

Indicator 6.25.

Value and Volume of Wood and Wood Products Production, Including Primary and Secondary Processing

What is the indicator and why is it important?

The value and volume of wood and wood products indicates the relative importance of forests as a source of raw material for a wide variety of uses. Tracking the values and volumes of goods and services through the production process from the forest to the end of secondary processing explains a key dimension of the economic contribution that forests make to local and national economies.

What does the indicator show?

The volume of total roundwood harvest (including fuelwood) in the United States increased fairly steadily from about 10 billion cubic feet in the 1930s to 18.8 billion cubic feet in 1989. Since 1989, harvest has declined, reaching a level of 16.4 billion cubic feet in 2006 (fig. 25-1), a figure equivalent to about 25 percent of world harvest. Industrial roundwood production increased steadily between the mid-1930s and 1989 and has since been roughly constant.

The amount of primary wood and paper products produced in the United States increased relatively steadily from 82 million tons in 1950 to 203 million tons in 1999 and has since then

declined to 191 in 2006 (fig. 25-2). In comparison, in 2006, the United States produced 9.5 million tons of steel and 142 million tons of Portland cement.

The decline since 1999 is due primarily to declines in production of pulp and paper, hardwood lumber and softwood plywood. These declines offset an increase of 29 percent in oriented strandboard (OSB) production. In 2006 the largest share of production, by weight, was for pulp and paper (51 percent) followed by softwood and laminated veneer lumber (LVL) (21 percent), hardwood lumber (10 percent), nonstructural panels (6 percent), OSB (5 percent), softwood plywood (4 percent) and other industrial products (3 percent) (fig. 25-2).

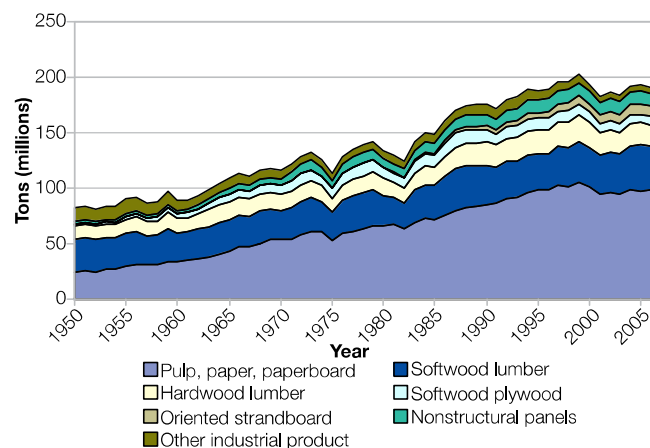
Wood energy use was 2.2 quadrillion BTUs (British Thermal Units) (Quad) in 2006 (roughly 2.4 percent of U.S. consumption), down from 2.7 Quad in 1983. Industrial use (primarily in forest products firms) was 1.5 Quadrillion in 2006 which is somewhat lower than highs in 1983 and 2000. Residential wood energy use has also declined but wood use for electric power has increased from 0.10 Quad in 1989 to 0.18 Quad in 2006 (fig 25-3). (see Indicator 24). Wood pellet fuel production increased from about 0.5 million tons (6 percent moisture

Figure 25-1. Volume of U.S industrial roundwood and fuelwood production (harvest), 1900–2006 (billion cubic feet) (Total line includes industrial roundwood plus fuelwood).



Source: USDA Forest Service

Figure 25-2. Weight of wood and paper products produced by product 1950–2006 (million tons).



Source: USDA Forest Service and other sources

content) (0.01 Quad) in 2003 to 1.8 million tons in 2008 (0.03 Quad). In 2008 about 20 percent of production was exported. Most domestic use was for residential heating.

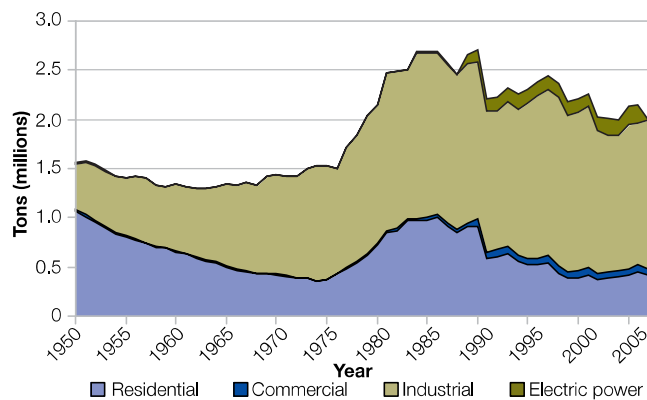
Total value of shipments for wood, paper, and furniture industries, using SIC (Standard Industrial Classification) industry codes, increased between 1973 and 1996 from \$288 to \$356 billion (all values adjusted for inflation and presented in 2005 dollars). Between 1997 and 2006, using U.S. Census (NAICS (North American Industry Classification System)) industry codes, shipments decreased from \$322 billion to \$309 billion (fig. 25-4). The decrease was due to a 10 percent decline for paper industries. Furniture industries increased 13 percent and wood products industries were nearly constant.

What has changed since 2003?

The volume of roundwood harvest and total weight of primary products production remained relatively stable between 2000 and 2006, although the weight of production has increased for softwood lumber, OSB and miscellaneous products and declined for other primary products—pulp and paper, hardwood lumber, softwood plywood, and nonstructural panels.

