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for the
PULP & PAPER
INDUSTRY**

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Part 1: Overview of the Pulp and Paper Industry

Globalization of the pulp and paper industry is not a prospect any more, not a sinister shadow looming on the horizon. It is here, it is now, and it is very much a fact of life. And though it is equally true that the level of concentration in pulp and paper production is still low compared to many other ICEM industry sectors, the rules and practices that dominate both routine functioning and prospective development of the sector now root themselves in principles that are no longer confined to local or national boundaries. What happens to paper mill workers is determined by events transpiring thousands of miles away from their workplace, by trends that span continents, and the real reasons why a mill that had been operational for generations is now shut has very little, or nothing, to do with efficiency, significance and value in the local context. And without acquiring a global perspective of their situation and the trends that cause workplace change, workers and their trade union organizations cannot truly understand why such rapid change occurs, and effectively protect them.

The main task of this ICEM World Conference for the Pulp and Paper Industry is to continue the always relevant discussion of concrete, practical ways and means of responding to the challenges of globalization with the view of eventually reshaping it for the benefit of the working people.

1.1. The Global Paper Industry

With the advent of radio, television, and then computers and the internet, some experts persistently predicted that paper, as a communication medium would disappear. Television advertising did hit the paper sector hard, particularly newsprint and magazine paper segments, yet technological progress has now produced digital video recorders that allow consumers to skip TV ads. Leading consumer goods players like Procter & Gamble or Kraft Foods have been quick to react by shifting their advertising budgets away from television and into magazine ads over the past few years, according to the International Federation of the Periodical Press (FIPP).

The paper industry is alive and growing, though overall performance is hardly spectacular. After the previous peaks in 1995 and again in 2000, the paper sector as a whole slid into a trough, following a global economic trend. According to Datamonitor, the compound annual growth rate (CAGR) of the industry's volume between 2000 and 2004 amounted to just 1.4%, and actually is slipping into the negative in 2001. The *Pulp and Paper International* Report of Paper and Paperboard Production in 2004, however, showed a healthy 5.5% increase to nearly 360 million tonnes from the previous figure of 339 million tons.

Pulp production in 2004 increased by just over 3% to reach a total of over 188 million tonnes, compared to just under 183 million tonnes in 2003.

There were few surprises in terms of the Top 30 producers and consumers in 2004, with the USA leading the way as the largest producer and consumer of paper and paperboard in the world. China and Japan followed hot on the heels of the USA in second and third place in terms of output and consumption. China's production also grew by 15.1% in 2004 compared to 2003 levels. (See the corresponding tables in the Appendices).

On a regional basis, Asia finished as the number one producer of paper and paperboard again in 2004 (it slipped ahead of Europe and the USA in 2002). Companies in the region churned out 120 million tonnes of paper and paperboard, nearly 10 million tonnes more than the previous year. Europe and North America trailed behind at 110 million and 104 million tonnes, respectively.

The forecasts for the next four years are not so bright, though, and after 2005, which is expected to show the greatest growth, the sector will slow down again. *Datamonitor* predicts a CAGR of 2.3% for the period until 2009.

However, the overall sector statistics are the mean value of very different figures, and there are great variations in growth rates, production volumes and consumption among different regions and grades.

1.2. Newsprint

Of all major paper grades, newsprint was no doubt hit hardest by competition from broadcasting and electronic media, both in the sphere of information and in the sphere of advertising. In recent years, this impact was further aggravated by the general cyclic downturn in the industry. Yet the decline in newsprint demand growth is far from universal and is predominantly confined to mature markets where newsprint producers find themselves wedged between overcapacity inherited from the past and a decreasing, or at best only sluggishly growing consumption.

Newsprint apparent consumption in 2002-2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	11,244,731	11,595,084	11,921,602
Latin America	1,548,651	1,627,666	1,709,632
North America	11,297,000	11,242,000	11,017,500
Africa	590,410	601,058	670,924
Asia	11,202,937	11,912,608	13,141,375
Australasia	786,770	868,464	849,613

Source: *Pulp and Paper International 2005 Annual Review*

In Europe, where overall apparent consumption has been growing over the past few years at around 3%, the growth is primarily driven by countries in Central, Southern and Eastern Europe (a staggering 41% in Ukraine) against a sometimes dramatic drop in consumption in most Nordic countries (-18.5% in Norway last year) and, for example, 0.8-1.3% growth in Germany and the UK, Europe's largest consumers of newsprint. A similar situation is observed in Asia where Korea, Japan, Singapore are at the low end of the consumption growth scale, while China, India, Taiwan and Vietnam occupy the high end.

This trend is also reflected in the production dynamics, with growth rates in Asia and Latin America showing a marked difference from those in Europe and, particularly, North America. (See the table below).

Newsprint production in 2002 - 2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	12,183,551	12,733,558	13,416,463
Latin America	890,300	830,300	884,500
North America	13,703,000	13,635,000	13,278,100
Africa	409,154	414,227	421,294
Asia	8,930,149	9,154,700	10,409,100
Australasia	746,585	774,130	801,912

Source: *Pulp and Paper International 2005 Annual Review*

The US newsprint market is quite concentrated, with the top 5 companies sharing 74.1% of the market, and the top 10 91.7% of overall capacity, which stood at 14,440,000 tonnes/yr in 2004. Yet the prolonged economic “soft patch” and declining demand from publishers hindered price growth, while energy and transportation costs keep mounting. So, predictably, capacity is being slashed further. According to the Pulp and Paper Products Council (PPPC), by 2003, the permanent closure of nine paper machines producing newsprint had removed over 1 million tonnes of capacity from a 1997 peak of 16,600,000 tonnes. Major conversions, grade switches, and changes in product mixes removed an additional 1.2 million tonnes. In July 2004, the PPPC reported that capacity totaling 475,000 tonnes/yr that had been down for more than 12 months from its official capacity estimates. Almost another 500,000 tonnes of idled capacity will almost certainly be removed in the PPPC’s next revision.

In trying to sustain the latest newsprint price increase through the remainder of 2005, Canada-based Abitibi-Consolidated plans to close the 194,000/tpy Stephenville, Newfoundland, newsprint mill and the 60,000/tpy PM Number 7 (50,000/tpy newsprint, 10,000/tpy hi-bright) at its Grand Falls mill, also in Newfoundland. At Abitibi’s Kenora mill in Ontario, the company intends to permanently close 90,000/tpy PM Number 7 (20,000/tpy newsprint, 70,000/tpy hi-bright and bulky uncoated groundwood grades) and indefinitely idle PM Number 10, a 150,000/tpy newsprint machine. Also, the conversion of 110,000 tonnes of newsprint capacity to hi-bright at the Belgo mill in Quebec is expected to take place in the fourth quarter of 2005.

The Communications, Energy and Paperworkers Union of Canada (CEP), an ICEM affiliate, called on the Ontario government to appoint a special mediator in its negotiations with Abitibi-Consolidated on the future of the Kenora newsprint mill. Following talks with the provincial government about installing a biomass co-generation facility at Kenora, Abitibi said it had decided to talk to the mill’s unions about restructuring to keep PM Number 10 in production. In Norway, Norske Skog made a final decision to close its Union newsprint mill in Skien employing 400 people, despite alternatives offered by the workers’ union, ICEM affiliate Fellesforbundet, which included selling the mill to another interested party.

1.3. Printing and Writing papers

Global printing and writing papers production has been developing more steadily than newsprint production, but largely followed the same pattern: rapid expansion in Asia in response to strong domestic demand and growing exports, and the uneven and less pronounced growth in Western Europe and North America. (See table *Printing and Writing production in 2002-2004*). The 2004 price hikes and increased demand for coated paper in the US were mainly taken up by imports. North American capacity was

actually declining, while new machines continued to make appearances in Asia and Europe.

Printing and Writing production in 2002 - 2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	35,810,065	37,028,805	39,794,287
Latin America	3,718,246	3,900,469	4,066,639
North America	28,522,000	28,000,650	29,753,610
Africa	826,793	816,613	932,387
Asia	32,113,505	33,912,200	36,269,800
Australasia	624,000	564,000	585,000

Source: *Pulp and Paper International 2005 Annual Review*

According to Paperloop's Resource Information Systems, Inc. (RISI), which provides exceptional economic analysis and forecasts for the forest products industries, North America's largest uncoated freesheet producer, International Paper Co., has been aggressively closing high-cost capacity to balance supply with declining demand in that market. Weyerhaeuser has tried to address the same problem by reducing costs some US\$100 million in 2004 alone, and cutting capacity by 1.3 million tons in the last 2½ years (but still increasing production by 10%). In October 2005, Weyerhaeuser announced the indefinite closure of its Prince Albert uncoated freesheet mill employing 700 workers. Brian Payne, the national president of the Communications, Energy and Paperworkers Union of Canada (CEP) called for "urgent action" on the part of the federal government to save the Prince Albert in British Columbia, and literally dozens of other mills across the country. Earlier, the largest coated freesheet producer, South African-based Sappi, announced the closure of a coated freesheet paper machine at a mill in Muskegon, Michigan, USA. The ICEM affiliate United Steel Workers and the Sappi union network have mounted a protest campaign in support of the affected workers.

Coated paper demand has peaked and will fall in 2005. Growth in 2006 will be minimal due to higher costs for postage. Furthermore, imports of coated freesheet from Asia promise to rise further due to rapid capacity expansion in that market. There is already overcapacity in coated freesheet, and any further rise in imports will aggravate the situation. Prices may also be headed down, while costs have risen rapidly in 2005. The squeeze on margins combined with overcapacity could lead to further mill closures in the coated paper market over the coming two years.

A study carried out by RISI states that there is approximately 2.5 million tons of capacity at high-risk coated paper mills in North America. Certainly these mills would not all close, even under the direst of circumstances, but the likelihood of machine closures at several of these mills is very high.

1.4. Paper Packaging

According to the *Datamonitor* industry profile, since strong growth in 2000, the global market for paper packaging has gradually tailed off, although the long-term outlook remains positive. The market, which comprises paper and cardboard containers and

packaging, performed well over the 2004 period, especially when compared to sales of metal and glass packaging.

The global paper packaging market reached a value of US\$195.1 billion in 2004, having grown with a compound annual growth rate (CAGR) of 5.4% in the 2000-2004 period. This growth was stronger than that of the containers and packaging industry itself, leading to the paper-packaging market's overall ranking gaining in global revenue terms. The leading revenue source for the global paper packaging market in 2004 was the containerboard sector, which accounted for 70.6% of the market's value. In value terms, this sector was worth US\$137.8 billion in 2004. The paperboard sector, generating the second largest revenues in 2004, reached sales of US\$29.4 billion or equivalent to 29.4% of the market's value. Both sectors primarily target producers of foods, beverages, fast food, detergents, pharmaceuticals and cosmetics as their biggest customers. In geographical terms, the largest markets currently are the US\$68 billion American market and the US\$62 billion European market. However, demand in Asia-Pacific (particularly India and China) is set to rise noticeably from its current position of US\$42.5 billion, equivalent to 21.8% of the global market.

During the next five years, the market is expected to experience steadily declining growth rates. By 2009, the market is forecast to reach a value of US\$234 billion, which equates to a CAGR of 3.7% in the 2004-2009 period.

Simultaneously, volumes have kept steady pace. Tonnage rose from 126.3 million tonnes in 2000 to 148.1 million tonnes in 2004, growing at a CAGR of 4.1%. Whilst the world economy growth was undergoing a slowdown, it is perhaps unsurprising that prices only rose by an annual 1.3% in the same period. Facing such a lack of spending extravagance, companies largely looked at cost-cutting to increase margins. Plants were shut and employee numbers were heavily scrutinized in order to combat rising energy costs, rising timber costs and a range of new legal and environmental costs.

In August 2005, Smurfit-Stone Container Corporation, owned by equity trader Madison Dearborn of the US, announced plans to permanently close production capacity at three North American containerboard mills as part of the company's ongoing assessment and restructuring efforts. Smurfit-Stone's total containerboard manufacturing capacity will be reduced by approximately 700,000 tonnes. The company's Smurfit-Stone's PM Number 2 at a linerboard mill in Fernandina Beach, Florida, had been idle since April 2001. The New Richmond, Quebec, and Bathurst, New Brunswick, mills have an annual production capacity of 235,000 tons of linerboard and 243,000 of corrugating medium, respectively. Both mills had been previously idled due to market conditions. The closures will result in the permanent layoffs of approximately 295 employees in New Richmond and 270 employees in Bathurst.

