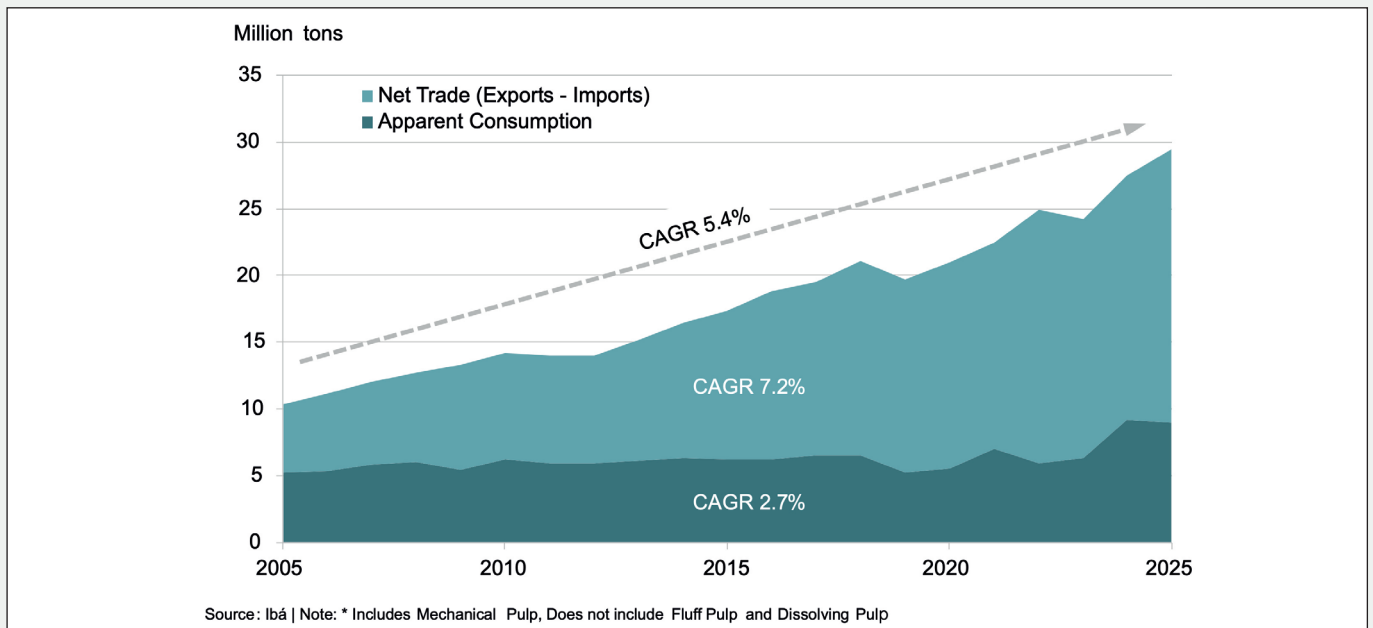


Figure 8. Brazilian pulp production by destination (2005-2025)

the majority of Brazil's pulp exports. **Figure 8** shows the distribution of Brazilian pulp production by destination over the years.

Brazil is the world's leading producer of paper-grade market pulp and the leading global supplier of BHKP. Despite the increase in production, Brazil's apparent pulp consumption declined by approximately 2.2% in 2025, primarily due to the increase in exports. **Figure 9** shows

trends in pulp production, imports, exports, and apparent consumption in Brazil.

Market BHKP capacity is expected to continue expanding, further strengthening Brazil's importance as a global supplier.

Brazilian pulp exports by destination region

Historically, Europe was the leading destination for Brazilian pulp exports. In recent years, China has

