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## **CPBIS Resources: Working Papers**

One of the resources made freely available by CPBIS is a collection of working papers authored by CPBIS faculty and graduate students. They can be found at the Web site, <http://www.cpbis.gatech.edu/> via a link that is prominently displayed at the center of the home page. To facilitate access to the collection, we have prepared the index below. The numbers following each entry are an abbreviated form of the number that identifies the paper on the Web page. For example, 05-04 refers to the paper identified on the Web page as 2005-04.

**Biorefinery Conversions:** feasibility of biorefinery conversions, 05-04

**Biotechnology:** commercialization of forest biotechnology, 04-09; forest biotechnology and production economics, 04-10; value of forest biotechnology, 05-07

**Costs:** production and cost characteristics, 06-02

**Demand:** Chinese economic transition and demand pattern, 04-5; computer use and paper demand, 08-02; digital printing paper trends, 07-02; price and customer service effects on demand, 04-7

**Historical Perspective:** ambiguity in U.S. forestry, 1890 – 1925, 02-01; antitrust and competitive industry structure, 1950 - 1990, 05-02; organizational capabilities, strategy and structure, 03-03

**Human Resources Management:** change and change management effects on employees, 04-02; workplace transformation, 04-03

**Industry Overview:** China's pulp and paper industry, 08-03; Chinese newsprint and P&W industry, 03-04; U.S. pulp and paper industry review, 04-11

**Industry Structure:** industry structure effects on price-cost margins, 04-06; transaction cost and vertical integration, 05-03

**Market Dynamics:** linerboard inventory, price and output, 06-01

**Performance:** integrated environmental and economic performance assessment, 03-02; MRO and competitive performance, 04-04; productivity gap: U.S. vs. European paper producers, 03-05

**Prices:** forecasting containerboard price, 03-01; industry consolidation and price, 05-01; modeling and forecasting prices, 08-01

**Product quality:** fiber quality analysis, 05-06;

**Productivity:** investments and productivity, 07-01

**Public Policy:** NEMS analysis of potential energy and climate policies, 09-02; networks and public policy, 05-05, potential policy impacts on the U.S. industry, 08-04

**Supply Chains:** dynamic learning in a supply chain, 04-08; logistics system reliability, 04-12; robust global supply chain design, 04-01

**Sustainability:** Sustainability in Georgia's pulp and paper industry, 09-01

## **Report: Rapid Growth of China's Industry Due to Massive Government Subsidies**

According to a report recently released by the Economic Policy Institute (<http://www.epi.org/>), massive Chinese government subsidies have given China's paper industry an unfair competitive advantage that has helped fuel the industry's rapid growth in recent years, contributing to the U.S.'s worsening trade deficit with China.

The following is quoted from an EPI press release:

“China overtook the U.S. as the world's largest producer of paper and paper products in 2008, and has increased its production of paper three-fold since 2000, according to the study, *No Paper Tiger: Subsidies to China's Paper Industry from 2002-2009*. The study shows that the rapid rise in China's

paper industry did not result from advantages in natural resources, economies of scale or scope, new technology, or lower cost of production (including labor). Instead, the growth resulted from at least \$33.1 billion in various Chinese government subsidies paid to the country's paper industry between 2002 and 2009."

## **AF&PA Releases Sustainability Report**

The American Forest & Paper Association (AF&PA) recently issued its 2010 report measuring progress by the forest products industry on key sustainability indicators. The following is from the AF&PA press release announcing the release of the report:

"Using the latest data available, the new report – Sustainable Practices: a foundation of the forest products industry – shows that despite the severe impact made by the recession, continued investments by AF&PA member companies in more efficient processes and equipment have led to measurable progress on such sustainability indicators as recycling and air emissions.

'AF&PA members continue to demonstrate leadership in sustainability, and their long-standing commitment to sustainability has produced remarkable progress in key indicators,'" wrote AF&PA President and CEO Donna Harman in her introduction to the report. "The challenging economic conditions that became painfully apparent in 2008 and 2009 have had impacts on performance, most notably in the area of economic performance. However, as the report also shows, members have reacted to these challenges in proactive ways and continue to build on the strong progress already made to further improve sustainability performance for the future.'

Among the report's key findings are:

- In 2009, 63.4 percent of U.S. paper consumed was recovered – surpassing AF&PA's 60 percent recovery goal three years ahead of schedule.
- On an absolute basis, both direct and indirect greenhouse gas emissions at member pulp and paper and wood products industry facilities have decreased.
- In 2008, 65 percent of the energy needed to operate member pulp and paper mills was produced from renewable fuels. At wood products facilities, renewable fuels produced 73.5 percent of needed energy.
- Compared to 2006, pulp and paper mill sulfur dioxide releases decreased 14.6 percent and total reduced sulfur releases were reduced 18.6 percent.

- Companies have continued to make investments in new processes and equipment. Paper mill and allied product company capital expenditures were \$7.6 billion in 2006 and \$6.3 billion in 2008.
- From 2002 to 2008, forest products exports grew by almost 50 percent, from \$18.2 to \$27.1 billion."

The report lists CPBIS as one of three "world-class research and technical support programs specifically tailored to meet forest products industry needs" that are directly supported by AF&PA members, the other two being the National Council for Air and Stream Improvement and the Institute of Paper Science and Technology at the Georgia Institute of Technology.

## **Recent Forestweb Headlines**

Forestweb publishes a weekly news report tracking recent developments in and around the paper and forest products industries. Subscription information is at <http://www.forestweb.com/Corporate/index.cfm>

Below is a small sampling of headlines from recent issues, together with brief synopses.