The extent to which the sector has become globalized is vividly demonstrated by the situation that had evolved in Latin America's containerboard sector by the summer of 2005. According to Paolo Tasso, Vice-President of the Brazilian company CellMark Packaging, in speaking to trade industry publication *Paperloop*, Latin America's box and sheet plants might face increasing difficulty in sourcing kraft linerboard and semichemical medium board from the US due to structural changes in the market. The wave of mergers and acquisitions that rose in 1998 when Stone Container joined up with Irish-based Jefferson Smurfit (and then was spun-off) led to rampant consolidation as inefficient machines were shut down. Twenty-four containerboard machines were

shut in the US alone between 2000 and 2003, reducing capacity by some 6 million tonnes. US linerboard exports have fallen by 13% since 1998, according to the American Forest & Paper Association. But while shipments to markets such as Europe have slumped, the country has increased exports of kraft linerboard to Latin America by 28% since 1999.

As Tasso indicated, the agricultural and refrigerated corrugated box sector in Latin America needs to use virgin fiber paperboard to achieve strength properties. Although the region's papermakers produce virgin board, much of it is exported rather than converted at home. For example, of the 1.3 million tonnes of kraft linerboard manufactured in Brazil last year, only 35%, or 210,000 tonnes, was sold on the domestic market.

Sales price levels apart, one reason why Brazilian containerboard producers choose to export may be transportation costs. Regional logistics are far from perfect in Latin America and, as a result, it can be cheaper to export board from Santos in Brazil to Antwerp in Belgium than to deliver it to neighboring countries.

Although imports to Latin America of US kraft linerboard are rising, on the recycled fiber side, producers will face increasing competition for US old corrugated containers (OCC). China bought 45% of the US's OCC capacity in the first quarter of 2005 and the US has reached a 50% recovery rate, so OCC mills operating in Latin America will have to compete for fiber.

The global paper packaging market remains highly fragmented with the top seven players controlling less than one-fifth of the market. (See the table below.)

Global Paper Packaging Market Share - Value, 2004

Company	Percentage
Smurfit-Stone Container	4.2
International Paper	3.8
Jefferson Smurfit	3.1
Weyerhaeuser	2.3
Rengo	1.8
Stora Enso	1.8
Georgia-Pacific	1.5
Other	81.5

1.5. Tissue Papers

In 2004, the global retail tissue industry bounced back with a sound 4% growth over the previous year, according to new research from *Euromonitor International*. This recovery comes on the back of stronger sales in the large North American market and sound demand in developing markets, in particular Eastern Europe.

In recent years, the global retail tissue industry has been negatively impacted by a number of factors, including the slowdown in population growth rates in mature markets. High penetration levels in the main sectors of the tissue market have also

added to the general gloom surrounding the industry. Hence it is no surprise that the recovery of the North American market in 2004 has been met with great enthusiasm.

This recovery stems from rising raw material prices and energy costs, which gave US tissue manufacturers the impetus to raise prices in a coordinated manner throughout 2004. *Euromonitor's* research shows that North American consumers spent over US\$12 billion on tissue products during 2004. Sales increased by over 5% in comparison to the prior year, reversing what had been a two year declining trend triggered mainly by a recessionary economic climate.

Of all major paper grades, tissue has seen global concentration levels reach the furthest, with four major producers controlling over 40% of the world market in 2003: Georgia-Pacific (14.2%), Kimberly-Clark (13.8%), SCA (7.2%), and Procter & Gamble (6.2%); five companies currently control 87% of North American tissue capacity: Georgia-Pacific (32%), Procter & Gamble (26%), Kimberly-Clark (17%), Cascades (7%), Kruger (5%); and five controlling 62% of the European tissue capacity: SCA (22%), Georgia-Pacific (14%), Kimberly-Clark (11%), Sofidel (9%), and Procter & Gamble (6%), according to *Paperloop*.

The production and apparent consumption dynamics largely follow the general trend. (See the tables below.)

Tissue production in 2003 - 2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	6,022,590	6,213,571	6,424,482
Latin America	2,105,703	2,176,313	2,375,866
North America	7,134,000	7,135,000	7,186,000
Africa	320,012	291,546	349,696
Asia	6,332,316	6,857,700	7,333,000
Australasia	256,715	248,411	258,794

Source: *Pulp and Paper International 2005 Annual Review*

Tissue apparent consumption in 2003-2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	6,087,097	6,400,840	6,653,776
Latin America	2,096,016	2,147,988	2,313,021
North America	7,246,000	7,275,000	7,302,000
Africa	371,178	328,540	398,683
Asia	6,333,368	6,765,022	7,286,400
Australasia	322,794	327,011	354,812

Source: *Pulp and Paper International 2005 Annual Review*

Early in 2005, *Tissue World Magazine* wrote that the tissue industry was finding itself the object of renewed scrutiny from environmental NGOs: In Europe, WWF International had begun an investigation into the corporate responsibility of the five "tissue giants" - Georgia-Pacific, Kimberly-Clark, SCA, Metsä Tissue and Procter & Gamble, including evaluations of fiber sources and manufacturing processes; in North America, Greenpeace Canada and the Natural Resources Defense Council had joined

forces to campaign against Kimberly-Clark for what they said was its primary role in destroying Canada's boreal forest.

The campaigns have credible potential to really hurt the companies involved. Greenpeace and WWF International are not only respected and trusted by large numbers of consumers, they are also able to mobilize people to boycott products, lobby parliamentarians, etc.

The campaigners insist that tissue companies should switch from 100% virgin fiber tissue to a product with a high recycled content, which may not always be practical or economically feasible from the industry's standpoint. Most consumers would prefer the higher quality tissue products to the "more environmentally friendly alternatives". Yet there is certainly space for a constructive dialogue between the industry and the pressure groups.

1.6. Pulp

Recent years have seen steady increases in pulp capacity in Latin America, Australasia, and Asia, particularly China. But while new pulp mills in China worked largely for the domestic market to meet the dynamically growing demand, the Latin American increase significantly exceeded domestic demand and was intended to make the best of the vast European market, where the overwhelming predominance of semi- and non-integrated mills ensured steady demand for market pulp, and the fast-growing Asian markets. The growth in pulp capacity in China, by far Asia's biggest importer, combined with the sluggish North American and European economies had a depressing effect on pulp prices in exporting countries. (See the tables below).

Pulp production in 2003 - 2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	46,988,165	48,729,221	50,556,483
Latin America	12,622,000	13,854,897	15,000,705
North America	79,232,000	77,869,000	79,991,000
Africa	2,213,081	2,988,880	2,887,765
Asia	38,648,733	36,660,900	37,065,800
Australasia	2,643,324	2,673,831	2,994,257

Source: *Pulp and Paper International 2005 Annual Review*

Pulp apparent consumption in 2003-2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	51,649,839	52,891,096	54,690,009
Latin America	8,265,740	8,295,963	8,705,739
North America	68,801,000	67,614,000	69,382,000
Africa	1,580,589	2,216,532	2,155,785
Asia	49,922,149	48,177,087	50,317,322

Australasia	2,196,676	2,363,165	2,515,035
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Source: *Pulp and Paper International 2005 Annual Review*

Pulp export in 2003 - 2004 by region (metric tonnes)

Region	2002	2003	2004
Europe	12,107,688	13,042,801	13,418,489
Latin America	5,799,020	6,931,377	7,788,432
North America	15,965,000	15,654,000	16,111,000
Africa	935,932	1,062,309	1,029,692
Asia	2,551,237	2,936,735	2,907,203
Australasia	767,493	675,112	860,903

Source: *Pulp and Paper International 2005 Annual Review*

The world economy continued to grow throughout 2004, driven mainly by American economic expansion. In the paper market, high production and shipment levels were registered in all regions. European paper deliveries were growing fast despite the negative impact of the Euro appreciation. All these factors combined to sustain higher demand for pulp. The European market accounted for around 45% of market pulp demand, while the Asian market represented 21% of the world market pulp demand for 2004.

In 2005, the pulp market started in a balanced supply and demand position, bolstered by a positive economic scenario and limited additional capacity that drove up pulp prices. However, the pulp price rebound in fourth quarter 2004 and first quarter 2005 driven by strong demand in Europe and China, as well as hardwood capacity closures, was short-lived, according to Kurt Schaefer, director of fiber at RISI. While Europe remained the largest consumer of market pulp, European consumption of pulp and paper leveled off.

Demand in China will continue to grow and play a key role in the global pulp market. But the country will still be the greatest source of both short-term and long-term volatility, making price cycles shorter and choppy. The startup of Asia Pulp and Paper's (APP) 1 million tonnes/yr bleached hardwood kraft pulp mill on Hainan Island, China, in 2004 will lead to a slowdown in hardwood pulp imports, but intake of softwood pulp will continue to grow to feed new paper and paperboard machines.

The high cash costs for pulp production due to the weak US dollar will force more pulp mills to shut down in Canada and Scandinavia, which mostly manufacture long fiber grades. Availability of softwood pulp will also decline as pulpwood supplies will decrease, thus sending prices upward.

In contrast, a massive increase in new hardwood pulp capacity is coming on line in the short term. On top of the Hainan plant, a raft of new pulp mills in Latin America will bring an extra 3.565 million tonnes/yr of hardwood and an additional 425,000 tonnes/yr of softwood capacity to the market between 2005 and 2007.

1.7. Mergers and Acquisitions

Merger and acquisition activity in the pulp and paper industry has been gradually slowing down over the years following the mega-deal consolidation spree at the turn of the century, with the last blockbuster deals being the US\$8 billion merger of US producers Mead and Westvaco and the US\$8 billion hostile takeover of Willamette by Weyerhaeuser, dating back to early 2002. After a dramatic rewriting of the list of the sector's key players and emergence of global giants with leading positions firmly established, things seem to be quieting down in the M&A world. The larger companies are refocusing their attention from "growing big and growing big fast" into reinforcing their core businesses on the national, regional and global scene, and then spinning off and divesting operations they believe to be strategically irrelevant in order to improve debt-to-equity ratios, profitability, and attractiveness to investors.

The biggest deals since 2002 include the US\$3.2 billion merger in August 2003 between Riverwood International, a major US cartonboard producer, and Graphic Packaging Corp., the largest converter of folding cartons in the US, to form a new company, expected to control 15% of the US market. Also on the list is Boise Cascade's US\$1.2 billion acquisition of OfficeMax, the third-ranked office supplies retailer in the US.

Australian paper merchant company PaperlinX was also busy. Hot on the heels of its acquisition of UK-based paper merchant Bunzl Fine Paper for US\$207 million in June 2002, the company sought to further strengthen its core activity through the A\$1.3 billion (US\$872 million) acquisition of Dutch firm Buhrmann's Paper Merchandising Division, which is Europe's leading distributor of paper and related products to the commercial print, office, and display markets. That deal was completed in October 2003. This acquisition propelled PaperlinX, with its production capacity of just over 800,000 tonnes/yr of paper, from 30th to the 19th slot of the *Pulp and Paper International 2004* Top 100 list by sales.

Another major deal took place in Brazil, where Aracruz Celulose bought Klabin's Riocell pulp unit for US\$610.5 million. The acquisition gives Aracruz the capacity to produce an extra 400,000 tonnes/yr of bleached eucalyptus pulp, as well as 40,000 hectares of eucalyptus plantation lands.

In 2003 in Europe, a major deal was the merger of Italian papermakers Cartiere Burgo and Holding Gruppo Marchi. The Burgo-Marchi Group comprised 15 mills - 14 in Italy and one in Belgium - with a total capacity of 3 million tonnes/yr of paper, of which 80% is coated mechanical and woodfree papers.

The two most current and largest pending deals at the time of this conference include International Paper's planned spin-off of its 50.5% stake in Carter Holt Harvey, and the pending merger between European packaging giants Jefferson Smurfit Group and Kappa Packaging.

Mergers and acquisitions are the main tool of a company's expansion and give a credible indication of the direction the company has chosen for its strategic development.

Part 2: Profiles of the Main Pulp and Paper Companies

2.1. International Paper Co.

Headquarters: 400 Atlantic St., Stamford, CT 06921, USA

Chairman and CEO: John V. Faraci Jr.

Web site: <http://www.ipaper.com>

ICEM web page on International Paper: <http://www.icem.org/?id=112>

International Paper Co. (IP), a US-based corporation registered in Stamford, Connecticut, but with operational headquarters in Memphis, Tennessee, has been the world's largest paper and forest products company historically focusing on printing and office paper, consumer and industrial packaging and forest products.

IP total sales amounted to US\$25.5 billion in 2004 with the company posted a net loss of US\$32 million. This compares to net earnings of US\$302 million in 2003 and net losses of US\$880 million in 2002 and US\$1.2 billion in 2001.