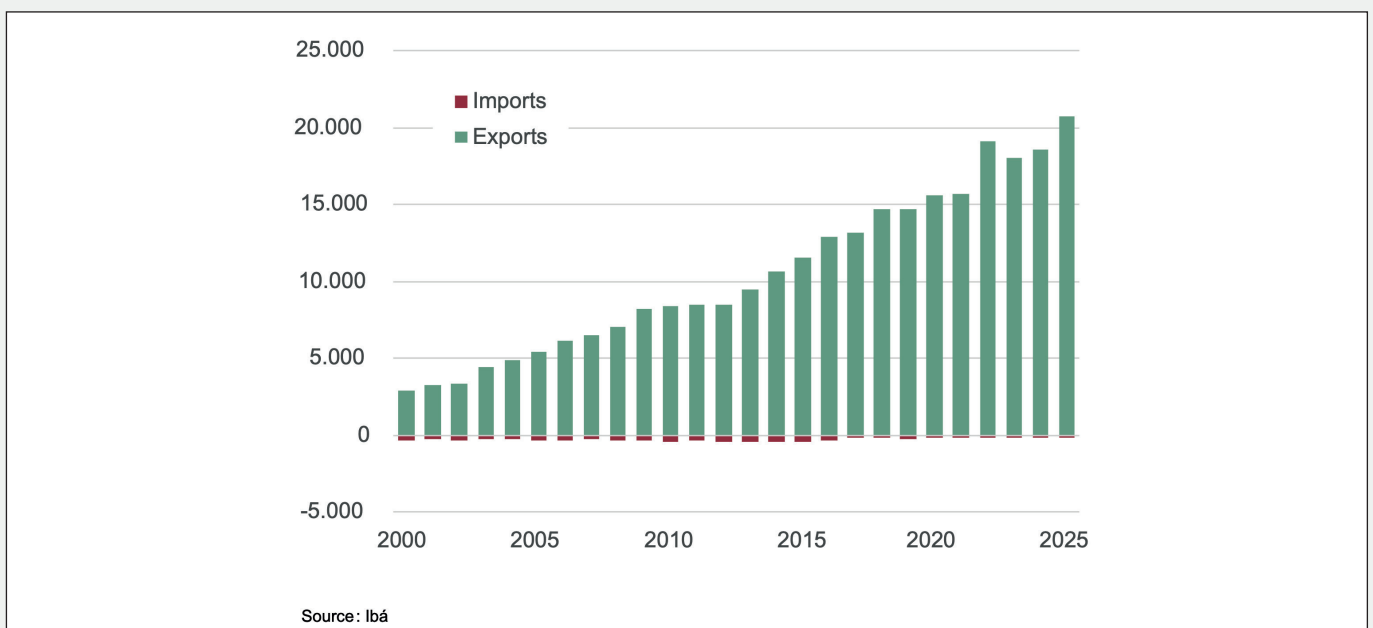


Figure 9. Brazilian pulp exports and imports

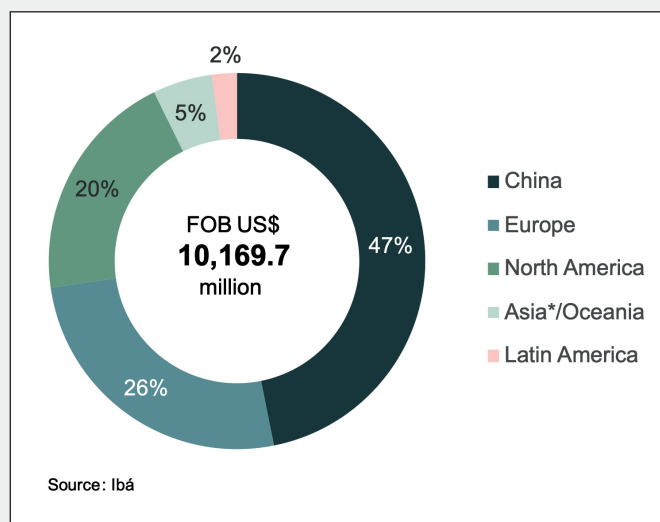


Figure 10. Brazilian pulp exports by destination region

substantially increased its imports from Brazil and became the largest buyer of Brazilian pulp in 2016. In 2025, China accounted for 47% of total Brazilian pulp exports, while Europe accounted for 26%.

Figure 10 shows Brazilian pulp exports by destination region.

Brazil's pulp industry remains highly competitive in the global market. Maintaining or improving this position depends on corporate initiatives across multiple fronts, ranging from forest optimization and management to the continuous pursuit of innovative production processes, as well as the development of new products and even the emergence of new business models.

Overview of Brazil's paper industry

Brazil's installed paper production capacity is estimated at 14.6 million metric tons per year. For comparison, domestic production reached 11.3 million metric tons in 2025.

Over the past 20 years, paper production in the country grew by 1.6% per year, while apparent consumption increased by 1.5% per year. Over the same period, net trade, defined as exports minus imports, grew by 1.9% per year.

Klabin expanded its capacity in the packaging paper segment. The startup of Paper Machine No. 28 (PM28), a new integrated cartonboard machine with a capacity of 460,000 metric tons per year, took place at the end of the first half of 2023. The investment increased Brazilian exports of cartonboard and other packaging papers between 2023 and 2025.

This investment demonstrates Brazil's comparative advantages, which enable domestic producers to expand their share of paper exports in addition to the country's already well-established position in the pulp market.

Although production leveled off during Brazil's economic crisis, it returned to a growth trajectory in the post-pandemic period.

Historically, Brazil's apparent paper consumption has remained close to domestic production volumes. In recent years, production has increased while domestic apparent consumption has remained relatively stable, indicating a greater export orientation for the industry.

The low growth rate of Brazilian paper consumption is primarily attributable to digitalization, which has reduced consumption of printing and writing papers and newsprint.

