

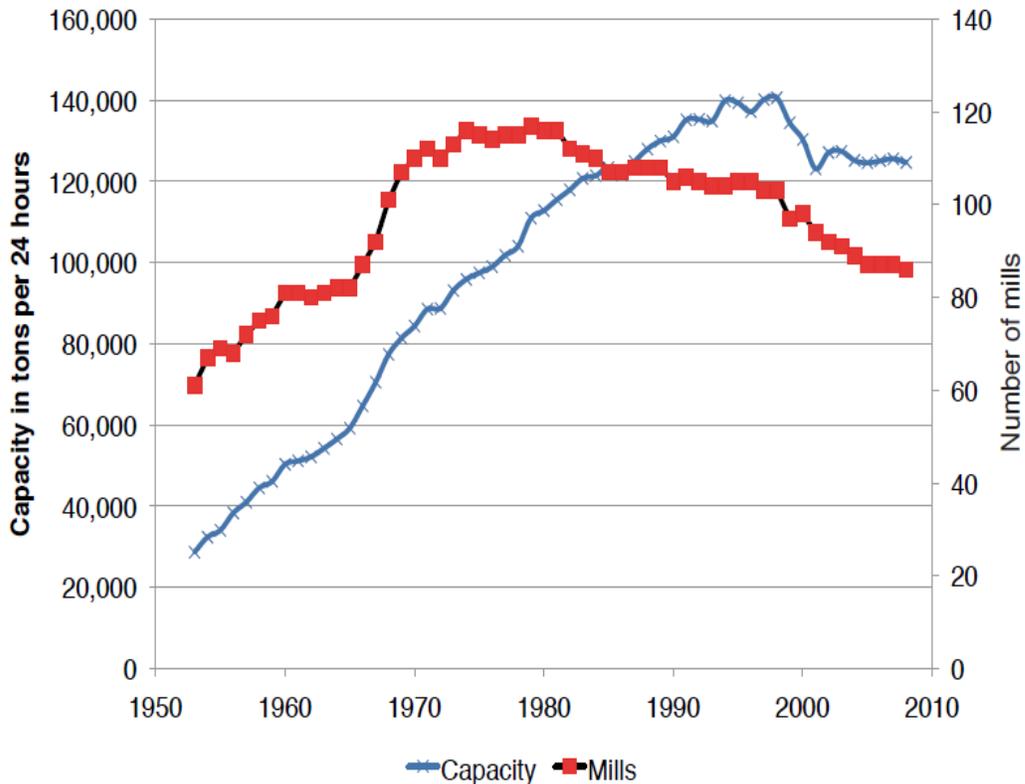
Mill Closure Reflects Larger Trends in the U.S. Pulp and Paper Sector

September 20, 2013

Multiple forces have contributed to a reduction in both the number of pulp and paper mills and the total processing capacity in the South (Figure 1) over the past 15 years. International Paper’s recent announcement that they will be closing their mill in Courtland, Alabama, illustrates how the shift from paper to electronic communication, changes in global markets, and rising capital intensity of papermaking technology translate into a loss of forestry related jobs—and equally important, into reduced demand for timber from forest landowners. This trend impacts the ability of landowners to manage their forests and reduces the income they can derive from harvesting timber.

U.S. Forest Service Southern Research Station scientists are monitoring and forecasting trends such as those in the paper and pulpwood markets in the South. Our data are useful in analyzing events such as the closing of International Paper’s mill in Courtland, Alabama.

Figure 1—Total number of pulp mills and capacity in the southern U.S., 1953-2009 (source FIA).



Effects on Alabama and Neighboring States

International Paper’s announcement indicated that 1,100 jobs will be lost as a result of the Courtland, Alabama mill closure. Additional jobs across the state will be impacted, including those in sectors that provide inputs to the mill, such as trucking, logging, and sawmills, as well as jobs that result from