The company owns 6.8 million acres of forestland in the US, and owns or has harvesting rights to another 1.7 million acres in Brazil and Russia.

Since 1996, the company has spent over US\$19 billion on acquisitions, which culminated in June 2000 with the purchase of US-based fine papers company Champion International Inc. for US\$10.2 billion. IP emerged from the deal as North America's largest producer of coated papers (capacity of 2.2 million tons/yr or 19% market share) and uncoated free-sheet (capacity of 5.0 million tons/yr or 33% market share). The company is also the world's No. 1 producer of uncoated papers and bleached paperboard, and third largest producer of containerboard.

Beginning in 2001, IP moved to reorganize its operations and sell non-core assets. The streamlining led to permanent shutdown of dozens of facilities, including pulp and paper mills in Natchez, Mississippi; Moss Point, Mississippi; Camden, Arkansas; Oswego, New York; Lock Haven, Pennsylvania; Erie, Pennsylvania; Corinth, New York, and massive job cuts that reduced the company's workforce by almost a quarter from 112,900 employees in 2000 to 80,000 at the end of 2004.

In July 2004, IP announced a dramatic transformation plan whereby the company will place future focus on just two business platforms: uncoated papers and industrial and consumer packaging, believing its global positions there as the strongest. By the end of 2007, the American company plans to sell or spin off:

- IP's 50.5 percent stake in New Zealand's Carter Holt Harvey;
- The coated and supercalendered (SC) papers business, including the coated groundwood mill and associated assets in Parana, Brazil;
- The beverage packaging business, including its big Pine Bluff, Arkansas, mill;
- The kraft papers business, including the former Champion Roanoke Rapids, North Carolina, mill;
- Arizona Chemical, IP's paper chemicals business;
- Segments or potentially all of its 6.8 million acres of US forestlands; and
- IP's entire wood products business

Half of the targeted proceeds (US\$8-10 billion) will go to reduce the company's debt from its acquisitions spree of the late 1990s, and to strengthen a balance sheet and solidify its investment grade credit rating; another 30% will be used to return value to shareholders; and 20% will be selectively reinvested.

The divestment plan was off to a quick start in September 2005 when IP completed the potential sale of its Carter Holt Harvey shares block for US\$1.14 billion to Rank Group Investments Ltd., run by New Zealand billionaire investor Graeme Hart who intends to split Australia/NZ's largest forest products firm comprised of pulp and paper, wood products and timberlands assets to the highest bidders.

Along with the massive sales of the businesses now defined as non-core, the company transformation program provides for major mill conversions and closures in the uncoated papers and packaging segments of the US. Speaking at the UBS Global Paper & Forest Products Conference in September 2005, John Faraci, IP Chairman and CEO, said the company was planning to reduce the share of income from North American operations from 75% to 50% and significantly increase its income from Latin America (primarily Brazil), China, Eastern Europe (Russia), and Europe (East and Mediterranean).

In September 2005, IP announced that it had bought approximately 65 percent of CMCP, a leading Moroccan corrugated packaging company, for approximately US\$80 million cash plus assumed debt of approximately US\$40 million. Paul Brown, vice president of IP's European Container business, noted, "CMCP fits well with International Paper's strategy to grow our corrugated box business globally ... The country has a rapidly growing economy with low inflation and recently signed free-trade agreements with the European Union and the United States." Early in the year IP said it intended to make investments totaling US\$1.4 billion in 2005.

2.2. Stora Enso Oyj

Headquarters: Kanavaranta 1, PO Box 309, 00101 Helsinki, Finland
CEO: Jukka Härmälä
Web site: <http://www.storaenso.com>

Stora Enso is an integrated paper, packaging and forest products company, a global market leader in the production of publication and fine papers, packaging boards and wood products. With annual production capacity of 16.4 million tonnes of paper and board, Stora Enso became the largest paper and board manufacturer in the world producing 14.52 million tonnes in 2004 and overtaking International Paper Co. in that category, but still remaining behind it in terms of turnover.

In 2004, Stora Enso had consolidated sales of US\$15.37 billion and net earnings of US\$262.2 million, compared to net earnings of US\$230.6 million on sales of US\$13.75 billion in 2003.

Swedish-Finnish company currently has around 43,800 employees in over 40 countries.

Stora Enso was formed in 1998 through the merger of the Swedish company Stora Koppabergs AB and the Finnish company Enso Oyj.

In 2000, the company expanded its business and entered the US market through the US\$4.5 billion acquisition of Consolidated Papers Inc., a leading US producer of magazine and fine papers.

Between 2000 and the end of 2004, Stora Enso, following its asset restructuring program, shut down 7 paper machines, modernized 20 and built 1 new one, the world's largest 400,000 tonnes/yr newsprint machine in Langenbrugge, Belgium. This addition added 750,000 tonnes/yr to its production capacity. In June 2005, Stora Enso acquired a 29% stake in Corenso from UPM Kymmene, becoming 100% owner of the firm. Corenso, a major European tube and core producer, has 4 paperboard mills in France, Finland and the US, together with 12 tube and core converters in Europe, one in China and one in the US, as well as associated companies in Canada and Spain.

Yet it is in the emerging markets, particularly those of South America, China and Russia, that Stora Enso's development drive has been geared to in recent years.

In May 2003, Stora Enso and Aracruz Celulose entered a 50/50 joint venture to construct a eucalyptus pulp mill for Veracel Florestal Celulose at Eunápolis in the state of Bahia, Brazil. The US\$1.2 billion 900,000 tonnes/yr facility, the largest single-line pulp mill in the world complete with plantations and infrastructure, was commissioned in May 2005, 2 months ahead of schedule, and in September 2005, Stora Enso announced its plans to double the mill's capacity by installing a second line.

In October 2004, Stora Enso announced that it had acquired 66% of the shares in the Polish packaging producer Intercell from private shareholders and the World Bank's International Finance Corp. The sale was announced to further expand Stora Enso's corrugated packaging business and strengthen the company's presence in the fast-growing Polish market.

In Russia, the company is considering plans to invest €1 billion by 2010 into a greenfield pulp mill and forestlands. Stora Enso also expanded its Balabanovo packaging mill in 2002 and commissioned another mill in Arzamas in June 2004 to supply 75 million m² of corrugated packaging products to the local market.

In 2004, Stora Enso started a joint venture with Shangdong Huatai Paper of China to assess the feasibility of publication papers production in China. In Guangxi Province, southern China, Stora Enso established 20,000 hectares of plantations with the prospect of building a pulp mill in the country. In August 2005, Stora Enso announced that it had signed a letter of intent to start a joint venture, in which Stora Enso will have a clear majority stake, with Chinese board producer Foshan Huaxin Packaging Co. Ltd. to produce liquid packaging board for the world's fastest-growing market, China.

In September 2005, Stora Enso started buying land in Uruguay and southern Brazil with the aim of acquiring 100,000 hectares of plantation lands in each country. An area of 100,000 hectares of trees would provide enough fiber to feed modern greenfield pulp mills in both Brazil and neighboring Uruguay. "We don't exclude that possibility," said Nils Grafstrom, president of Stora Enso Latin America, speaking to *Paperloop*.

2.3. Svenska Cellulosa (SCA)

Headquarters: Box 7827, 103 97 Stockholm, Sweden

President, CEO and Director: Jan Åström

Web site: <http://www.sca.com>

ICEM web page on SCA: <http://www.icem.org/?id=101>

Svenska Cellulose AB (SCA) is a Sweden-based integrated paper company that produces absorbent hygiene products, corrugated packaging, and forest products. Over the past decade, SCA has transformed itself from a narrowly focused forest products business to a strategically driven "growth" company centering on high-value hygiene products and packaging. SCA sales in 2004 amounted to US\$12.24 billion, awarding the company the third spot on *Pulp and Paper International's* Top 100 list. Net earnings in 2004 were US\$495.1 million compared to US\$627.9 million in 2003.

Since 2002, volume growth of mainly hygiene products has totaled 15% and the company has set a goal of increasing volume at an average rate of 8-10% per year for the period 2002-2007, while maintaining double-digit operating surplus (EBITDA) margins. Acquisitions would provide two-thirds of this growth and one-third would come from expansion of existing businesses. In 2003, volume growth was only 4% due to weak market conditions, increased competition and lower pricing. Total sales were €9.37 billion compared to €9.62 billion in 2002.

The increasing emphasis on hygiene products and packaging has changed SCA's sales mix. In 1991, hygiene products (tissue, diapers, feminine hygiene and incontinence products) and packaging (containerboard, corrugated and specialty products) accounted for 65% of SCA's annual sales. In 2003, the two segments generated 85% of the group's sales and 81% of operating profits. Hygiene products contributed half of SCA's 2003 sales while packaging accounted for 35%. The company's forest products business, which includes SCA's market pulp and publication papers segment, accounted for 15%.

SCA took giant steps forward in the North American market during 2001 by buying Georgia-Pacific's away-from-home (AFH), or institutional, towel and tissue business. It had earlier purchased foam-packaging company Tuscarora. These two deals highlighted the group's €1.40 billion (SEK13.3 billion) shopping spree. The SEK8.3 billion (€ 0.88 billion) purchase of Georgia-Pacific's AFH towel/tissue business established SCA as North America's third largest tissue supplier behind Georgia-Pacific and Kimberly-Clark. The group quickly raised its share of this North American market from 17% to 19% by snapping up U.S.-based Encore Paper Co. of New York during late 2001 for SEK 969 million (€102 million).

SCA used the SEK 3 billion (€ 318 million) takeover of Tuscarora as a springboard into North America's protective packaging market. After latching on to Tuscarora, SCA purchased three more U.S.-based specialty packaging companies, Ohio-based RPA, Arizona-based Insulated Shipping Containers and California-based Marko Foam Products.

While pouring more of its resources into North American expansion, SCA also continued to bolster its position in Europe. It purchased two French-based businesses – Anjou Emballages and Cartonnages Industriels – and Pakkausjaloste in Finland. In a pair of July 2002 deals, SCA sold its 51% stake in German liquid packaging manufacturer Zewathener to DS Smith and paid €131 million for Verpackung & Display

Stabernack, a privately held packaging manufacturer in Germany. In 2004, SCA acquired the Italian packaging company Busto & Tema.

SCA added to its European consumer tissue base in April 2002 by acquiring Italy-based CartoInvest for €472 million, including assumed debt. In 2003, it purchased 50% of Papeles Industriales S.A. (PISA), Chile's second largest tissue producer. SCA also commissioned a new US\$240 million integrated tissue mill and converting facility in Barton, Alabama, to supply the southeastern U.S. market. The company recognized ICEM affiliate PACE (now USW) as the bargaining representative for workers at this new mill, a rare occurrence in US labor relations. In 2003, SCA also approved a new tissue paper machine in Columbia. In early 2004, SCA paid SEK1.8 billion (US\$240 million) to acquire 67% (and 50% of the voting rights) for the tissue operations of Copamex S.A. de C.V., Mexico's second largest tissue producer after Kimberly-Clark de Mexico. In May 2004, SCA completed its NZ\$655 million (US\$456 million) purchase of Carter Holt Harvey Tissue, and the 50% of Sancella, its hygiene products joint venture, that CHH previously held. Also in the hygiene products sector, SCA bought Malaysian incontinence products outfit, Drypers, for US\$87 million.

SCA sold a minority holding in Metsä Tissue at the beginning of 2003, freeing up about SEK650 million (€72 million). The holding was acquired as part of a takeover effort, which was blocked by European competition authorities in 2001. SCA holds the No. 1 position in the Western Europe tissue market, followed by Georgia-Pacific and Kimberly-Clark.

In 2003, SCA continued to consolidate its North American packaging business with three acquisitions: Alloyd Inc., the leading North American supplier of clear plastic consumer packaging; corrugated board manufacturer Southeastern Packaging; and protective packaging company Specor Systems Inc. In Asia, SCA increased its ownership interest in Central Packaging Group (Cenpak), a leading player in the Chinese packaging market, first to 65% and then to 92.5%. The company has now been renamed SCA Packaging Asia.

In the Forest Products sector in 2003, SCA acquired the remaining 41% of the forestry company Scaninge in Sweden, adding 390,000 hectares of commercial timberlands, which will increase the supply of wood for SCA pulp, paper and sawmill facilities in northern Sweden. In 2002, SCA commissioned a new 240,000 tonnes/yr supercalendered (SC) paper machine at the Laakirchen mill in Austria, which contributed to an 11% increase in publication paper shipments during 2003. The company plans to raise the production capacity of Paper Machine No. 11 to 360,000 tonnes/yr in the future.