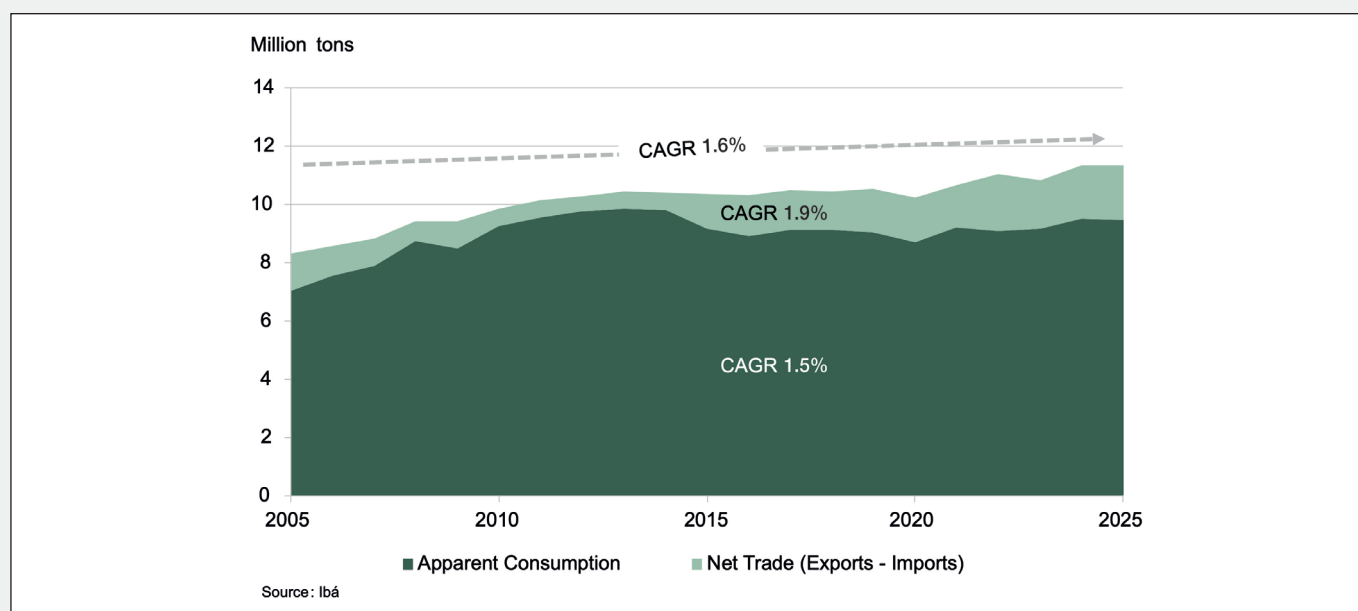


Figure 11. Brazilian paper production by destination: domestic vs. export markets (2005–2025)

Table 3. Paper production and apparent consumption in Brazil

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Production	8,315	8,558	8,807	9,409	9,428	9,844	10,159	10,261	10,443	10,397	10,357	10,335	10,471	10,433	10,535	10,240	10,666	11,040	10,836	11,323	11,337
Apparent consumption	7,328	7,702	8,099	8,755	8,505	9,272	9,562	9,782	9,851	9,813	9,165	8,920	9,115	9,131	9,055	8,700	9,202	9,093	9,184	9,514	9,481
Imports	770	967	1,097	1,328	1,085	1,502	1,455	1,396	1,274	1,262	866	688	758	715	683	551	597	547	541	640	710
Exports	2,039	1,990	2,006	1,982	2,008	2,074	2,052	1,875	1,866	1,846	2,058	2,103	2,114	2,017	2,163	2,091	2,061	2,494	2,193	2,449	2,566
Per capita consumption (kg/person)	39	41	44	46	44	49	50	50	49	48	44	43	43	44	43	41	43	45	45	45	45

Source: Ibá

By contrast, consumption of packaging papers, cartonboard, and tissue has increased. Brazil's paper production is expected to continue growing in the coming years.

Table 3 shows trends in production, apparent consumption, imports, exports, and per capita consumption.

Brazil's per capita paper consumption remains well below the levels observed in European countries, the United States, Canada, Japan, and South Korea, leaving room for growth in the coming years. Brazil's per capita consumption increased by 9 kg between 2005 and 2011 and remained virtually unchanged between 2011 and 2014, at approximately 50 kg per capita. In 2015 and 2016, apparent consumption declined sharply, primarily due to the overall downturn in consumption and industrial production in the domestic market. Currently, Brazil's per capita paper consumption stands at 45 kg, where it has remained since 2022.

Domestic consumption in the coming years will be affected by slower population growth, as indicated by data

from the 2022 Census released by the Brazilian Institute of Geography and Statistics (IBGE).

The 2022 Census reported a slower rate of population growth than the historical average recorded in previous censuses. Brazil's birth rate has been declining rapidly.

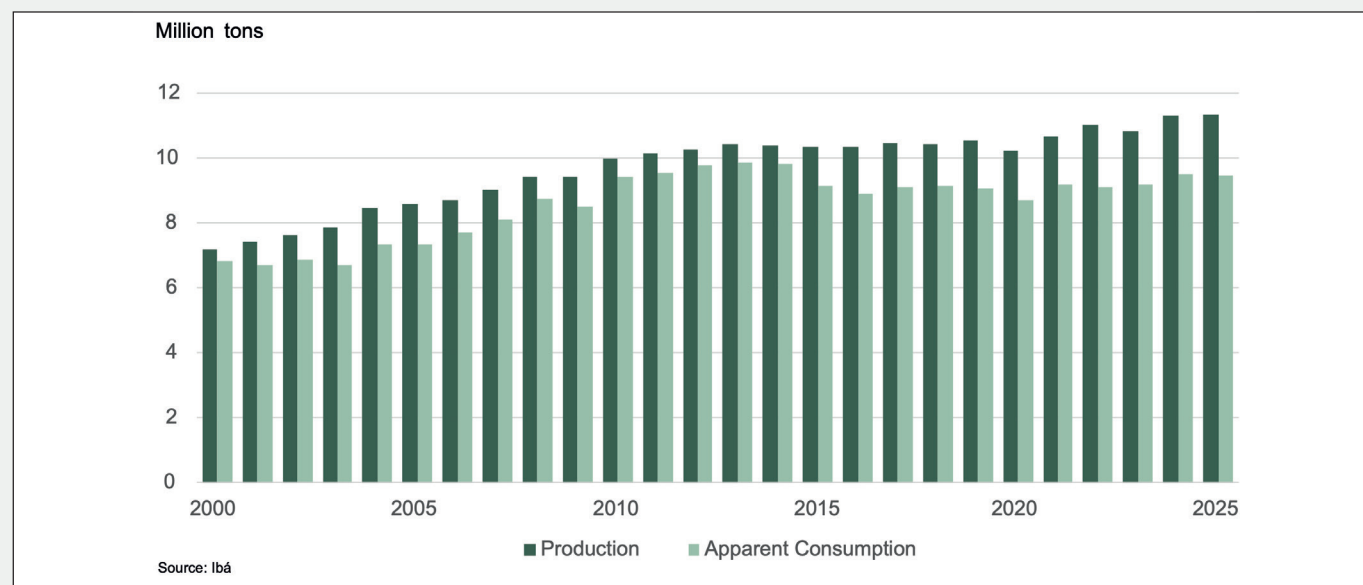
Over the next decade, Brazil's population is expected to continue growing, albeit at a slower pace, while average incomes are also expected to continue rising, supporting growth in domestic paper consumption.