### **July 19**

*WWF launches voluntary Paper Company Environmental Index rating tool allowing firms to report their ecological footprint; Domtar, M-real, Stora Enso, UPM and Mondi are first paper manufacturers to participate*

The index assesses key environmental criteria, such as use of recycled fiber or fiber coming from well-managed forests, energy use, CO<sub>2</sub> emissions, water consumption and water pollution.

*Alberta's cold winter slashes pine beetle population, but high numbers in southeastern British Columbia are likely to re-infest Alberta, says minister*

Alberta has spent more than C\$270 million over the past six years to fight the pest.

### **July 12**

*China pulp imports in May fall by 13.7% month-over-month and by 35.9% year-over-year*

The decline is the combined result of high pulp prices and unsatisfactory paper prices, leading to increased reliance on local nonwood fiber.

*Greenpeace report alleges major brands like Walmart, Auchan, KFC are fueling climate change, driving rain forest destruction in Indonesia by using or selling paper made by APP*

According to the report, Asia Pulp and Paper (APP) uses logs from rainforest areas that are important wildlife refuges and ecologically sensitive areas.

*APP refutes Greenpeace's allegations that company's forestry operations are harming Indonesia's rainforest, reiterates commitment to sustainable development of country*

In a detailed refutation, APP provides arguments to support its contention that Greenpeace's claims against Indonesian policy and APP are unequivocally inaccurate and deliberately misleading.

### July 5

*Smurfit-Stone completes financial restructuring, officially emerging from Chapter 11 as newly reorganized, public company that will begin trading on NYSE on July 1*

The company, an integrated containerboard and corrugated packaging producer (and one of the world's largest paper recyclers), also announced a new board of directors.

*GP's Green Bay, Wisconsin, paper mill to turn Starbucks' used paper cups into napkins as part of coffee chain's plan to create market for 3 billion paper cups it uses each year*

GP will turn the cups into Starbucks napkins starting this fall, reported The Seattle Times on June 28.

### June 28

*Newsprint demand continues to creep down in North America in May, falling by 1.8% year-over-year, but exports remain robust at 59.6% ahead of a year earlier*

May newsprint shipments from North America to overseas increased 59.6% year-over-year to 213,000 tonnes, bringing the total overseas shipments from North America year-to-date to 967,000 tonnes, which is up 52.6% from January-May 2009.

*U.S. recovered paper consumption climbs 7.1% year-over-year in May, up 1.3% from April -- AF&PA*

Compared to the first five months of 2009, consumption is up 8.5%. The largest May year-over-year increase, (11.7%) was in the consumption of recovered corrugated containers.

### June 21

*Global pulp prices have peaked, should start declining by August and continue to correct for about 12 months before bottoming out in mid-2011, says industry consultant*

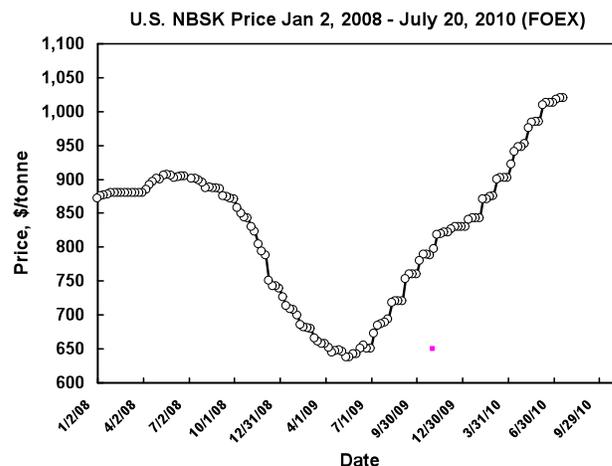
Forestweb's Debbie Garcia reports that Brian McClay of TerraChoice Market Services Inc., speaking during a Deutsche Bank conference call, said his forecast is based on a number of factors, but could change if there are any more unforeseen supply shocks, adding that the hurricane season this year is expected to be severe.

*EPA's proposed Boiler MACT rule could cost forest products industry more than US\$6B in capital expenditures, millions more in annual costs and discourage use of renewable energy, say AF&PA, AWC*

The Boiler Maximum Achievable Control Technology (Boiler MACT) rule could be unsustainable for the forest product industry and the nearly 900,000 men and women it supports, according to Tim Hunt, representing the American Forest & Paper Association (AF&PA) and the American Wood Council (AWC). Speaking at an EPA hearing. Hunt noted that this comes on the heels of the worse economic decline the industry has faced in modern history, with over 350,000 job losses since 2006.

## Statistics Corner: Softwood Pulp Prices

Northern bleached softwood kraft (NBSK) pulp prices have varied over an extremely wide range during the past two and a half years, as is readily apparent in Figure 1, below.



**Figure 1. U.S. NBSK Price, Jan. 2, 2008 - Present**

The relatively high prices enjoyed in early 2008 were short-lived, becoming a casualty of the global recession and reaching a low point in May, 2009. Subsequently, aided by the beginnings of an economic recovery and burgeoning Chinese demand, prices began a strong upward trend. That trend weakened in late 2009 but strengthened again in March 2010, when world supplies suffered from the "double whammy" of a strong earthquake in Chile and a Finnish port strike. A new weakening in recent weeks can be attributed to recovering world supplies, low paper prices and growing Chinese resistance to high pulp prices. ■