The number of employees in the company increased from 46,000 in 2003 to close to 50,000 by the end of 2004.

2.4. UPM

Headquarters: Eteläesplanadi 2, PO Box 380, 00101 Helsinki, Finland

President and CEO: Jussi Pesonen

Web site: <http://www.upm-kymmene.com>

In January 2004, the company known since 1996 as UPM-Kymmene dropped "Kymmene" and re-branded itself simply as UPM for all corporate and commercial functions.

UPM is one of the world's leading papermakers with annual production capacity of 12 million tonnes and is the world's largest producer of magazine papers. Its core products are high-quality supercalendered (SC) and lightweight coated (LWC) magazine papers, newsprint, fine papers and specialty papers, supplemented by wood products, label stock, silicon papers and industrial wrapping papers. In addition, UPM owns 47% of Metsä-Botnia, one of Europe's biggest pulp producers with an annual capacity of 2.7 million tonnes.

The main geographic markets for UPM products are European Union nations and North America, which together account 75% of the total sales. Sixty-five percent of the company's revenues come from paper division. The company has pulp and paper mills in 15 countries including Finland, France, Germany, UK, US, Canada and China. UPM had total sales of US\$12.2 billion in 2004 with net earnings of US\$1.19 billion (compared to US\$360.3 million in 2003). The company employs just over 33,400 people compared to 34,482 at the beginning of 2004.

In November 2001, UPM completed the largest acquisition in the company's history, purchasing four paper mills from Germany's Haindl Group for a total enterprise value of €2.69 billion. This acquisition added capacity of 1.9 million tonnes of publication papers and strengthened UPM's position as the leading magazine papers producer in Europe and one of the leading producers of newsprint in Europe.

In September 2005, UPM completed the new 430,000-tonne fine papers machine at the Changshu mill in China, fully owned by the company since 2000. This increased UPM's total investment in China to over US\$1 billion, and more than doubled the Finnish company's fine paper capacity in China and made the company the biggest producer of uncoated fine papers in that country. The new paper machine is the world's biggest and fastest paper machine producing uncoated fine papers, which is in line with UPM's philosophy of maintaining technological sophistication of its paper division's machines. These modern units are more than twice the size of the global average and 50% larger than the average for all European producers. Also in September 2005, UPM's Raflatac, the pressure-sensitive paper labels business, announced plans to build a US\$40 million world class labelstock facility in Changshu, adjacent to the paper mill there. For UPM, the investment means an enhanced and more diversified presence in the Chinese market. Earlier in 2005, Walki Wisa, a part of UPM's converting division, announced plans to build a €6 million converting factory in the Riverside Industrial Park, Jiangsu Changshu Economic Development Zone, approximately 100 kilometres from Shanghai where Walki Wisa has had a printing unit since 2002.

In August 2005, UPM launched a program to reduce the unit costs in magazine paper production and improve the company's profitability with details of the restructuring plan to be finalized within the next 12 months. In conjunction with the program, closures and conversions of older paper machines will take place. In response to weaker markets, UPM closed two older coated magazine papers machines at its Blandin paper mill in the US in 2003, and a book papers machine at the Voikkaa mill in Finland in early 2004. Additional cost cuts were planned leading to permanent annual savings of €200 million by the beginning of 2005. The program also includes an investment in a new paper

machine producing supercalendered (SC) magazine papers in continental Europe. The new machine will have an annual capacity of approximately 400,000 tonnes of state-of-the-art SC paper, but UPM's production capacity of magazine papers will increase only by approximately half the new machine's capacity because of the restructuring program.

2.5. Oji Paper

Headquarters: *Ginza 4-7-5, Chuo-ku, Tokyo, 104-0061, Japan*

President and CEO: *Shoichiro Suzuki*

Web site: <http://www.ojipaper.co.jp>

Oji Paper, Japan's second biggest papermaker, operates nearly 20 paper mills throughout Japan that produce a variety of paper products, including printing and writing papers and corrugated board and boxboard. The company also makes paper-based containers, plastics, thermal papers, and disposable diapers. Other business segments manufacture packaging equipment and chemicals for making paper. Oji Paper also has forestry and real estate operations. The company has more than 120 subsidiaries and affiliates worldwide, including operations in the Americas, the Asia/Pacific region, and Europe.

Oji Paper's sales from pulp, paper and converting operations amounted to US\$9.61 billion in 2004 with net earnings of US\$450.6 million (US\$315.7 million in 2003 and US\$224 million in 2002).

Oji Paper has expanded its product line of 100% recycled products, previously limited to newsprint and printing papers, to include carbonless and specialty paper products. It plans to increase its use of recycled fibers to 70% of all the raw material it uses by 2010.

On the heels of a recession in Japan (90% of sales), the company has endeavored to cut costs through workforce reductions and the elimination of some operations, mostly old and low capacity facilities. The company's workforce shrank from 21,300 in 2001 to 18,634 in 2005, mainly through encouraging early retirement and attrition.

While continuing to restructure in pursuit of a healthier bottom line, Oji Paper is looking to new markets in Asia. In September 2005, Oji Paper was forced to bring a Chinese partner on board its ¥ 220 billion (US\$2 billion) project to build a greenfield mill in Nantong city, in China's Jiangsu province, after the Chinese government revised its guidelines on investments by foreign firms. It went into a 90/10 joint venture with Nantong Economic and Technological Development Zone Corp., which owns the industrial park where the new plant will be built. The mill is a three-phase project, the first leg of which is the installation of a 400,000 tonnes/yr woodfree paper machine, a coater and a coal boiler, as well as work on a port facility, slated for start-up in 2007. Phase two will include another 400,000 tonnes/yr fine paper machine, a coater, a kraft pulp line and a recovery boiler. This stage is scheduled for completion in 2009. The final leg of the project will comprise a third 400,000 tonnes/yr woodfree paper machine, which is scheduled for startup in 2011. Oji Paper has already obtained the permits for the paper machines and boilers.

In February 2005 in Vietnam, Ojtex Holdings, a 70/30 joint venture between Oji Paper and Malaysia's Texchem Resources Group, brought a new US\$12 million converting plant on line in the port city of Haiphong, some 100 km southeast of Hanoi. Ojtex also operates a corrugated board plant in Dong Nai province, southern Vietnam.

In July 2005, Oji Paper reached an agreement with Illford International Holdings BV to acquire all shares in Illford Imaging Switzerland GmbH, of which Illford International Holdings is the sole owner. Illford Imaging Switzerland has developed resin-coated glossy Inkjet papers for printing digital-camera images, and built a solid position for itself in this industry. Oji Paper Group is particularly interested in building a full inkjet-paper product lineup straddling both cast glossy and resin-coated glossy media types, enabling it to secure for itself a large share of the top-quality photographic inkjet-paper market.

2.6. Kimberly-Clark

Headquarters: 351 Phelps Dr., Irving, TX 75038, USA

Chairman, CEO and President: Thomas J. Falk

Web site: <http://www.kimberly-clark.com>

The US-based Kimberly-Clark is the world's top maker of personal paper products: facial and bathroom tissues, paper towels, and other household items, personal care products, and commercial wipes. In 2004, the company's sales from its tissue and converting operations amounted to US\$9.31 billion out of the consolidated sales of US\$15.08 billion. Its net earnings of US\$1.8 billion in 2004 compare to US\$1.69 billion in 2003 and \$1.67 billion in 2002 – a top earner among pulp and paper companies.

In 1999, the company paid US\$365 million for the tissue business of Swiss-based Attisholz Holding. The acquisition nearly tripled the sales of Kimberly-Clark's tissue business in Germany, Switzerland, and Austria.

In 2000, the company bought virtually all of Taiwan's S-K Corp., a move that made Kimberly-Clark one of the largest manufacturers of consumer packaged goods in Taiwan and set the stage for expanded distribution in the Asia/Pacific region. The company later purchased Taiwan Scott Paper Corporation for about US\$40 million and merged the two companies, forming Kimberly-Clark Taiwan. In 2001, Kimberly-Clark bought Italian diaper maker Linostar, and announced it was closing four Latin American manufacturing plants.

In 2002, Kimberly-Clark purchased paper-packaging rival Amcor's 45% stake in Kimberly-Clark Australia tissue manufacturing joint venture for US\$375 million in cash and debt. Adding to its global consumer tissue business, in 2003, Kimberly-Clark acquired the Polish tissue-maker Klucze from International Paper.

In early 2004, Chairman and CEO Thomas Falk began rolling out the global business plan the company had detailed in July 2003. In 2004, K-C realigned its North American and European businesses and formed a unit to increase sales in emerging countries abroad. Also, it spun off its paper (Neenah Paper, and technical papers division), pulp, and timber operations in 2004. Kimberly-Clark kicked off a multiyear reorganization in July 2005.

Using its momentum from reorganization efforts begun in 2004, Kimberly-Clark has continued to restructure its operations. In April 2005, the company combined its North Atlantic Personal Care and Family Care businesses to form a North Atlantic Consumer Products unit, which serves North America and Europe. In mid-2005, Kimberly-Clark announced that it would purge about 10% of its workforce (some 6,000 employees) worldwide, close or sell more than 20 plants (representing about 17% of its manufacturing facilities), and streamline its operations - all by the close of 2008 - as it progresses deeper into a global business plan, launched two years ago.

2.7. Nippon Paper

Headquarters: *Shin Yurakucho Bldg., 1-12-1 Yurakucho, Chiyoda-ku, Tokyo, 100-0006, Japan*

President: *Masatomo Nakamura*

Web site: <http://www.np-g.com>

Nippon Paper Group (formerly Nippon Unipac Holding) was created by bringing two rivals together (Nippon Paper Industries and Daishowa Paper Manufacturing), resulting in the largest paper producer in Japan with a market share of about 40%. This company is also the top liquid packaging carton maker in Japan, with an approximate market share of 33%.

The company manufactures newsprint and printing papers, household towel and tissue, converted paper products, liquid packaging, wood pulp, paperboard, lumber and other construction materials, and chemicals. Nippon Paper Group has 17 mills in Japan, and overseas operations in Australia, Canada, Chile, China, Finland, New Zealand, Russia, South Africa, and the US.

The pulp and paper segment is the principal segment of the company and accounts for more than 75% of total sales (77% in 2003). This segment includes paper, paperboard and household tissue manufacturing. Nippon Paper had 2004 consolidated sales of US\$10.9 billion in 2004 with US\$225.1 million in net earnings (US\$209.2 million in 2003 and US\$39 million in 2002). The company employs 13,774 workers.

During November 2001, Nippon Paper Industries Co. Ltd. sold two newsprint paper machines at its Yatsushiro Mill to Guangxi Jing Da Xing Paper Industry Co. Ltd.

In early 2002, three new subsidiaries, Nippon Paper Lumber Co. Ltd. (trade lumber and lumber products); Nippon Paper-Pak Co. Ltd. (liquid containers and other paper packaging); and Nippon Paper Chemicals Co. Ltd. were formed through the separation of the company's non-paper milling divisions.

In July 2003, Nippon Paper Industries, a core company of the then Nippon Unipac Holding Group, as part of its strategy to expand its presence in China - and invest in a Shanghai-based corrugated carton board manufacturing company - established a joint venture for producing corrugating medium in Zhejiang.

Towards the end of 2003, in December, a subsidiary of the Nippon Paper Industries, Nippon Paper-Pak, along with Elopak AS, formed a joint venture holding company called Elopak Nippon Paper-Pak Holding B.V. The new company deals in the beverage packaging business in China. Also during that month, Nippon Paper Industries Co. Ltd. formed a paper manufacturing company based in China.

In June 2005, Nippon Paper Group mapped out its growth strategy for the next 10 years, entitled Group Vision 2015. Under the plan, the company aims to become one of the world's top five pulp and paper companies. The group is targeting consolidated sales of ¥ 1.5 to 2 trillion (US\$ 13.9 to 18.6 billion) and an operating profit of ¥ 100 billion from the domestic market, as well as boosting its overseas business. Nippon Paper has laid out several strategies to achieve the goals. These include expanding its core businesses in three key markets, Asia, North America and Europe; to take its overseas sales ratio up to 30%; and to expand through mergers and acquisitions and forming alliances. On top of that, Nippon Paper intends to investigate comprehensive "scrap and build" initiatives.

2.8. Weyerhaeuser

Headquarters: 33663 Weyerhaeuser Way South, Federal Way, WA 98063-9777, USA

Chairman, President and CEO: Steven R. Rogel

Web site: <http://www.eyerhaeuser.com>

The principal business segments of US-based Weyerhaeuser are timberlands, building products, cellulose fibers, paper and packaging, real estate, and transportation. The 2004 sales from pulp, paper and converting operations amounted to US\$8.65 billion, or 38% of the company's consolidated sales of US\$22.67 billion, a 5.7% increase from 2003.