The value of paper industry shipments decreased 12 percent between 2000 and 2006 from \$187 to \$165 billion, but values were stable between 2000 and 2006 for wood products and wood furniture shipments (fig. 25-4).

Figure 25-3. Wood energy produced, by consumer, 1950–2006 (10^{15} BTUs).



Are there important regional differences?

A marked increase in roundwood harvests occurred in the South along with concurrent reductions in the North and Pacific Coast Regions. Industrial roundwood harvest volume increased 80 percent in the South between 1970 and 2006, accounting for 62 percent of the United States total in 2006. In 2006, the North provided 18 percent of the roundwood harvest, followed by the Pacific Coast at 16 percent, and the Rocky Mountains at 3 percent. Harvest decreased between 1991 and 2006 in all regions except the South (fig. 25-5).

Percent changes in harvest are not fully reflected in the value of final product shipments, which have remained much more stable across the regions (fig. 25-6). Although the South had the largest volume of harvest in 2006, the value of shipments for the wood and paper industries was highest for the North, at \$108 billion, followed by the South, at \$104 billion. Value of shipments has declined since 1997 in the North, South and Pacific Coast, and has increased in the Rocky Mountain Region. State level data on the value of wood furniture production were not available but may alter these results.

Figure 25-4. Value of shipments for forest products industries by SIC (Standard Industrial Classification) code, 1961–1996, and by NAICS (North American Industry Classification System) code, 1997–2006 (billions of 2005 dollars) (each line is added to the line below).

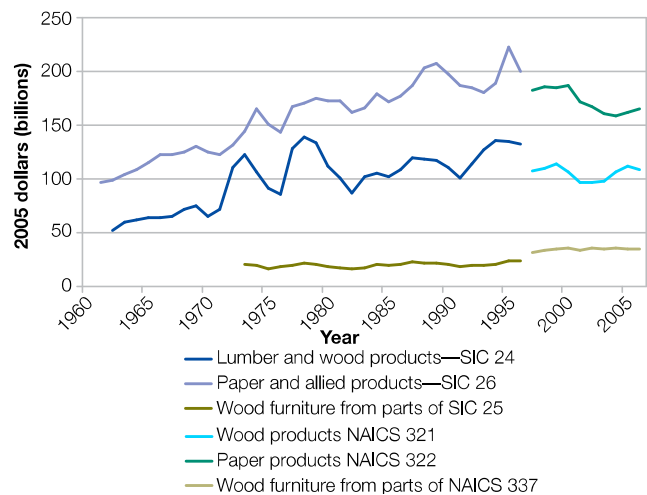
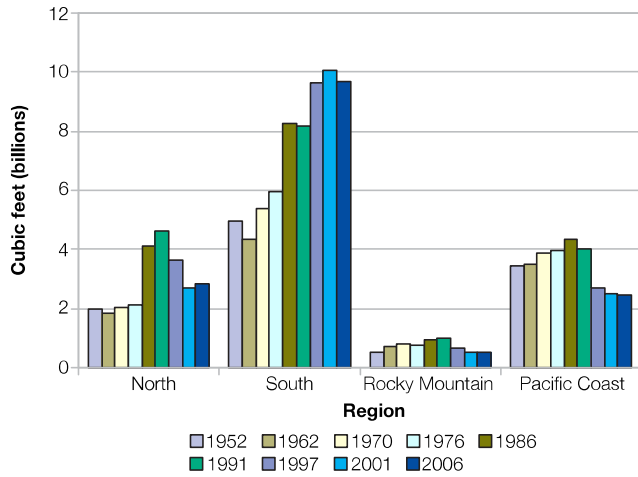


Figure 25-5. Volume of all industrial roundwood harvested by region, 1952–2006 (billions of cubic feet).

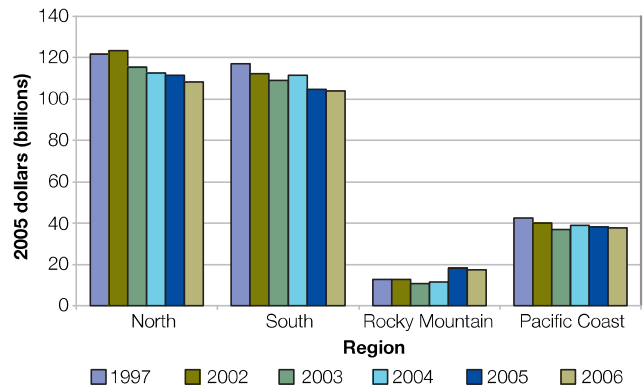


Source: USDA Forest Service

Relation to other indicators

The level and trend in this indicator are factors in sustaining benefits from forests employment and wages (Indicators 6.36 and 6.37), distribution of revenues (Indicator 6.40), and community resiliency (Indicator 6.38). The level of wood and

Figure 25-6. Value of shipments in wood and paper products industries (NAICS 321, 322) by region (billions of 2005 dollars).



Source: U.S. Department of Commerce, Bureau of Census

paper production is determined by the competitiveness of U.S. industries compared to foreign industries which, in turn, is influenced by capital investment in new technology (Indicator 6.34), by levels of research and education (Indicator 6.35), and by productivity of forests (Indicator 2.11).