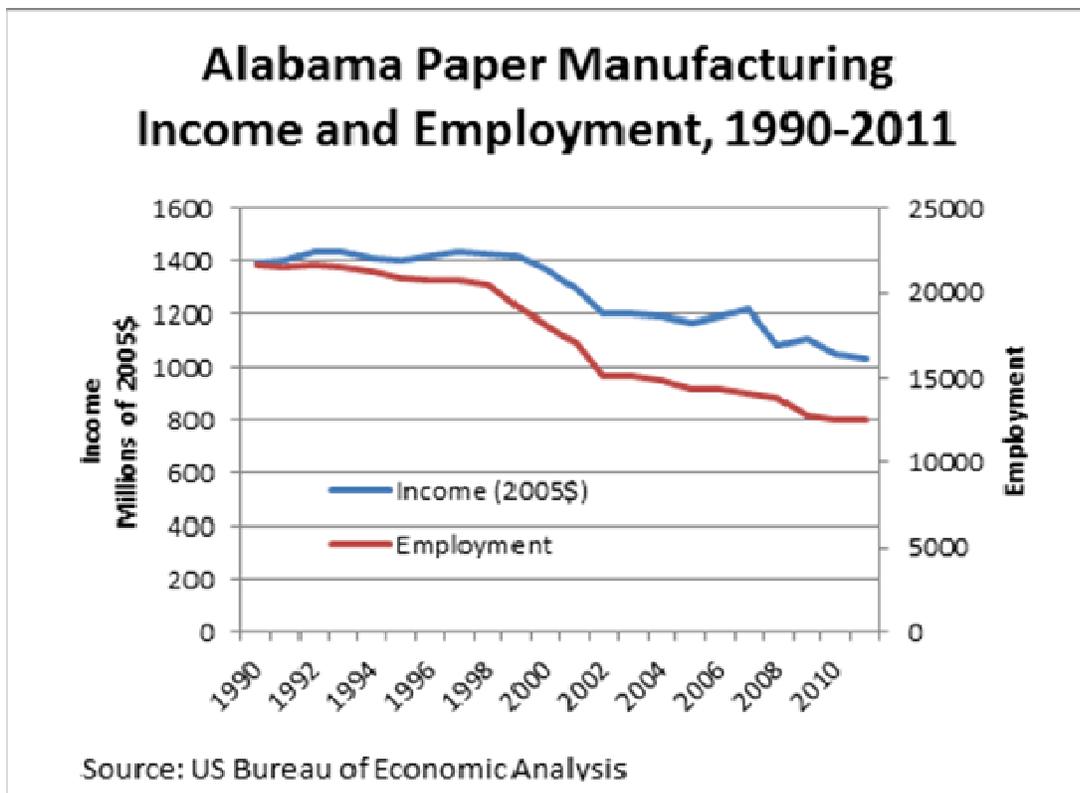
employees' spending in local communities. Total losses to the state of Alabama are estimated at nearly 5,000 jobs and over \$300 million per year.

The Courtland facility is the largest pulp mill in the South, drawing wood from more than 70 counties across Alabama, Mississippi, and Tennessee. With a 24-hour pulping capacity of 4,750 tons, the closure of this mill reduces Alabama's pulping capacity by nearly 21 percent and the South's pulping capacity by nearly 4 percent.

While most of the volume used for paper production at this mill comes from roundwood (logs and chips), additional sources include by-products of other mills in the area, mostly sawmills. Hardwoods make up more than half of the species mix. In these three states, this mill uses a substantial proportion of the roundwood production, in particular hardwoods (based on 2012 data). The loss of a mill of this size has far-reaching consequences for forest landowners who provide wood to the mill.

While mill capacity in Alabama declined 21 percent, jobs declined by 43 percent and income by 29 percent between 1990 and 2011 (figure 2). The steeper decline in jobs than in capacity indicates that only a portion of the decline in jobs derives from reductions in paper demand. A portion of the remainder could be attributed to technological change, as paper manufacturing becomes more capital intensive and less labor-intensive over time. This is not a new situation for the paper manufacturing sector, nor is it unique to Alabama.

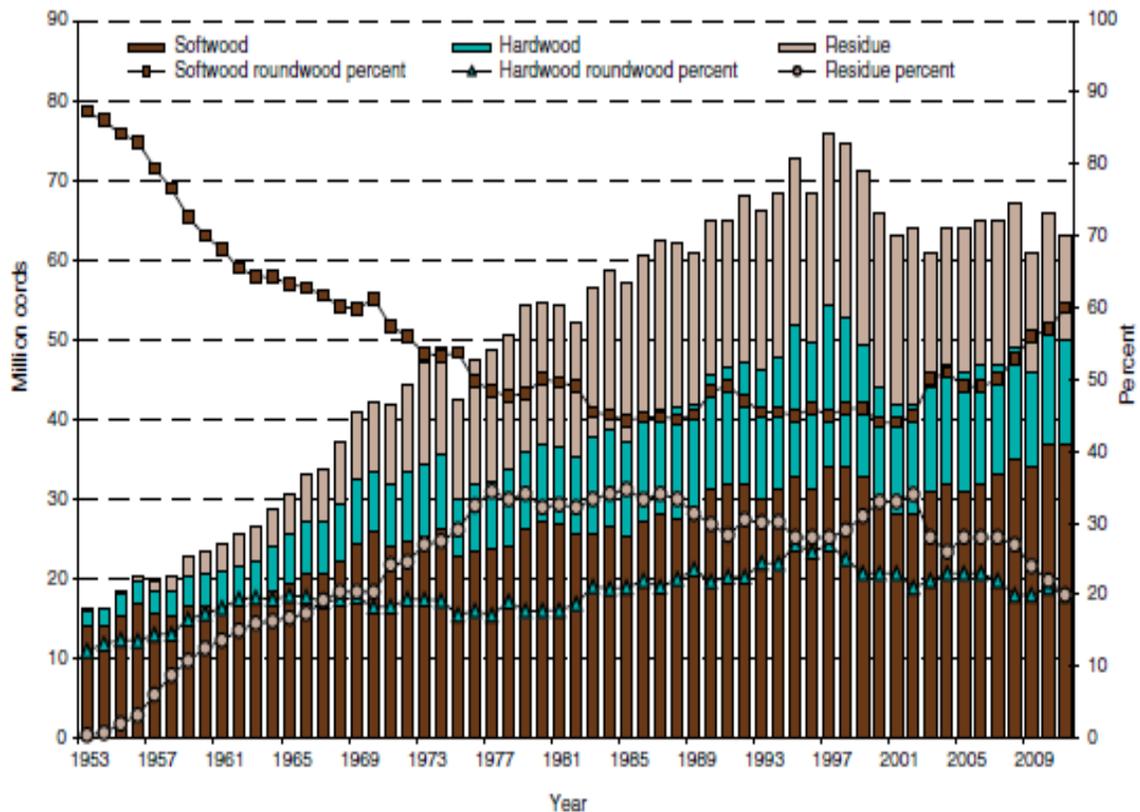
Figure 2—Alabama paper manufacturing income and employment, 1990-2011.