After a protracted hostile takeover, in March 2002 Weyerhaeuser acquired Willamette Industries, another integrated forest product company, in a US\$6.1 billion cash deal. The company closed three North American plants (in Colorado, Louisiana, and Oregon) later that year. In October 2003, Weyerhaeuser closed a Canadian containerboard mill, cutting 140 jobs in the process. At the close of the year, Weyerhaeuser sold approximately 115,000 acres of timberlands for about US\$211 million to aid in paying down debt associated with the Willamette acquisition. Altogether, Weyerhaeuser closed 12 facilities and sold about 444,000 acres of non-strategic timberlands in 2003, reducing its debt by US\$1.1 billion.

The company closed its Grande Cache, Alberta, Canada, sawmill in February 2004, adversely affecting more than 150 jobs. In 2004, Weyerhaeuser sold roughly 270,000 acres of timberlands in the US state of Georgia for US\$400 million and sold or closed 11 mills and paper converting facilities to achieve net earnings of US\$1.3 billion, increasing the 2003 figure by more than 3.5 times. In 2004, Weyerhaeuser changed the name of its pulp business to Weyerhaeuser Cellulose Fibers to reinforce its focus on developing unique or specialized applications for cellulose fibers.

Early in 2005, Weyerhaeuser agreed to sell five Canadian sawmills, two finishing plants, 635,000 acres of timberlands, and some cutting rights on Canadian government lands to Brascan for US\$970 million. Weyerhaeuser had acquired the timber and sawmill assets when it acquired MacMillan Bloedel in 1999.

The company's workforce shrank dramatically from 57,000 in 2003 to 35,000 in 2005.

2.9. Smurfit-Stone Container Corporation

Headquarters: 150 N. Michigan Ave., Chicago, IL 60601, USA

Chairman, President and CEO: Patrick J. Moore

Web site: <http://www.smurfit-stone.com>

Smurfit-Stone Container Corp. makes corrugated containers (over half of sales), containerboard, boxboard, bag packaging, folding cartons, paper tubes, and labels. Corrugated board and containers account for 75% of sales. The vertically integrated company is one of the world's largest recyclers of paper fiber, a key raw material in the production of the company's products. Smurfit-Stone buys the bulk of its wood fiber on the open market, but it also owns more than a million acres of timberlands in Canada and operates harvesting facilities in the US and Canada. In 2002, Ireland-based Jefferson Smurfit Group dispersed the 29% of Smurfit-Stone Container it once owned to US-based Madison Dearborn.

Smurfit-Stone acquired specialty containerboard manufacturer St. Laurent Paperboard of Canada in 2000 in a deal worth US\$1.4 billion. St. Laurent operates four containerboard mills and 16 packaging plants. With all its growth, Smurfit-Stone continued to trim operations and cut costs. The company absorbed its specialty packaging unit into its consumer packaging division in January 2002.

Also in 2002, the company purchased a corrugating medium mill, seven corrugated container plants (three of which were closed before year's end), one hardwood sawmill, and some 82,000 acres of timberlands from MeadWestvaco Corp. for about US\$375 million.

In 2003, the company sold its European assets to Jefferson Smurfit for 50% of that company's Canadian unit and US\$200 million.

The company ended the year 2004 with a net loss of US\$57 million on total sales of US\$8.3 billion, compared to a net loss of US\$208 million on total sales of US\$7.7 billion in 2003. Ninety percent of all company sales are generated inside the US market.

2.10. M-real

Headquarters: *Revontulentie 6, 02100 Espoo, Finland*

President and CEO: *Hannu Anttila*

Web site: <http://www.m-real.com>

The Finnish company M-real Oyj produces about 6 million tons of paper and paperboard a year, focusing on four core businesses areas: Consumer Packaging, Publishing, Commercial Printing and Office Papers. It also owns and intends to further develop a wholesale organization, Map Merchant Group, which covers 23 countries in Europe. M-real has 26 production units in 9 European countries, but 10,000 of its 15,500 workforce are in Finland. In 2004, the company's total sales were US\$6.78 billion with net earnings of US\$14.9 million, compared to a loss posted in 2003 of US\$90.2 million on sales of US\$6.8 billion.

The company acquired the name M-real in 2001 when it changed it from Metsä-Serlä.

In 2000, M-real acquired Modo Paper (Sweden), and, in 2001, Zanders (Germany) from International Paper.

In November 2003, pursuing its divestment plans for non-core businesses, M-real announced that it was selling 66% of its wholly owned subsidiary, Metsä Tissue Corp., to Metsäliitto Osuuskunta. The divestment was done in January 2004, when M-real sold its stake in Metsä Tissue to Varma Mutual Pension Insurance Co. and Sampo Life Insurance Co.

In the past, the pulp business Oy Metsä-Botnia Ab Kemiart Liners had been jointly owned with UPM-Kymmene (M-real had a 47% stake in the resource company); however, M-real bought the remaining shares of the coated white-top linerboard business for liquid and food packaging in mid 2004. In October 2005, the company rebuilt Paper Machine No. 1 at Kemiart Liners in Kemi, Finland, to boost the printability and smoothness of the board produced on the mill's single 345,000 tonnes/yr white-top linerboard machine. Earlier, in August 2005, M-real commissioned to operation a 300,000 tonnes/yr bleached chemi-thermomechanical pulp mill in Kaskinen, Finland. The total value of the investment is €180 million.

2.11. Smurfit Packaging Group

Headquarters: Beech Hill, Clonskeagh, Dublin 4, Ireland
CEO: G.W. McGann
Web site: <http://www.smurfit.ie>

This Irish company, formerly know as Jefferson Smurfit Group, Ltd., has traditionally been the world's top maker of containerboard and corrugated containers, and also a leader in old corrugated container (OCC) recycling markets. The company produces containerboard and converts it into corrugated cases, folding cartons, paper sacks, tubes, and composite cans. Other products include boxboard, kraft bag paper, newsprint, and printing and writing papers. The company produces 4.5 million tonnes annually and owns and operates 300 facilities throughout the world. In 2004, the company's sales were US\$5.97 billion, 11.3% higher than 2003 sales.

Smurfit Packaging Corp. now concentrates on the European market; the company has virtually no operations in North America since 2002 when it divested of its 29% stake in Smurfit-Stone Container Corp. to US-based investment group Madison Dearborn Partners for US\$3.5 billion in cash. In 2003, the company acquired the European assets of its former US affiliate Smurfit-Stone Container for 50% of the value of the Canadian unit and US\$200 million. Later that year, the company expanded its international paper operations through the acquisition of Spanish-based Papelera Navarra, later renamed Smurfit Navarra.

In September 2005, Jefferson Smurfit Group (JSG) and Kappa Packaging announced a proposal to merge their respective operations. The merger is subject to a number of conditions including EU competition approval and consultation with the relevant employee representative organizations. The merged group would gain a 21.7% share of the western European containerboard market, according to RISI. Jefferson Smurfit is currently the leader with 13%, followed by SCA with 12% and Kappa with 8.7%.

2.12. Kappa Packaging

Headquarters: Dr. Holthoepaan 5, 5652 XR Eindhoven, The Netherlands
President and CEO: Frits Beurskens
Web site: <http://www.kappapackaging.com>

The Dutch paper packaging group is the third largest European corrugated producer, behind Jefferson Smurfit and SCA. Kappa has a capacity of 2.3 million tonnes/yr of containerboard and 1 million tonnes/yr of cartonboard among 126 production sites in 20 countries. The company's 2004 sales amounted to US\$3.4 billion, a 7.8% increase from the 2003 figure. For the past few years Kappa Packaging has been operating at a growing loss (US\$98 million in 2004, US\$27.1 million in 2003, US\$9.3 million in 2002).

In mid-2001, Kappa Packaging doubled its size with the US\$1 billion acquisition of AssiDomän Group's containerboard and corrugated packaging operations, thus strengthening its position in the European packaging industry.

The proposed merger by Kappa and Jefferson Smurfit Group, if approved, will have a global effect. A merged entity would result in enhanced geographic reach across Europe and Latin America and the workforce will grow to 43,000. In 2004, revenue generated from the combined operations totaled €7.6 billion. These operations span 23 European and 9 Latin American countries, with total capacity exceeding 6.1 million tonnes of containerboard annually and 5.1 million tonnes of corrugated. "The combined companies would comprise JSG's leading market position in Latin America and existing market positions in Western and Southern Europe with Kappa's positions in Northern and Eastern Europe. The new company would become a world leader in corrugated, a European leader in containerboard and retain leading market positions, in both paper grades, in Latin America," reported paper trade journal *Paperloop*.

2.13. Sappi

Headquarters: 6/7th Fl., Sappi House, 48 Ameshoff St., Braamfontein, Johannesburg, 2001, South Africa
CEO and Director: Jonathan Charles Alexander Leslie
Web site: <http://www.sappi.com>
ICEM web page on Sappi: <http://www.icem.org/?id=115>

The South African company Sappi is one of the world's leading producers of coated fine papers. Fine paper is the company's principal product and consists of both coated and uncoated varieties. The company also produces specialty papers and casting release papers. Sappi's production operations are conducted through the following divisions: Sappi Fine Paper Europe, Sappi Fine Paper North America, Sappi Fine Paper South Africa, and Sappi Forest Products, a fully integrated pulp and commodity paper products business operating solely in South Africa. Sappi operates in the 3 distinct geographical regions with 8 fine paper mills in Europe, 4 in North America, and 3 South Africa.

In 2004, the company posted pulp and paper sales of US\$4.73 billion with net earnings of US\$78 million, compared to net earnings of US\$161 million on sales of US\$4.3 billion in 2003. The company employs 16,000 people.

In May 2001, Sappi Fine Paper North America, focusing on its core business, coated fine paper, exited the US uncoated paper business by closing a mill in Mobile, Alabama. More consolidation in the US coated arena saw Sappi buy Potlatch Corp.'s

Northwest Paper Div. in Minnesota for US\$480 million in cash in March 2002. The acquisition principally consisted of a pulp and coated papers operation in Cloquet, one of two Sappi mills that can produce a triple-coated stock, and agreement with Potlatch that it would close the other Northwest mill in Brainerd, Minnesota, in order to reduce global coated capacity.

Also in March 2002, Sappi ended its presence in the carbonless paper market by closing its Transcript mill in Scotland.

Sappi did enter the Chinese market in October 2004 through a joint venture with Shandong Chenming Paper Holdings Limited, acquiring 34% of the company.

2.14. Norske Skog

Headquarters: Oksenøyveien 80, 1326 Lysaker, Norway

President and CEO: Jan A. Oksum

Web site: <http://www.norske-skog.com>

ICEM web page on Norske Skog: <http://www.icem.org/?id=104>

The Norway-based company Norske Skogindustrier (Norske Skog) is the world's number 2 manufacturer of newsprint behind Canadian-based Abitibi-Consolidated. Norske Skog, which incorporates recycled paper into some products, operates 24 paper mills in 15 countries worldwide and has over 8,000 employees. The company's 2004 sales amounted to US\$3.75 billion, coming with net earnings of US\$97.1 million. In 2003, net earnings were US\$56.8 million on sales of US\$3.4 billion.

In 2000, the group made strategic acquisitions that secured a global production base and positioned it as an international newsprint and magazine paper manufacturer. In 2001, Norske Skog acquired (through subsidiary Norske Skog Canada) Pacifica Papers and that company's two British Columbia mills. It also agreed to pay UPM Kymmene US\$946 million for paper mills in Germany and the Netherlands, which significantly increased Norske Skog's position in magazine grades across Europe. UPM Kymmene made the deal in order to get EU approval to purchase German rival Haindl. Also in 2001, Norske Skog and Peterson merged their fine paper operations in Norway and Sweden into a joint holding company.

In September 2005, the company further reinforced its strong presence in Asia through becoming the sole owner of the Pan Asia Paper Co., Asia's largest newsprint manufacturer outside Japan. Norske Skog bought the remaining 50% stake from its partner in the joint venture, Abitibi-Consolidated. In China, the company constructed the country's largest newsprint machine in Hebei province, which began initial production in June 2005. Norske Skog is looking to expand further in China, which already consumes more newsprint than the UK and Germany, the two largest European markets.

