

Indicator 6.34.

Value of Capital Investment and Annual Expenditure in Forest Management, Wood and Nonwood Product Industries, Forest-Based Environmental Services, Recreation, and Tourism

What is the indicator and why is it important?

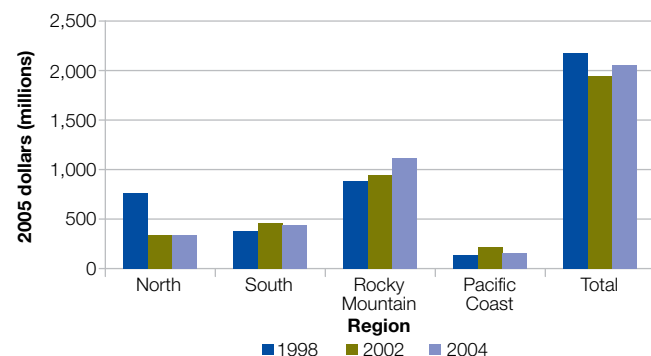
This indicator measures investments made to maintain and enhance the ability of forests to produce goods and services for the benefit of a Nation's economy and people. Sustainable forest management is not possible in the long run without regular investments. When capacities to protect, manage, and use forests erode, through lack of funding, the benefits that forests provide also decline.

What does the indicator show?

Capital investment toward protecting and managing forests includes investment in facilities, roads, and trails by the Forest Service, which was \$501 million in 2005 and \$390 million in 2007 (adjusted for inflation and expressed in 2005 dollars). Annual expenditures for Forest Service programs for national forests and grasslands decreased between 2004 and 2007 from \$3.0 to \$2.7 billion and expenditures for wildfire management increased from \$1.7 to \$2.1 billion (all in 2005 dollars).

Total annual expenditures for State forestry agency programs have been about the same in 1998, 2002, and 2004 at \$2.0 to \$2.2 billion (2005 dollars) (fig. 34-1). During this time State expenditures increased for States in the Pacific Southwest and Pacific Northwest Regions by 27 percent after inflation,

Figure 34-1. Annual State forestry program expenditures and costs by region, 1998, 2002, 2004 (millions of 2005 dollars).



Source: National Association of State Foresters

primarily in California, and decreased in the Northern Region mostly as a result of an urban forestry expense in 1998 in New Hampshire not present in 2002 or 2004.

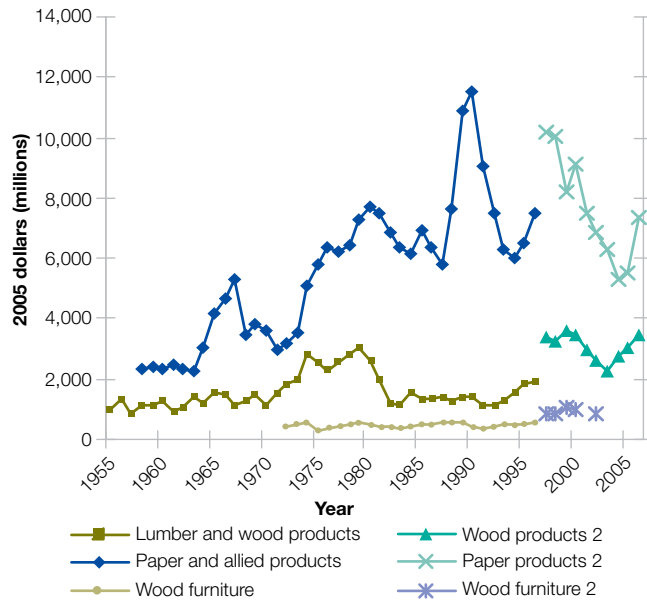
Capital investment in forest recreation and tourism are made by a variety of entities on both public and private land, and for infrastructure for businesses that provide the goods and services that make forest recreation possible. On the national level, investments into public recreation facilities include those made by the Forest Service and the U.S. Department of the Interior National Park Service (NPS). For 2009 the Forest Service budgeted \$405 million in capital improvement and maintenance costs, which is an 8-percent decrease from 2008 (\$474 million). NPS expenditures on facility maintenance increased from \$389 million in 2006 to \$393 million in 2007, and are budgeted for \$461 million in 2008.

Private capital investment in forest recreation infrastructure was estimated for businesses that provide forest recreation services and those that provide the equipment, which makes forest recreation possible. In 2006, total capital expenditures within the forest recreation sector were an estimated \$1.47 billion, with \$1.03 billion toward structures and \$442 million in equipment expenditures. These expenditures are approximately 8.5 percent of total expenditures in the leisure industry.

In 2006, NPS concessions provided an estimated \$48.3 million in the form of franchise fees paid to NPS and in the form of facility improvements for national parks, with \$21.6 million of this being solely dedicated to facility improvements. As much as 90 percent of the fees and improvements may support forest-based recreation.

Capital investment in wood products industries decreased from \$3.4 billion in 1997 to \$2.2 billion in 2003 but increased to \$3.5 billion in 2006 (all in 2005 dollars) (fig. 34-2). Capital investment in paper products industries declined more—from \$10.2 billion in 1997 to \$5.3 billion in 2004 but increased to \$7.4 billion in 2006 (all in 2005 dollars). Capital investment in the wood furniture industry was \$837 million in 1997 and \$873 million in 2002. Capital investment in logging industry was \$0.9 billion in 1997 (2005). More recent data from U.S. Bureau of Census is not available.