Historical Trends in Pulpwood Production in the South

Data from the Southern Forest Futures Project (SFFP), Forest Inventory and Analysis, and the 2010 Resources Planning Act Assessment (RPA) show a general decline in pulpwood production in the South as a whole. Figure 3 illustrates Southern pulpwood production from 1953 to 2011. The 4 percent decline registered between 2010 and 2011 follows a 7 percent increase between 2009 and 2010. This was one of the largest increases recorded since data collection began, second only to the 11 percent increase recorded between 1996 and 1997.

Figure 3—Pulpwood production in the South, 1953–2011 (source FIA).



Softwood roundwood expressed as a percent of total production declined significantly from 1953 until the mid-1980s. In 1953, softwood roundwood supplied 87 percent of the total pulpwood production. By 1985 it made up only 44 percent of total production and remained relatively stable until 2002. Since then, softwood roundwood has comprised an increasingly larger share of total pulpwood production. Softwood roundwood was up 1 percent in 2011 and accounted for 60 percent of total pulpwood production.

In contrast, hardwood roundwood as a proportion of total pulpwood production was only 12 percent in 1953 and steadily increased until 1997 when it accounted for 27 percent of total production. Since then,

the hardwood roundwood component has steadily declined. In 2011, with a 9 percent decrease, hardwood roundwood production only accounted for 20 percent of total pulpwood production.

The production and use of wood residues (from other mills, primarily saw mills) in the South has taken much the same track as hardwood production. In 1953, wood residue was not recorded as being used for pulpwood production. The production and use of wood residue increased steadily until 1985 when it accounted for 35 percent of total pulpwood production. Since then the proportion of wood residue has declined. Although wood residues are still an important source of fiber for the pulp and paper industry in the South, the 14 percent decline in wood residue production in 2011 reduced the proportion of wood residues to 20 percent of total pulpwood production.

Future Trends in Pulp and Paper Manufacturing

Pulp and paper mills are expensive (new mills require an initial investment of \$2 billion or more) and are subject to rigorous environmental controls. Coupled with declining domestic paper consumption, these factors have resulted in no new mills being built in the United States since the 1980s.

The SFFP and the 2010 RPA describe the most recent historical declines in production and consumption of in paper products in the U.S. and the resulting impacts on forests. The RPA Assessment also includes a forecast of the paper sector across multiple possible future scenarios, pointing toward long-run declines in most scenarios in prices, production, and consumption in newsprint and printing and writing paper in the U.S. over the next 50 years.

U.S. Forest Service Southern Research Station scientists are monitoring and forecasting trends such as those in the paper and pulpwood markets in the South. Our data are useful in analyzing bellwether events such as the closing of a major mill. SRS scientists continually monitor these trends and have developed forecasts that can help in future planning by industry and landowner groups.

Links to Key Information Sources:

SRS Website on Economic Impacts of Wood Related Sectors:

<http://www.srs.fs.usda.gov/econ/data/woodsector/>

Southern Forest Futures Project: <http://www.srs.fs.usda.gov/futures/>

2010 RPA Assessment: <http://www.fs.fed.us/research/rpa/>

2011 Southern Pulpwood Report: <http://www.srs.fs.usda.gov/pubs/43626>

SRS FIA TPO Data Retrieval: http://srsfia2.fs.fed.us/php/tpo_2009/tpo_rpa_int1.php

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