Despite Norske Skog's global expansion, the Norwegian company has been focusing on its core European pulp market, and divesting of unprofitable ventures. Europe accounts for more than 60% of Norske Skog's sales. In 2004, the company's European mills delivered 3.6 million tons of newsprint and magazine papers to paper markets. In response to what the company says is overcapacity in the European paper industry, Norske Skog plans to close its Norske Skog Union mill in Skien, Norway, during the first quarter of 2006.

In South America and Australasia, the group has a strong foothold and is the only large producer of newsprint from plantation-grown pine in the regions.

2.15. Abitibi-Consolidated

Headquarters: 1155 Metcalfe St., Ste. 800, Montreal, Quebec H3B 5H2, Canada
President and CEO: John W. Weaver
Web site: <http://www.abitibiconsolidated.com>

Abitibi-Consolidated is the world's largest newsprint manufacturer with a production capacity of over 5.4 million tons of paper annually and it also sets the global standard in newspaper and magazine recycling. Other products include groundwood papers, pulp, and lumber. Newsprint accounts for nearly 60% of Abitibi-Consolidated's sales, and almost three-fourths of the company's sales are generated at home in Canada. Abitibi-Consolidated has ownership interests in some 26 paper mills in Canada, the UK, and the US, controlling 33% of the North American newsprint capacity. Sales in 2004 stood at US\$4.46 billion, and the company posted a net loss of US\$27.7 million, compared to net earnings of US\$124.9 million in 2003 and US\$164.9 million in 2002.

Pricing pressures have caused cries of overcapacity in the paper sector and this, in turn, has brought ongoing consolidation. Abitibi-Consolidated has made a goal to further reduce newsprint production in response to high energy prices and low sales volume. Pursuing this strategy, Abitibi-Consolidated idled two North American paper mills (located in Lufkin, Texas, and Port-Alfred, Quebec) in 2003. The company also closed two previously idled mills in Sheldon, Texas, and another mill in Port-Alfred, Quebec, in hopes of reducing operating costs.

Throughout 2001 and 2002, Abitibi invested US\$50 million in its Thorold, Ontario, mill for the construction of a new de-inking plant, making the Thorold mill the second mill in Canada to produce newsprint using 100% recycled fiber.

In February 2004, the company sold its remaining interest in SFK Pulp Fund.

2.16. Bowater

Headquarters: 55 E. Camperdown Way, Greenville, SC 29602, USA
Chairman, President and CEO: Arnold M. Nemirow
Web site: <http://www.bowater.com>

US-based Bowater is one of the world's leading newsprint makers with production capacity of nearly 3 million tonnes a year. Other products include coated and uncoated groundwood papers, market pulp, and lumber. The company operates 12 pulp and paper mills in the US, Canada, and South Korea. Several of its facilities can use recycled paper as raw material. Bowater's newsprint division accounts for about half of the company's sales. Customers in the US, where Bowater controls close to 20% of the newsprint market, account for more than 70% of sales. The company's 2004 total sales reached US\$3.19 billion with a net loss of US\$87.1 million. That compares with the net losses of US\$205 million in 2003 and US\$142.4 million in 2002.

Bowater's answer to falling newsprint demand due to declining newspaper circulation was to broaden its product offerings. In 2001, it acquired Canada-based Alliance Forest Products for US\$770 million. The acquisition added three paper mills and 10 sawmills

along with a higher-margin fluff pulp market presence. The company also hopes to cash in on the growing demand for coated papers.

Bowater announced job cuts in 2002 (up to 500) and in 2003 announced the closing of a specialty paper machine in Quebec, a move that reduced production capacity by 100,000 metric tonnes annually.

2.17. Asia Pulp & Paper Company (APP)

Headquarters: 69 Loyang Dr., 508958 Singapore
Executive Director, President and CEO: Teguh Ganda Wijaya
Web site: <http://www.asiapulppaper.com>

One of the world's largest vertically integrated pulp and paper companies, Singapore-based Asia Pulp & Paper (APP) can produce 2 million tons of market pulp annually and more than 5 million tons of paper and packaging materials each year. The company makes printing and writing papers and paperboard. Its packaging systems include cartons and tubes, and its stationery products include spiral notebooks, loose-leaf notebook paper, envelopes, and hardcover books. APP also makes office paper and bleached hardwood kraft pulp. A unit of the Sinar Mas group, the financially troubled company—now carrying a debt load of US\$6 billion—operates 14 plants in Asia-Pacific and sells to customers in 60 countries. The company's 2004 sales were estimated at US\$3.47 billion. The company's estimated workforce is 70,000 people.

APP defaulted on debt totaling US\$14 billion in March 2001, sparking a legal battle between the company and a group of secured bondholders led by Oaktree Capital and Gramercy Advisors. The bondholders sued the company to enforce a US\$353 million judgement, although a New York appeals court ruled in May 2005 that the bondholders had not proved they held the bonds when they initially sued.

Part 3: The ICEM Response to Globalization

The ICEM's Second World Congress in Durban, South Africa, in 1999, laid down a firm foundation on which to build a strategic response to globalization, a foundation that essentially combines two principles: building global trade unionism to challenge global corporate power, and promoting unity among workers of every land: two goals, two parts of the whole, which are meaningless without each other. They encompass two processes developing together and supporting each other, a synergy that, for once, means a better and more secure life for workers rather than the loss of jobs and declining living standards that corporate restructuring generally brings.

Along with the principles, the working tools were identified and prioritized: Global Framework Agreements (GFAs) with multinational companies and global company Trade Union Networks. The former takes industrial relations to the global level by securing a general level of standards as recognized by internationally approved labor and human rights conditions. The latter makes sure that those broad principles are transformed into tangible benefits for workers, and links workers of the same global concern for solidarity and mutual betterment. The ICEM's Third Congress in Stavanger, Norway, reinforced this point through the slogan: Local Problems – International Solutions, through Solidarity.

At the time of the ICEM Second Congress, there was but one Global Agreement in place, that with Norwegian oil company Statoil. The previous ICEM World Conference for the Pulp and Paper Industry in Sainte-Adèle, Canada, in 2000 welcomed the signing of the second Global Agreement between the ICEM and German affiliate IG BCE with the German chemicals and rubber manufacturer Freudenberg. By the Congress in Stavanger, 6 Global Agreements were in place. Today, ICEM and its affiliates have 12, the latest signed on September 12, 2005, with French materials multinational Lafarge; the agreement bears the signatures of three international trade union co-signatories: ICEM, IFBWW and WFBW, adding an inter-sectoral dimension to the process. The list of multinationals that have signed Global Agreements with ICEM also includes Endesa (2002), ENI (2002), Lukoil (2004), and EDF (2005) in the Energy sector, AngloGold (2002) in Mining, and French chemicals company Rhodia (2005).

Two of the 12 GFAs have been signed with multinational companies in the pulp and paper sector. In June 2002, ICEM and its Norwegian affiliate Fellesforbundet signed a Global Agreement with Norske Skog, a global leader in newsprint production. The story behind the Agreement could be traced to solidarity ties formed in 1998 between Fletcher Challenge striking workers in Canada and Fletcher workers in New Zealand; with Norwegian paperworkers joining the link in 2000, when Norske Skog acquired Fletcher Challenge's paper operations. Asia-Pacific workers also joined the link in 1999, when Norske Skog, Canada's Abitibi-Consolidated and Korea's Hansol Paper set up an Asian joint venture, Pan Asia Paper Co., headquartered in Singapore (now fully owned by Norske Skog). ICEM's networking strategy clearly bore fruit. The second Global Framework Agreement in the pulp and paper sector was signed in April 2004 between the Swedish paper multinational Svenska Cellulosa Aktiebolaget (SCA) and ICEM, its Swedish paperworkers' affiliate Pappers, and the SCA European Works Council (EWC). A precursor to this Agreement was a neutrality agreement between US affiliate PACE (now USW) and SCA at the company's tissue mills in America. The texts of both the Norske Skog and SCA GFAs can be found on the new ICEM web-site www.icem.org.

In 2002, ICEM set up a Global Trade Union Network for International Paper, the world's largest paper and forest products company, and, in 2005, another one for Sappi, a South African-based global leader in coated fine papers with production facilities in South Africa, Europe and North America.

In 2003, the ICEM Trade Union Network for International Paper delivered during the 82-day strike at the Kinleith mill in New Zealand, where the workers were locked in bitter dispute with Carter Holt Harvey (50.5% owned by IP), contributing to the successful resolution of the conflict. The IP Network alerted unions in Canada, U.S., Sweden, Lithuania, Colombia and the United Kingdom, who poured aid and letters of support to the striking members of NZ's Engineering Printing and Manufacturing Union (EPMU) and their families, while Don Langham of USW, the Network's chairman and ICEM Vice-President, bombarded top executives of the US multinational with persistent protests. (Read more at <http://www.icem.org/index.php?id=112&doc=1044>)

The ICEM's Sappi Network, administrated by Welile Noling, General Secretary of the Chemical, Energy, Paper, Printing, Wood and Allied Workers' Union (CEPPWAWU) of South Africa, is currently providing support to the workers at Sappi's Muskegon, Michigan, USA, pulp and paper mill, who are faced with the company's decision to shut down one of the two machines and the entire pulpmill. The protest letters to the company and mill managers are also sent by paperworkers' unions from all continents alerted to the dispute by the USW and ICEM.

Undisputable proof that international union solidarity works was given this year during the May-June lockout of 25,000 Finnish paper workers, members of ICEM affiliate Paperiliitto, by the Finnish Forest Industries Federation, the most massive labor dispute in the latest history of the sector. Swedish paperworkers put blockades to all paper products originating from Finland, and also implemented an overtime ban at 14 Stora Enso mills in Sweden. ICEM affiliate Fellesforbundet in Norway did the same. Stora Enso, UPM and M-real EWCs declared their support. Unions from other sectors organized solidarity strikes. EMCEF and ICEM rallied up their affiliates in Europe and the world for support. The combined union effort on the national, European and global level forced the employers to drop or significantly limit most of their initial demands in the course of government-mediated talks with the union.

One of the more revealing aspects of the dispute was the employers' insistence on greater freedom for use of contract labor, a phenomenon that is massively spreading in the globalized economy and eroding hard-won labor standards. After a thorough study of the issue in 2004, ICEM launched a Global Campaign on Contract and Agency Labour, urging workers globally to tackle the problem from all sides and on all levels, and resolved to table the issue before multinational employers and intergovernmental organizations for social dialogue.

The dynamics of the process of engaging multinational companies in negotiations over prospective Global Agreements has noticeably changed over recent years. Now, considering that the adverse economic, social and environmental consequences of corporate-driven globalization is becoming ever more apparent, multinational companies see sense in positioning themselves as champions of sustainable development and upholders of fundamental human and labor rights worldwide. The UN Global Compact today is signed by some 3,000 companies, including 30 in the paper

sector which range from giants like Stora Enso, UPM, Nippon Paper, Oji Paper, M-real, Norske Skog, to big names in emerging markets like Brazil's Aracruz, Klabin and Veracel and Chile's Empresas to companies like China's Huatai Group and Nepali Paper Products. These companies declare their support of the Compact's 10 principles of company governance encompassing fundamental human and labor rights, sustainability and the fight against corruption. The prospect of a Global Agreement with a Global Union Federation no longer look as unthinkable to a multinational company as it did a decade ago. However, it is effective trade union company networks, the establishment of smoothly running horizontal and vertical communication channels, and true workers' solidarity at the core that will bridge international solutions and local problems, and will breathe life into the underlying principles of Global Agreements to lift them off the paper that contains them.

Appendix 1

The World's Top 30 Producers and Consumers – 2004

Top 30 Paper & Paperboard producers

Paper & paperboard production	2004	% change
		04/03
1. USA	83,401	4,0
2. China, People's Rep.	49,500	15,1
3. Japan	30,889	2,0
4. Canada	20,461	2,5
5. Germany	20,392	5,6
6. Finland	14,036	7,5
7. Sweden	11,589	4,8
8. Korea, Rep. of	10,511	3,6
9. France	10,249	3,1
10. Italy	9,665	1,8
11. Brazil	8,422	6,4
12. Indonesia	7,678	5,6
13. Russia	6,789	6,5
14. United Kingdom	6,240	0,2
15. India	6,229	7,0
16. Spain	5,527	1,6
17. Austria	4,852	6,3
18. Taiwan	4,801	3,1
19. Mexico	4,349	6,6
20. Thailand	3,600	10,4
21. Netherlands	3,459	3,5
22. Australia	3,164	3,4
23. Poland	2,635	7,1
24. South Africa	2,563	9,9
25. Norway	2,294	4,9
26. Belgium	1,957	12,1
27. Switzerland	1,777	-2,2
28. Turkey	1,769	9,3
29. Portugal	1,666	9,5
30. Argentina	1,507	8,1

Source: Paperloop Inc.