Consumption is expected to grow at moderate rates, particularly for tissue. In this segment, expansion is expected to occur primarily through mills integrated with pulp production, replacing older, less efficient units.

Growth is also expected in projects focused on the production of packaging papers for export.

Figure 12 shows paper production and apparent consumption in Brazil (2000–2025).

With respect to apparent consumption, the COVID-19 pandemic deepened the decline already observed since

**Figure 12.** Paper production and apparent consumption in Brazil (2000–2025)

SECTOR OVERVIEW

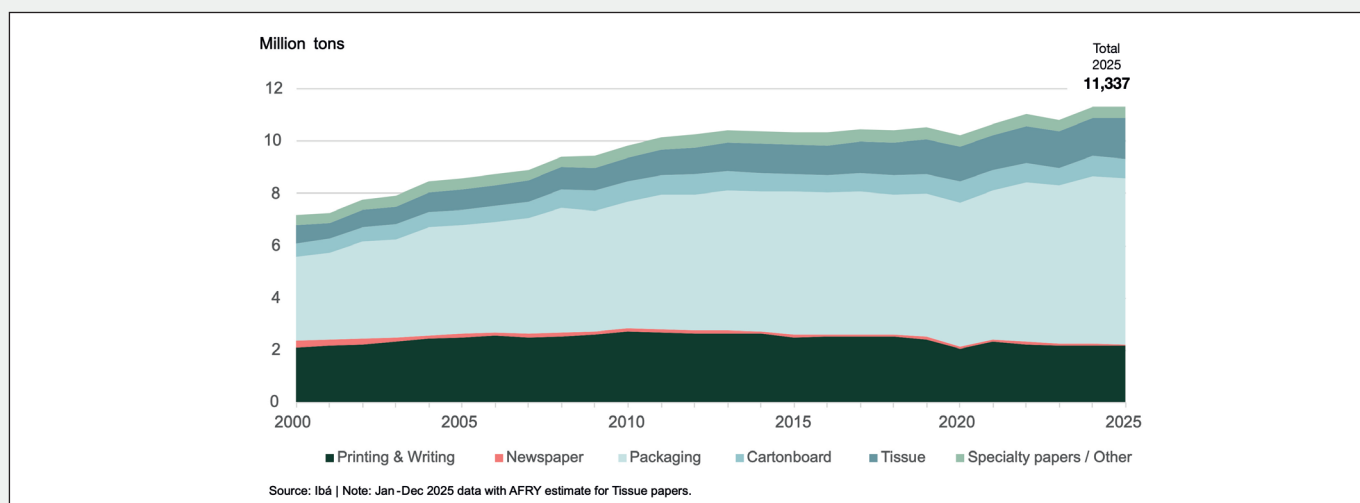


Figure 13. Brazilian paper production by grade (2000–2025)

2015, when Brazil entered a severe economic recession. Since then, apparent consumption has gradually recovered. In 2025, it reached approximately 9.481 million metric tons, very close to the 9.514 million metric tons recorded in 2024, representing a slight decline of approximately 0.3%.

Brazil primarily exports printing and writing papers and Kraftliner, while importing newsprint, Lightweight Coated Paper (LWC), Supercalendered Paper (SC), Coated Woodfree Paper (CWF), and other specialty papers.

Brazilian paper production by grade

Figure 13 shows Brazilian paper production by grade from 2000 to 2025.

Total paper production in Brazil reached 11.3 million metric tons in 2025. Packaging papers accounted for the largest share, at approximately 56% of total production, followed by printing and writing papers, at approximately 19%.

Figure 14 shows Brazilian paper production by grade in 2025.

Demand for graphic papers has been declining for at least a decade, both in Brazil and globally. Digitalization

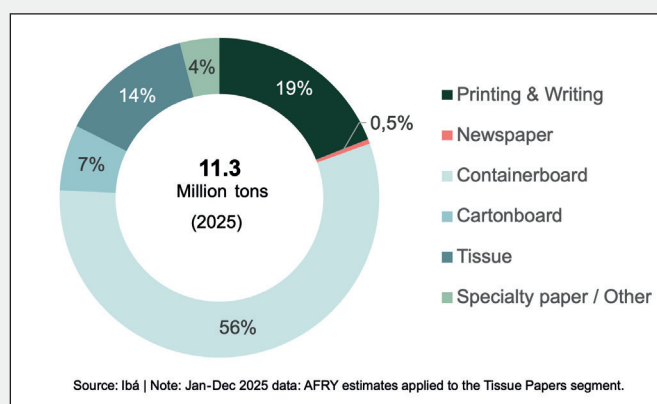


Figure 14. Brazilian paper production by grade (2025)

and increased advertising spending on digital media have substantially reduced consumption. The resulting decline in the supply of printing and writing papers will also reduce the availability of white recovered paper, creating growing challenges for producers that rely on this fiber source.

Table 4 shows production and growth in the Brazilian paper industry by grade.