Figure 34-2. Capital expenditure in forest products industries, 1955–2006 (millions of 2005 dollars) (data after 1996 use NAICS (North American Industry Classification System) industry codes).



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

Annual expenditures for payroll and materials by the wood products industries decreased between 1997 and 2003 about 9 percent from \$82 to \$75 billion then increased to \$84 billion in 2006 (2005 dollars). Annual expenditures for payroll and materials for paper product industries decreased 15 percent from 1997 to 2003 from \$121 to \$104 billion then increased to \$107 billion in 2006 (in 2005 dollars).

What has changed since 2003?

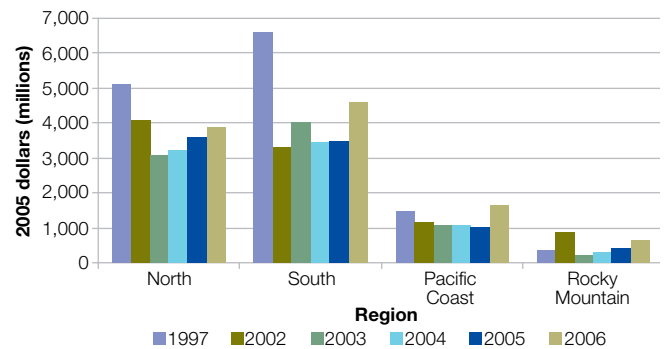
Annual capital investment in wood and paper industries declined 40 percent between 1997 and 2004 and increased 34 percent between 2004 and 2006. In contrast annual expenditures for payroll and materials remained relatively stable between 1997 and 2006 (in 2005 dollars).

In recent developments, during 2007 and early 2008, the U.S. Department of Energy (DOE) announced grants of up to \$585.3 million for capital costs to build 13 commercial or demonstration cellulosic liquid biofuels plants. Six of the plants—with DOE capital funding up to \$230.3 million—will use wood biomass or wood pulp extract as feedstock. Additional funds will be invested by individual businesses. In addition to the DOE funded plants, three other wood based biofuels plants are being prepared. All together these wood-based plants expect to use 2,300 tons per day or more of wood biomass (720,000 tons per year).

Are there important regional differences?

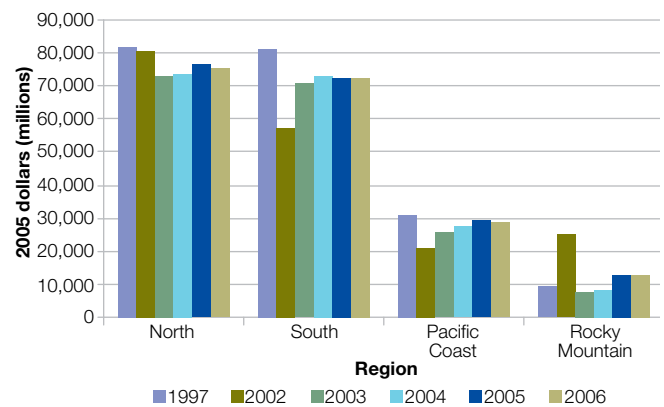
The regional share of U.S. expenditures for State forestry agency programs in 2004 is highest for the Pacific Coast (54 percent), followed by the South (21 percent), North (16 percent), and Rocky Mountains (8 percent). Between 1997 and 2006 the share of total U.S. annual capital investment in wood and paper product industries ranged from 35 to 49 percent in the North, 36 to 43 percent in the South, 11 to 15 percent in the Pacific Coast, and 3 to 9 percent for the Rocky Mountain Region (fig. 34-3). The share increased from 11 to 15 percent for the Pacific Coast Region and decreased for the North and South Regions. The regional shares of annual payroll and material expenses have been a little more stable and are highest in the North and South, 39 percent, 38 percent, respectively, followed by the Pacific Coast (15 percent), and Rocky Mountains (7 percent) (fig. 34-4).

Figure 34-3. Capital expenditure in wood products and paper products industries by region, 1997, 2002–2006 (millions of 2005 dollars).



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

Figure 34-4. Payroll and material costs for wood and paper products industries by region, 1997, 2002–2006 (millions of 2005 dollars).



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

Why can't the entire indicator be reported at this time?

Capital expenditure and annual expense data are not available for a number of entities that protect and manage forests, including county and local governments, conservation organizations, and certain corporate land owners (e.g., TIMOs, REITs). Capital and annual expense data are not available by region for forest based recreation and tourism. Data specifically on capital and annual expenses for providing forest-based environmental services are not available although some cited total expenses by the Forest Service and State forestry agencies support these services.

Relation to other indicators

The levels and trends in capital investment and annual operating expenses are key factors in sustaining benefits of all types from forests—from wood products (Indicators 6.25 and 6.28), from nonwood products (Indicators 6.26 and 6.29), from recreation (Indicators 6.41, 6.42, and 6.43), and for environmental services (Indicator 6.27). Levels of capital investment and operation expenses also influence the competitiveness of U.S. wood and nonwood products firms in comparison to foreign firms (Indicators 6.30, 6.31, and 6.32). Levels of capital investment also influence levels of employment (Indicator 6.36), wages (Indicator 6.37) and community resilience (Indicator 6.38).