Top 30 Pulp producers

Pulp production	2004	% change
		04/03
1. USA	53,585	3,8
2. Canada	26,406	0,6
3. China, People's Rep.	14,180	2,2
4. Finland	12,619	5,6
5. Sweden	12,106	3,1
6. Japan	10,720	1,3
7. Brazil	9,728	6,0
8. Russia	7,361	2,8
9. Indonesia	5,209	0,3
10. Chile	3,409	20,6
11. India	3,269	-2,8
12. France	2,547	3,0
13. Norway	2,528	5,8
14. Germany	2,402	9,6
15. South Africa	2,192	-5,4
16. Spain	1,998	5,5
17. Portugal	1,950	0,8
18. Austria	1,936	6,2
19. New Zealand	1,596	12,5
20. Australia	1,398	11,4
21. Poland	1,022	-0,3
22. Thailand	1,000	1,0
23. Argentina	942	2,6
24. Czech Republic	736	2,1
25. Italy	687	6,2
26. Korea, Rep. of	544	4,0
27. Belgium	531	8,1
28. Slovak Republic	523	9,3
29. Taiwan	404	0,0
30. Colombia	382	0,7

Source: Paperloop Inc.

Top 30 Paper & Paperboard consumers

Paper & Paperboard consumption	2004	% change
		04/03
1. USA	92,257	4,0
2. China, People's Rep.	54,392	13,2
3. Japan	31,426	2,0
4. Germany	19,442	3,3
5. United Kingdom	12,678	1,7
6. Italy	11,334	0,7
7. France	11,079	2,3
8. Korea, Rep. of	8,243	0,2
9. Brazil	7,303	8,7
10. Canada	7,299	2,5
11. Spain	7,194	-0,3
12. India	6,968	12,7
13. Mexico	6,137	4,5
14. Indonesia	5,408	1,8
15. Taiwan	5,187	2,9
16. Russia	4,933	7,8
17. Australia	4,122	2,7
18. Belgium	3,502	0,9
19. Poland	3,381	8,6
20. Netherlands	3,361	-6,3
21. Turkey	3,329	15,0
22. Malaysia	2,548	7,6
23. Sweden	2,276	-0,3
24. South Africa	2,147	12,6
25. Austria	2,088	3,1
26. Argentina	1,958	12,9
27. Switzerland	1,664	3,0
28. Iran	1,525	6,6
29. Finland	1,489	-8,1
30. Denmark	1,395	9,7

Source: Paperloop Inc.

Appendix World Pulp, Paper & Board industry - Production and Trade (2003/2004)

Europe

Country	Population (1,000)	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
		P&B	Pulp	P&B	Pulp		P&B		Pulp		P&B		Pulp	
							2003	2004	2003	2004	2003	2004	2003	2004
Europe														
Albania	3,563	4	4	35	23	15,4	54	55	16	16	24	25	13	13
Austria	8,185	26	12	4,980	1,775	255,1	2,026	2,088	2,207	2,372	4,564	4,852	1,823	1,936
Belarus	10,300	10	1	344	70	36,6	354	377	100	105	279	285	61	63
Belgium	10,364	13	3	2,090	530	337,9	3,470	3,502	750	700	1,745	1,957	491	531
Bosnia & Herzegovina	4,025	3	2	280	168	20,6	87	83	29	31	53	68	0	0
Bulgaria	7,450	12	3	460	220	40,9	291	305	93	100	209	233	127	133
Croatia	4,496	3	2	378	188	73,0	290	328	65	69	235	244	105	109
Cyprus	780	1	0	8	0	115,4	83	90	0	0	5	5	0	0
Czech Republic	10,241	30	7	1,100	925	129,5	1,169	1,326	558	577	941	955	721	736
Denmark	5,432	3	0	420	0	256,8	1,272	1,395	80	83	370	380	0	0
Estonia	1,333	3	1	70	70	86,3	108	115	69	69	67	69	69	69
Finland	5,223	46	43	15,410	14,435	285,1	1,620	1,489	9,791	10,432	13,057	14,036	11,951	12,619
France	60,656	124	17	12,000	3,063	182,7	10,830	11,079	3,919	4,050	9,940	10,249	2,472	2,547

Georgia	4,677	1	1	10	15	7,5	35	35	10	10	8	8	10	10
Germany	82,431	178	22	21,977	2,722	235,9	18,825	19,442	6,265	6,519	19,310	20,392	2,192	2,402
Greece	10,668	14	0	396	0	103,8	1,102	1,108	101	107	386	389	0	0
Greenland	56	0	0	0	0	71,0	5	4	0	0	0	0	0	0
Hungary	10,007	9	1	580	30	81,8	885	819	224	253	545	577	16	4
Iceland	297	0	0	0	0	128,6	36	38	0	0	0	0	0	0
Ireland	4,016	1	0	45	0	102,1	437	410	10	7	43	43	0	0
Italy	58,103	194	13	11,105	860	195,1	11,254	11,334	4,039	3,939	9,491	9,665	647	687
Latvia	2,290	3	0	38	0	69,8	142	160	0	2	38	38	0	0
Liechtenstein	34	0	0	0	0	148,3	5	5	0	0	0	0	0	0
Lithuania	3,597	4	0	122	0	39,7	130	143	2	<1	92	99	0	0
Luxembourg	469	0	0	0	0	345,7	146	162	0	0	0	0	0	0
Macedonia	2,045	2	1	27	6	22,5	47	46	1	1	12	9	0	0
Malta	399	0	0	0	0	85,5	48	34	0	0	0	0	0	0
Moldova	4,455	1	0	20	0	9,7	40	43	0	0	15	15	0	0
Monaco	32	0	0	0	0	277,7	8	9	0	0	0	0	0	0
Netherlands	16,407	27	2	3,829	210	204,8	3,588	3,361	804	977	3,341	3,459	137	125
Norway	4,593	14	13	2,437	2,662	181,6	881	834	1,869	1,961	2,186	2,294	2,389	2,528
Poland	38,635	39	6	2,700	1,050	87,5	3,113	3,381	1,407	1,456	2,461	2,635	1,025	1,022
Portugal	10,566	41	7	1,540	1,992	120,0	1,082	1,268	977	908	1,522	1,666	1,935	1,950
Romania	22,330	16	5	756	375	26,9	599	601	260	238	443	455	290	262
Russia	143,420	82	33	7,838	7,032	34,4	4,575	4,933	5,331	5,553	6,377	6,789	7,162	7,361
Serbia and Montenegro	10,829	13	7	411	193	28,9	248	313	40	23	109	100	38	21

Slovak Republic	5,431	6	3	768	523	74,2	464	403	445	513	674	768	479	523
Slovenia	2,011	9	3	700	150	129,0	262	260	162	182	596	678	134	147
Spain	40,341	116	15	6,233	2,077	178,3	7,217	7,194	1,705	1,877	5,438	5,527	1,894	1,998
Sweden	9,002	46	44	11,589	12,654	252,8	2,282	2,276	8,603	8,997	11,062	11,589	11,737	12,106
Switzerland	7,489	20	3	1,830	270	222,2	1,616	1,664	641	665	1,817	1,777	269	271
Ukraine	47,425	21	3	950	115	22,6	965	1,074	122	132	615	687	39	40
United Kingdom	60,441	76	3	6,880	580	209,8	12,463	12,678	2,196	1,767	6,225	6,240	504	345
Europe	734,550	1,211	280	120,356	54,983	131,1	94,155	96,263	52,891	54,690	104,296	109,256	48,729	50,556

Source: Paperloop Inc.

Asia

Country	Population (1,000)	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
		P&B	Pulp	P&B	Pulp		P&B 2003	2004	Pulp 2003	2004	P&B 2003	2004	Pulp 2003	2004
Asia														
Afghanistan	29,929	0	0	0	0	0,4	12	12	0	0	0	0	0	0
Armenia	2,983	1	0	10	0	8,4	24	25	0	0	5	5	0	0
Azerbaijan	7,912	0	0	0	0	4,7	33	37	0	0	0	0	0	0
Bahrain	688	1	0	15	0	93	60	64	0	0	15	15	0	0
Bangladesh	144,320	23	6	380	160	3,4	506	496	265	254	245	240	239	233
Bhutan	2,232	0	0	0	0	0,4	1	1	0	0	0	0	0	0
Brunei	372	0	0	0	0	13,4	5	5	0	0	0	0	0	0

Darussalam														
Cambodia	13,607	0	0	0	0	1,9	24	26	0	0	0	0	0	0
China, People's Rep.	1,306,314	3500	3000	50,000	21,000	41,6	48,059	54,392	19,875	21,483	43,000	49,500	13,870	14,180
Hong Kong	6,899	2	0	0	200	159,9	986	1,103	2	1	193	195	0	0
India	1,080,264	660	203	7,600	3,180	6,5	6,185	6,968	3,691	3,644	5,821	6,229	3,363	3,269
Indonesia	241,974	66	14	10,046	6,287	22,3	5,314	5,408	3,555	3,631	7,268	7,678	5,194	5,209
Iran	68,018	6	6	750	440	22,4	1,431	1,525	350	375	661	696	245	255
Iraq	26,075	2	2	137	108	2,5	61	64	4	7	7	13	2	4
Israel	6,277	5	0	385	0	133,5	814	838	155	160	363	368	0	0
Japan	127,417	434	37	32,004	14,892	246,6	30,797	31,426	12,832	13,039	30,294	30,889	10,584	10,720
Jordan	5,760	4	0	66	0	34,6	184	199	26	26	54	54	0	0
Kazakhstan	15,186	1	0	26	0	9,5	129	144	1	1	16	24	0	0
Korea, People's Rep.	22,912	6	2	100	80	3,8	88	87	100	95	75	77	60	60
Korea, Rep. of	48,423	104	2	11,328	582	170,2	8,223	8,243	2,980	3,127	10,148	10,511	523	544
Kuwait	2,336	1	0	60	0	77,9	151	182	23	20	56	56	0	0
Kyrgyzstan	5,146	1	0	6	0	3,9	20	20	0	0	2	2	0	0
Laos	6,217	0	0	0	0	1,3	9	8	0	0	0	0	0	0
Lebanon	3,826	5	0	124	0	70,8	245	271	31	35	64	67	0	0
Macao	449	0	0	0	0	31,4	14	14	0	0	0	0	0	0
Malaysia	23,953	20	1	1,508	145	106,4	2,367	2,548	165	180	1,319	1,358	145	145
Mongolia	2,791	1	0	10	0	6,4	18	18	0	0	5	5	0	0
Myanmar	42,909	7	2	72	26	2,3	95	99	41	44	42	45	41	44

Nepal	27,677	3	1	50	10	2,1	57	58	18	8	35	33	18	8
Oman	3,002	0	0	0	0	22,3	60	67	0	0	0	0	0	0
Pakistan	162,420	82	12	422	300	4,5	655	735	370	394	409	420	277	295
Philippines	87,857	26	6	1,100	200	15,7	1,308	1,377	231	212	928	962	172	176
Qatar	863	0	0	0	0	47,5	31	41	0	0	0	0	0	0
Saudi Arabia	26,418	3	0	300	0	35,1	809	927	75	85	204	279	0	0
Singapore	4,426	0	0	0	0	154,3	734	683	0	0	0	0	0	0
Sri Lanka	20,065	3	2	82	42	13,2	267	265	46	49	63	72	32	34
Syria	18,449	4	1	90	30	14,6	254	270	31	35	61	74	5	5
Taiwan	22,894	108	2	5,235	420	226,6	5,043	5,187	1,168	1,214	4,658	4,801	404	404
Tajikistan	7,164	0	0	0	0	3,1	22	22	0	0	0	0	0	0
Thailand	65,444	48	6	4,009	1,143	51	1,060	1,191	1,174	1,164	3,261	3,600	990	1,000
Turkey	72,003	39	10	2,487	554	46,2	2,893	3,329	508	526	1,619	1,769	161	128
Turkmenistan	4,863	1	1	56	64	2,5	10	12	0	17	0	12	0	17
United Arab Emirates	2,563	6	0	135	0	216,9	510	556	47	35	78	81	0	0
Uzbekistan	26,851	4	1	100	30	3,1	87	84	18	18	52	52	15	15
Vietnam	83,536	300	25	800	350	13,9	1,028	1,164	396	439	670	750	321	321
Yemen	20,727	0	0	0	0	4,2	74	87	0	0	0	0	0	0
Asia	3,902,411	5,477	3,342	129,492	50,242	33,4	120,758	130,277	48,177	50,317	111,691	120,932	36,661	37,066

Source: Paperloop Inc.