Table 4. Brazilian Paper Production and Compound Annual Growth Rate (CAGR) by Grade

	Production (selected years)			CAGR (%)		
	2000	2015	2025	2000-2025	2000-2015	2015-2025
Printing & Writing	2,093	2,492	2,157	0.12%	1.2%	-1.43%
Newsprint	266	98	54	-6.18%	-6.4%	-5.79%
Packaging papers	3,209	5,471	6,375	2.78%	3.6%	1.54%
Cartonboard	519	691	756	1.52%	1.9%	0.90%
Tissue	697	1,114	1,543	3.34%	3.2%	3.31%
Specialty papers / Other	378	491	452	0.72%	1.8%	-0.82%
Total	7,162	10,357	11,337	1.85%	2.5%	0.91%

SECTOR OVERVIEW

Over the past ten years, newsprint production declined by an average of 5.8% per year. Since 2000, production volumes have declined by 6.2% per year.

Production of printing and writing papers continued to decline in 2025, reflecting the structural decrease in demand for graphic papers.

Brazil has a medium-sized specialty paper industry (thermal, filter, banknote paper, among others) with total installed capacity of approximately 400,000 metric tons per year.

Tissue and packaging papers have experienced steady growth, at rates close to or slightly above Brazil's gross domestic product (GDP) growth over this period, and have the strongest growth prospects for the next decade, in line with global trends.

Demand for tissue and packaging papers remains resilient worldwide. Brazilian tissue is highly competitive, and producers continue to invest in innovation, develop new markets, and prepare for declining availability of white recovered paper. Integrated production of tissue and BHKP has expanded, and Brazilian exports of tissue also increased between 2024 and 2025.

In 2025, the country's production of packaging papers remained close to its 2024 level, declining by approximately 0.9%, from 6.430 million to approximately 6.375 million metric tons. In 2026, production is expected to exceed the 2025 level, as indicated by corrugated box shipments during the first half of the year.

The packaging paper and corrugated board segment reached record levels in the first half of 2026, driven by the continued expansion of digital sales channels and e-commerce. According to the Monthly Statistical Bulletin published by the Brazilian Association of Paper Packaging (Empapel), shipments of corrugated boxes, accessories, and sheets maintained a positive trend

during the first seven months of 2026. This performance supports expectations of continued growth in demand for packaging papers, although monthly results should be interpreted in light of seasonal effects and the number of working days.

The main indicators reported in the bulletin are:

- **Record monthly shipments:** In July 2026, shipments of corrugated boxes, accessories, and sheets reached 379,925 metric tons, the highest level ever recorded for the month of July since the series began in 2005. This represents a year-over-year increase of 0.3%.
- **Year-to-date shipments (January-July 2026):** Cumulative shipments from January through July 2026 totaled 2,483,997 metric tons, up 2.56% from the same period in 2025.
- **Packaging by end-use sector:** The breakdown by industry category shows that food products accounted for 50.29% of total consumption of corrugated boxes and accessories in July 2026, followed by chemicals and byproducts (9.17%), horticulture/fruit growing (8.87%), and slaughtering/meat products (which alone accounted for 20.45% of total food packaging demand).

Brazilian paper exports by region

Brazilian paper exports generated approximately US\$2.4 billion in revenue in 2025. Latin America accounted for more than half of Brazilian paper exports by value (56%), while North America accounted for nearly one-fifth (19%).

Figure 15 shows the regional breakdown of Brazil's paper export revenue in 2025.

In 2025, exports to Europe and Africa increased, while paper exports to the other regions declined slightly.

Figure 16 shows trends in each region's share of Brazilian paper export revenue worldwide.

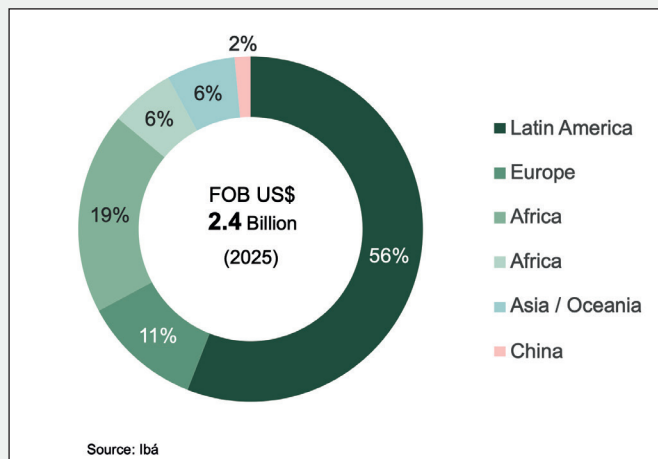


Figure 15. Brazilian paper exports by region

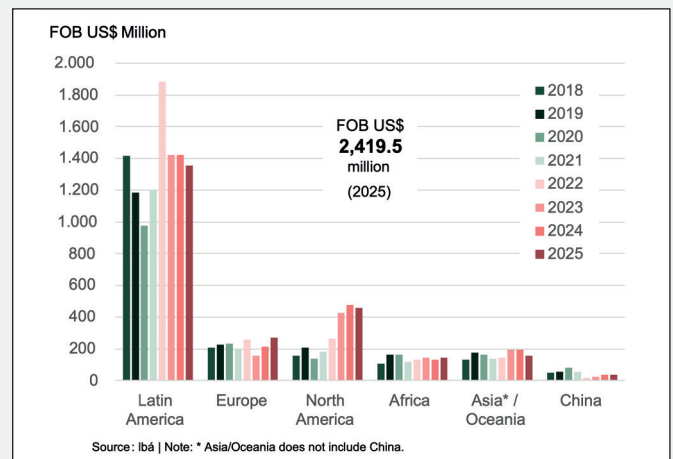


Figure 16. Breakdown of Brazilian paper exports worldwide

Investments, Innovation and Sustainability

IBÁ announced a portfolio of industrial, forestry, logistics, and social and environmental investments estimated at approximately R\$105.4 billion through 2028, reinforcing the transition to a large-scale bioeconomy.