Australasia

Country	Population (1,000)	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
		P&B	Pulp	P&B	Pulp		P&B 2003	2004	Pulp 2003	2004	P&B 2003	2004	Pulp 2003	2004
Australasia														
Australia	20,090	21	9	3,201	1,390	205,2	4,012	4,122	1,614	1,775	3,061	3,164	1,255	1,398
Fiji	893	0	0	0	0	29,1	24	26	0	0	0	0	0	0
New Caledonia	216	0	0	0	0	32,3	8	7	0	0	0	0	0	0
New Zealand	4,035	5	7	976	1,725	189,9	804	772	749	740	810	916	1,419	1,596
Papua New Guinea	5,545	0	0	0	0	3,4	20	19	0	0	0	0	0	0
Samoa	177	0	0	0	0	50,8	9	9	0	0	0	0	0	0
Solomons	538	0	0	0	0	1,9	1	1	0	0	0	0	0	0
Australasia	31,496	26	16	4,177	3,115	157,4	4,878	4,956	2,363	2,515	3,871	4,080	2,674	2,994

Source: Paperloop Inc.

North America

Country	Population (1,000)	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
		P&B	Pulp	P&B	Pulp		P&B		Pulp		P&B		Pulp	
							2003	2004	2003	2004	2003	2004	2003	2004
North America														
Canada	32,805	85	49	20,806	27,914	222,5	7,124	7,299	15,831	15,852	19,969	20,461	26,241	26,406
USA	295,734	444	163	91,131	61,251	312,0	88,713	92,257	51,783	53,530	80,220	83,401	51,628	53,585
North America	328,539	529	212	111,937	89,165	303,0	95,837	99,556	67,614	69,382	100,189	103,862	77,869	79,991

Source: Paperloop Inc.

Latin America

Country	Population (1,000)	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
		P&B	Pulp	P&B	Pulp		P&B		Pulp		P&B		Pulp	
							2003	2004	2003	2004	2003	2004	2003	2004
Latin America														
Argentina	39,538	73	11	1,758	1,090	49,5	1,734	1,958	753	798	1,394	1,507	918	942
Bahamas	302	0	0	0	0	33,1	10	10	0	0	0	0	0	0
Barbados	279	0	0	0	0	32,2	6	9	0	0	0	0	0	0
Belize	279	0	0	0	0	10,7	3	3	0	0	0	0	0	0

Bermuda	65	0	0	0	0	91,8	6	6	0	0	0	0	0	0
Bolivia	8,858	3	0	18	0	8,2	69	72	10	10	15	16	0	0
Brazil	186,113	178	66	9,003	9,881	39,2	6,716	7,303	4,917	5,079	7,916	8,422	9,175	9,728
Chile	15,981	13	12	1,259	3,547	66,7	893	1,066	729	878	1,089	1,214	2,826	3,409
Colombia	42,954	23	4	1,012	385	26,6	1,085	1,141	500	497	866	900	379	382
Costa Rica	4,016	1	1	20	5	76,4	310	307	12	12	20	20	3	3
Cuba	11,347	6	2	200	200	9,3	99	76	9	10	52	56	5	5
Dominican Rep.	8,950	2	0	40	0	22,2	172	199	1	1	12	13	0	0
Ecuador	13,364	5	1	160	35	41,5	483	238	41	42	112	115	22	22
El Salvador	6,705	2	0	115	0	28,2	188	189	10	10	99	104	0	0
Guadeloupe	449	0	0	0	0	24,5	13	14	0	0	0	0	0	0
Guatemala	14,655	2	1	45	20	23,3	319	342	19	19	38	38	15	15
Guyana	765	0	0	0	0	11,8	9	9	0	0	0	0	0	0
Haiti	8,122	0	0	0	0	1,1	10	9	0	0	0	0	0	0
Honduras	6,975	0	0	0	0	21,9	137	153	0	0	0	0	0	0
Jamaica	2,732	1	0	7	0	22,3	63	61	0	0	5	5	0	0
Martinique	433	0	0	0	0	39,3	17	17	0	0	0	0	0	0
Mexico	106,203	56	6	5,355	738	57,8	5,872	6,137	1,066	1,085	4,080	4,349	334	292
Neth. Antilles	220	0	0	0	0	68,2	13	15	0	0	0	0	0	0
Nicaragua	5,465	2	0	8	0	6,0	39	33	0	0	6	6	0	0
Panama	3,039	4	0	38	0	44,1	127	134	0	0	35	37	0	0
Paraguay	6,348	4	0	50	0	14,3	71	91	0	0	24	27	0	0
Peru	27,926	14	4	250	200	15,5	404	432	76	92	133	144	45	50

Surinam	438	0	0	0	0	9,1	3	4	0	0	0	0	0	0
Trinidad and Tobago	1,089	0	0	0	0	79,9	83	87	0	0	0	0	0	0
Uruguay	3,416	3	2	110	52	32,5	85	111	50	62	87	96	37	45
Venezuela	25,375	6	4	700	314	23,3	405	591	103	111	250	370	96	108
Latin America	552,400	398	114	20,148	16,466	37,7	19,444	20,817	8,296	8,706	16,233	17,439	13,855	15,001

Source: Paperloop Inc.

Africa

Country	Population (1,000)	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
		P&B	Pulp	P&B	Pulp		P&B	2004	Pulp	2004	P&B	2004	Pulp	2004
Africa														
Algeria	32,532	8	1	150	14	12,5	304	406	10	12	20	22	0	0
Angola	11,191	1	1	30	30	2,1	17	23	7	9	7	9	7	9
Benin	7,460	0	0	0	0	1,1	9	8	0	0	0	0	0	0
Botswana	1,640	0	0	0	0	11,6	21	19	0	0	0	0	0	0
Burkina Faso	13,925	0	0	0	0	0,8	11	11	0	0	0	0	0	0
Burundi	6,371	0	0	0	0	0,6	4	4	0	0	0	0	0	0
Cameroon	16,380	0	0	0	0	2,7	60	44	0	0	0	0	0	0
Cape Verde Is.	418	0	0	0	0	2,4	1	1	0	0	0	0	0	0
Central African Rep.	3,800	0	0	0	0	0,8	2	3	0	0	0	0	0	0

Chad	9,826	0	0	0	0	0,3	3	3	0	0	0	0	0	0
Comores Archipel	671	0	0	0	0	1,5	1	1	0	0	0	0	0	0
Congo, Dem. Rep. of	60,086	0	0	0	0	0,1	7	8	0	0	0	0	0	0
Congo, Rep. of	3,039	0	0	0	0	2,3	8	7	0	0	0	0	0	0
Djibouti	477	0	0	0	0	2,1	1	1	0	0	0	0	0	0
Egypt	77,506	24	3	880	250	16,6	1,281	1,287	280	288	582	692	180	200
Ethiopia	73,053	1	0	10	0	0,5	34	35	7	7	8	8	0	0
Gabon	1,389	0	0	0	0	7,2	11	10	0	0	0	0	0	0
Gambia	1,593	0	0	0	0	1,3	2	2	0	0	0	0	0	0
Ghana	21,030	0	0	0	0	2,7	55	56	0	0	0	0	0	0
Guinea	9,468	0	0	0	0	1,0	8	9	0	0	0	0	0	0
Guinea-Bissau	1,416	0	0	0	0	0,7	1	1	0	0	0	0	0	0
Ivory Coast	17,298	0	0	0	0	4,1	78	71	0	0	0	0	0	0
Kenya	33,830	6	2	170	100	5,2	175	175	82	91	139	148	79	89
Lesotho	1,867	0	0	0	0	2,1	4	4	0	0	0	0	0	0
Liberia	3,482	0	0	0	0	0,6	2	2	0	0	0	0	0	0
Libya	5,766	1	0	10	0	6,4	30	37	1	2	6	6	0	0
Madagascar	18,040	1	1	15	8	1,6	30	29	5	5	4	4	5	5
Malawi	12,159	0	0	0	0	1,0	13	12	0	0	0	0	0	0
Mali	12,292	0	0	0	0	0,6	8	7	0	0	0	0	0	0
Mauritania	3,087	0	0	0	0	1,9	6	6	0	0	0	0	0	0
Mauritius	1,231	0	0	0	0	38,3	43	47	0	0	0	0	0	0

Morocco	32,726	6	1	275	125	11,9	386	390	40	43	190	202	120	109
Mozambique	19,407	1	0	10	0	1,3	25	26	4	4	4	4	0	0
Namibia	2,031	1	0	12	0	13,3	27	27	0	0	12	12	0	0
Niger	11,666	0	0	0	0	0,3	4	3	0	0	0	0	0	0
Nigeria	128,772	7	0	130	0	3,1	400	403	14	16	47	50	0	0
Rwanda	8,441	0	0	0	0	0,7	6	6	0	0	0	0	0	0
Senegal	11,127	0	0	0	0	2,9	37	32	0	0	0	0	0	0
Seychelles Is.	81	0	0	0	0	24,6	3	2	0	0	0	0	0	0
Sierra Leone	6,018	0	0	0	0	0,3	3	2	0	0	0	0	0	0
Somalia	8,592	0	0	0	0	0,3	4	3	0	0	0	0	0	0
South Africa	44,344	30	9	2,677	2,612	48,4	1,907	2,147	1,618	1,525	2,332	2,563	2,317	2,192
Sudan	40,187	1	0	4	0	0,9	36	38	0	0	3	3	0	0
Swaziland	1,174	2	1	74	225	34,1	40	40	0	0	50	50	188	190
Tanzania	36,766	4	2	81	76	2,4	87	87	50	50	49	49	50	50
Togo	5,682	0	0	0	0	1,1	7	6	0	0	0	0	0	0
Tunisia	10,075	9	1	175	16	22,2	194	224	60	65	105	125	11	12
Uganda	27,269	1	0	5	0	1,0	27	27	0	0	3	4	0	0
Zambia	11,262	1	1	16	30	2,3	26	26	0	0	8	8	0	0
Zimbabwe	12,747	4	3	94	42	5,1	62	65	39	39	66	70	32	32
Africa	880,688	109	26	4,818	3,528	6,7	5,512	5,884	2,217	2,156	3,635	4,030	2,989	2,888

Source: Paperloop Inc.

Total World

	Population	Number of Mills		Capacity (1,000 tonnes)		Apparent consumption per Capita (kg)	Apparent consumption (1,000 tonnes)				Production (1,000 tonnes)			
	(1,000)	P&B	Pulp	P&B	Pulp		P&B		Pulp		P&B		Pulp	
							2003	2004	2003	2004	2003	2004	2003	2004
Total World	6,430,085	7,750	3,990	390,927	217,500	55,6	340,584	357,754	181,558	187,766	339,914	359,599	182,777	188,496

Source: Paperloop Inc.

Appendix 3

World Paper & Board Production by Grade (2003–2004, by 1,000 tonnes)

	Newsprint		Printing/writing		Tissue		Containerboard		Board		Total P&B	
	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
Europe	12,734	13,416	37,029	39,794	6,214	6,424	25,300	26,047	12,746	13,062	104,296	109,256
Asia	9,155	10,409	33,912	36,270	6,858	7,333	37,394	41,416	13,969	15,240	111,691	120,932
Australasia	774	802	564	585	248	259	310	404	83	73	3,871	4,080
North America	13,635	13,278	28,001	29,754	7,135	7,186	32,925	34,493	14,470	14,899	100,189	103,862
Latin America	830	884	3,900	4,067	2,176	2,376	6,064	6,618	1,588	1,746	16,233	17,439
Africa	414	421	817	932	292	350	1,566	1,749	256	259	3,635	4,030
Total	37,542	39,211	104,223	111,402	22,923	23,928	103,559	110,727	43,113	45,278	339,914	359,599

Source: Paperloop Inc.

World Pulp Production by Grade (2003–2004, by 1,000 tonnes)

	Chemical pulp		Mechanical		Other pulp		Total pulp	
	2003	2004	2003	2004	2003	2004	2003	2004
Europe	36,613	37,888	11,500	11,921	687	632	48,729	50,556
Asia	13,389	13,608	1,770	1,739	16,263	16,337	36,661	37,066
Australasia	1,368	1,525	1,313	1,469	0	0	2,674	2,994
North America	61,503	63,479	16,088	16,275	278	237	77,869	79,991
Latin America	12,118	13,186	918	1,019	707	672	13,855	15,001
Africa	1,838	1,702	310	310	836	871	2,989	2,888
Total World	126,828	131,389	31,900	32,733	18,771	18,748	182,777	188,496

Source: Paperloop Inc.