These investments are directed toward the construction of new mills, modernization of existing units, forest management, and logistics infrastructure improvements.

Major industrial projects

- **Suzano:** Announced an investment cycle with projected capital expenditures (Capex) of between R\$10.9 billion and R\$13.3 billion. In addition, in 2025 the company completed an investment cycle of more than R\$1.1 billion in Espírito Santo, including the startup of a new tissue paper mill and modernization of the biomass boiler at its Aracruz mill.
- **Arauco (Sucuriú Project):** Located in Inocência, Mato Grosso do Sul (MS), in the region known as Brazil's "Pulp Valley," the project is scheduled for completion by the end of 2027 and will have a nominal capacity of 3.5 million metric tons per year of hardwood pulp.
- **Klabin:** Is investing to expand its packaging capacity to reduce direct exposure to fluctuations in market pulp prices. In addition, in early 2025 the company inaugurated its second corrugated packaging facility in Piracicaba, São Paulo (SP)—Figueira Project—following an investment of R\$1.6 billion.
- **Bracell:** Inaugurated its new tissue production unit in Lençóis Paulista, São Paulo (SP), following an investment of R\$5 billion. The facility operates entirely without fossil fuels.

- **Melhoramentos:** Inaugurated Biona, a plant that produces 100% compostable pulp-based packaging in Camanducaia, Minas Gerais (MG), as an alternative to single-use plastics. Built with an investment of R\$40 million, the plant can produce up to 80 million units per year, which decompose within 75 days.

Wave of green investments (sustainability and carbon)

- **Energy mix:** Approximately 90% of the energy consumed by the planted-tree industry comes from renewable sources, including self-generated energy from biomass and black liquor.
- **Restoration and Climate Fund:** Suzano will restore 24,000 hectares of degraded land in the Amazon, Cerrado, and Atlantic Forest through a R\$250 million partnership with the Brazilian Development Bank (BNDES), using resources from the New Climate Fund. **Biomax**, a startup whose shareholders include Suzano, announced a R\$55 million investment in the Muçununga Project to restore 1,200 hectares of Atlantic Forest in Bahia.
- **Carbon credits:** Greentech **Symbiosis** secured investment from Apple's Restore Fund, a US\$200 million fund, while **re.green** expanded its partnership with Microsoft through the sale of 3.5 million carbon credits to support forest restoration projects.

The industrial and forestry investment portfolio covered by IBÁ's survey includes projects announced, under development, or recently completed by companies across the industry, as shown in **Table 5**.

Table 5. Breakdown of identified forestry and industrial investments

Company	Location	Investment
Arauco	Inocência – MS	R\$ 25.00 billion
Eldorado	Três Lagoas – MS	R\$ 25.00 billion
CMPC	Barra do Ribeiro – RS	R\$ 24.00 billion
Suzano	Ribas do Rio Pardo – MS	R\$ 22.85 billion
Bracell	Lençóis Paulista – SP	R\$ 5.00 billion
Klabin	Piracicaba – SP	R\$ 1.60 billion
Irani	Vargem Bonita – SC	R\$ 0.95 billion
Adami	Caçador – SC	R\$ 0.85 billion
Others	Several locations	R\$ 0.12 billion
Total		R\$ 105.37 billion

Source: Ibá

HOW INNOVATION CAN DIVERSIFY PRODUCTS, PROCESSES, AND REVENUE STREAMS

Innovation is expected to expand value creation beyond traditional pulp and paper products. The development of papers with new barrier properties, recyclable and repulpable packaging, nanocellulose, biochemicals, cellulosic textile fibers, and other bioproducts can diversify revenue streams and broaden the applications of forest biomass.

Technological transformation is also extending to industrial processes. Predictive systems, automation, advanced process control, energy efficiency, and improved utilization of waste and effluents can increase productivity while reducing costs and environmental impacts. These solutions will be important in enabling the industry to combine economic competitiveness, product functionality, and environmental performance.

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Mercosur-European Union Agreement

WHICH SEGMENTS MAY BENEFIT OR FACE GREATER COMPETITION UNDER THE AGREEMENT

The Mercosur-European Union Agreement has different implications for the various segments of the forest-based industry. For Brazilian pulp producers, the benefits are primarily institutional, since the European Union already applied zero tariffs on imports of pulp, paper, and converted products. The Agreement increases predictability in trade, strengthens market diversification, and may facilitate access to European machinery and technologies.

For European paper and cartonboard producers, the tariff benefits are more direct. The gradual reduction of Mercosur tariffs will expand access to South American markets, particularly in specialty papers, technical products, and higher-value-added packaging. European producers, however, will continue to face competition from Brazilian pulp and from integrated producers benefiting from high forest productivity.

For Brazilian producers, the main opportunities are concentrated in BHKP, cartonboard, packaging papers, integrated tissue production, and renewable solutions capable of replacing fossil-based materials. The greatest risks are in printing and writing papers, specialty papers, and certain converted products, segments in which the European industry is highly specialized and may become more competitive as tariffs are phased out.

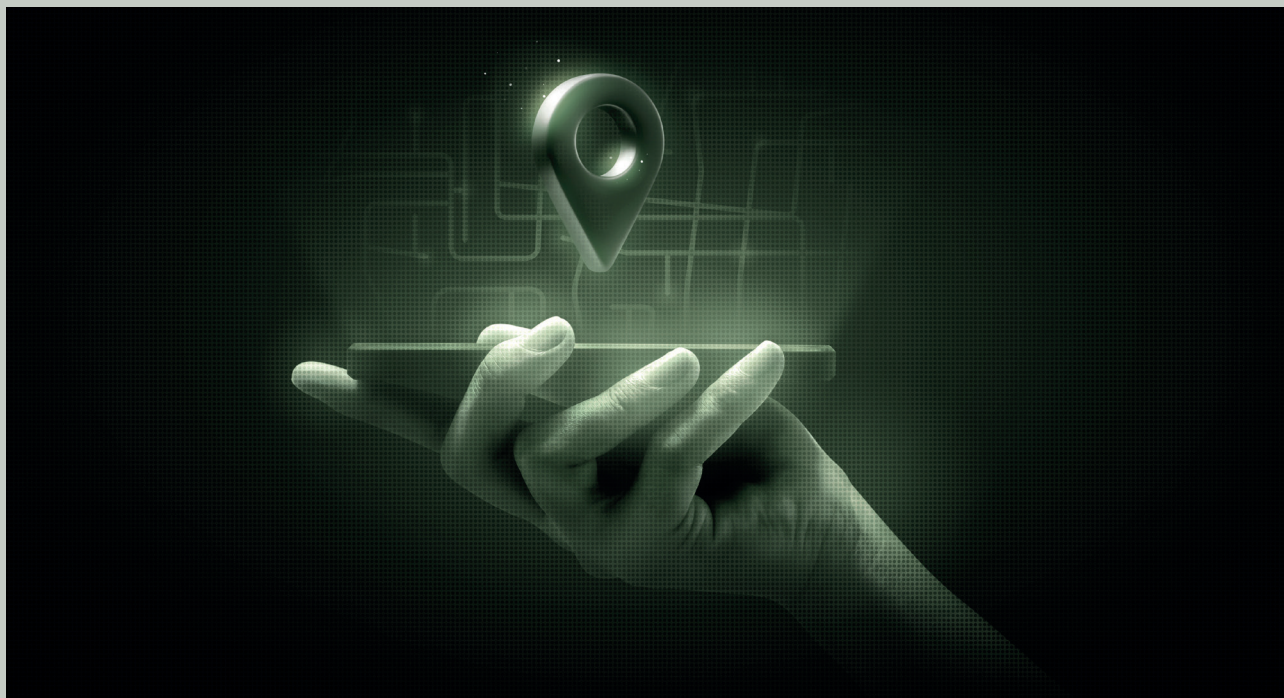
The outcome will depend not only on tariffs but also on the ability of companies to comply with technical and environmental standards, reduce logistics costs, develop higher-value-added products, and integrate their supply chains.

The Mercosur-European Union Agreement should also be considered alongside the regulatory and environmental changes reshaping the European pulp, paper, and packaging market. In this context, greater market access will be accompanied by increasingly stringent requirements for traceability, circularity, recyclability, and carbon emissions reduction. These issues are addressed in the following sections on the EU Deforestation Regulation (EUDR), the Packaging and Packaging Waste Regulation (PPWR), and industry decarbonization.



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EUDR – Traceability and access to the European market



HOW TRACEABILITY CAN BECOME A MARKET ACCESS REQUIREMENT

The EU Deforestation Regulation (EUDR), part of the European Green Deal, establishes traceability and due diligence requirements aimed at preventing products associated with deforestation and forest degradation from being placed on the EU market.

The regulation introduces stricter environmental requirements for products entering the European market. Key components of the EUDR include due diligence statements, which strengthen compliance requirements for products sourced by importers; geolocation data, which enable products to be traced back to their source; and sustainability requirements designed to ensure that products originate from compliant sources.

The European Commission confirms that companies outside the European Union may need to provide location and origin data to EU operators, even when they are not themselves responsible for initially placing the product on the EU market.

The Brazilian industry's experience with certification, traceability, and georeferencing may facilitate adaptation to the EUDR. These mechanisms, however, do not fully replace the specific due diligence and documentation requirements established by the EU regulation.

Brazil's pulp and paper industry, which relies primarily on planted eucalyptus and pine forests, already collects much of the information needed to meet traceability requirements as a result of its longstanding use of international certification systems. Modern practices for georeferencing fiber sources, both for forest certification and compliance with Brazil's Rural Environmental Registry (CAR), should facilitate adaptation to the European requirements.

For Brazil, the EUDR presents both challenges and opportunities. Although it increases the pressure to comply with sustainability requirements, Brazil's competitive and well-established forest sector may also benefit by attracting investment in sustainable projects.

The EUDR implementation schedule was recently postponed. Most obligations will apply from December 30, 2026, while most micro and small operators will be subject to them from June 30, 2027, subject to specific rules for timber and timber products previously covered by the EU Timber Regulation (EUTR).

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PPWR – Circularity and new packaging requirements

HOW EUROPEAN RULES ARE RESHAPING PACKAGING

Another EU regulation relevant to the pulp, paper, and packaging industry is the Packaging and Packaging Waste Regulation (PPWR), established by Regulation (EU) 2025/40, which replaces the former Directive 94/62/EC. Its objective is to harmonize requirements for packaging placed on the EU market, reduce packaging waste, promote reuse and recycling, and support the transition to a circular and climate-neutral economy. The regulation entered into force on February 11, 2025, and applies generally from August 12, 2026. Among its key implementation milestones are requirements for packaging to be designed for recycling, the introduction of recyclability performance grades from 2030, and requirements concerning recyclability at scale from 2035. Implementation will be progressively deepened after 2035 through supplementary acts and technical performance criteria, as well as stricter recyclability requirements starting in 2038.

For the pulp, paper, and packaging industry, the PPWR represents a significant growth opportunity. The regulation may favor renewable and widely recycled materials, provided they meet recyclability and chemical-safety requirements. At the same time, it increases pressure to eliminate per- and polyfluoroalkyl substances (PFAS), simplify multilayer structures, and demonstrate environmental performance throughout the packaging life cycle.

The PPWR is likely to be broadly positive for paper and cartonboard packaging, particularly in applications that replace single-use plastics. The main challenges include developing PFAS-free barrier solutions, demonstrating recyclability, and adapting packaging designs to meet the EU's new ecodesign criteria.

The consolidation of the PPWR in Europe, building on previous EU packaging legislation, raises the bar for circularity globally and may turn Brazil's well-established National Solid Waste Policy (PNRS) into a competitive advantage. With a regulatory framework that has been in place for more than a decade and high recycling rates for materials such as aluminum and paper, the Brazilian industry is well positioned in terms of compliance, traceability, and access to post-consumer recovered materials.



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Decarbonization of Brazil's pulp and paper industry



WHAT ACTIONS CAN REDUCE EMISSIONS THROUGH 2035 AND TRANSFORM THE INDUSTRY BY 2050

Decarbonization complements the traceability and circularity requirements established by the EUDR and PPWR. Together, these factors are expected to increasingly influence access to the European market and the competitiveness of Brazilian producers.

AFRY supported Brazil's Ministry of Development, Industry, Trade and Services (MDIC), the Inter-American Development Bank (IDB), the Brazilian Tree Industry Association (IBÁ), and the Brazilian Pulp and Paper Technical Association (ABTCP) in developing a decarbonization strategy for Brazil's pulp and paper industry. Developed in collaboration with companies representing more than 86% of domestic production, the strategy sets out actions to reduce greenhouse gas emissions from forestry, industrial, and logistics operations.

Through 2030–2035, priorities will focus on mature solutions such as energy efficiency, fossil fuel substitution, cogeneration using biomass and black liquor, logistics optimization, recycling, and forest management. Through 2050, transformational technologies such as green hydrogen, biomethane, biomass gasification, carbon capture and utilization, and new bioproducts will become increasingly important.

With its competitive forest resource base and extensive use of renewable energy, Brazil's pulp and paper industry is well positioned to advance toward a low-carbon economy.

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Outlook for the global industry and Brazil's position

The global pulp and paper industry maintains a positive long-term outlook despite a more challenging economic and geopolitical environment. Moderate global economic growth, armed conflicts, rising logistics costs, and the expansion of new production capacity are expected to continue putting pressure on prices and margins. At the same time, urbanization, rising incomes in developing countries, and growing demand for renewable materials are expected to support demand for hygiene products, cartonboard, and packaging papers.

Market developments will be shaped by changes in the fiber mix and greater integration of pulp and paper production. Manufacturers will continue to combine virgin

and recycled fibers to meet requirements for quality, strength, softness, and productivity at the lowest possible cost. In this context, the partial shift from BSKP to BHKP is expected to increase the use of hardwood pulp, particularly in tissue, cartonboard, and certain packaging applications.

Packaging papers and tissue are expected to remain among the industry's main growth drivers. Demand for recyclable and repulpable packaging designed to replace fossil-based materials is creating opportunities for papers with new barrier properties. In food and beverage markets, growth in corrugated board and the use of virgin-fiber Kraftliner in applications requiring higher performance are also expected to support pulp demand. Conversely, printing and writing papers and newsprint

will continue to face structural declines in consumption associated with digitalization.

Brazil remains well positioned in this environment because of the high productivity of its planted forests, the short rotation cycle of eucalyptus, and the competitiveness of its industrial production. As the world's leading BHKP supplier, Brazil is positioned to meet growing demand for hardwood fiber and expand its presence in the tissue, cartonboard, and packaging markets. Its renewable forest resource base and the significant share of biomass in its energy mix also strengthen Brazil's position as traceability, circularity, and emissions-reduction requirements become increasingly stringent.

Consolidating these advantages, however, will depend on further investment in forests, productivity, infrastructure, and innovation. Expansion of the planted forest area will need to be consistent with environmental commitments and regional development, while improvements in logistics will be necessary to reduce the impact of fuel, freight, and transportation costs on export competitiveness.

Technological transformation is expected to expand opportunities for value creation beyond traditional pulp and paper products. The development of new barrier solutions for packaging, diversification of biomass applications, improvements in energy efficiency, reduced use of fossil fuels, and adoption of predictive systems in industrial processes are expected to strengthen the transition to a low-carbon economy. Technological cooperation and access to more efficient equipment may also accelerate modernization of Brazil's industrial base.

The trade and regulatory environment will be equally important. Tariff disputes, the reorganization of international

trade flows, and increasingly stringent environmental requirements may create both opportunities and risks. The Mercosur-European Union Agreement is expected to provide greater predictability and access to technology, while the EUDR and PPWR raise requirements related to raw material origin, recyclability, and product environmental performance. European regulation may create opportunities for technological leadership in areas where Brazil already stands out.

In summary, Brazil has the conditions to maintain a prominent position in the international pulp and paper market. Future competitiveness will depend on the industry's ability to combine forest productivity, industrial efficiency, market diversification, technological innovation, and environmental performance. Brazil is expected to continue expanding production and attracting investment, but the industry will need to adapt to changes in the fiber mix, expansion of Asian capacity, and new requirements in consumer markets. ■

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