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TIMBERLANDS



in **TURMOIL**

America's timberlands are in turmoil. From the remote backwoods to groves near small towns, forests are shrinking: 35 acres here, 500 there. The decline is so incremental it masks a crisis. Viewed from a national perspective, however, the pace of the losses is staggering:

The United States loses 1 million acres of forests annually, an area larger than all of Rhode Island, according to the U.S. Forest Service's *Forests on the Edge: Housing Development on America's Private Forests*, which also reports:

- 13 million acres lost since 1992, almost the size of West Virginia.
- 23 million acres gone by 2050, an area larger than all of Maine.

The culprit is clear. America's timberlands are being converted to development.

"You wake up one morning and the forest you took for granted down the road has bulldozers tearing up the trees," says Bob Simpson, vice president of forest programs for the American Forest Foundation.

Far more is at stake than neighborhood ambiance. The decline in forest acreage will put 340 animal species at risk of extinction, 20 percent of the total that depend on forests for their survival. It will affect the 180 million people who depend upon forests for their drinking water. Nearly 40 watersheds scattered across the eastern United States will shift to urban uses, increasing stormwater runoff and reducing both the quality and quantity of the water they provide.

Even the air we breathe is at risk. With every acre lost, the amount of carbon stored in trees will decline. This has broad implications for the management of greenhouse gas emissions, which are offset by forests sequestering carbon in trees, soil, and plant litter, as well as wood products.



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As timber companies divest, carefully managed forestland is up for grabs, and it portends an invisible—but staggering—crisis for the U.S.

By Jane Braxton Little

Officials (below) hold a neighborhood walk to describe the history of land that could become housing, while



New Hampshire residents (top) face a new reality out their kitchen windows: former forestland sold and developed as "kingdom" lots.

This is not the first era in American history to witness a widespread reduction in timberlands. When Europeans arrived, a billion acres of forests covered half of the land that would become the United States. The new settlers set to work immediately, whittling at the woods to make way for farms and cities. As settlements moved from the East to the Midwest and on westward, the clearing continued. By 1900, forests covered less than a third of the United States. That acreage has remained relatively stable for nearly a century despite some forest growth in the East, where former farmlands are maturing into second-growth forests.

Today America's forests include 504 million acres considered productive timberlands. The U.S. Forest Service and other government agencies own and manage around 29 percent, according to the Heinz Center for Economics and the Environment. The rest belongs to 10 million different private owners ranging from lone individuals to International Paper, whose 6.8 million acres make it the nation's largest forests-products company.

THE TIMO ERA

For industrial and family forest owners alike, the landscape began shifting in the mid-1980s. Driven by a combination of market forces and tax laws, timber companies started selling their lands. After decades of managing immense forest tracts to produce pulp and sawlogs for the mills they owned and operated, corporations like Crown Zellerbach and Diamond Occidental began divesting them at a pace that has accelerated to nothing short of dizzying. International Paper, which sold all its Maine holdings last year, recently announced plans that include selling its entire remaining timberlands, according to the *Forestry Source* newspaper.

More than half the nation's 68 million acres of private industrial timberland has changed hands since 1995, says Tom Tuchmann of US Forest Capital, LLC. Most of those sales were in the last five years.

"It's clear that all industrial timberland is for sale or has sold," says Bill Ginn, director of The Nature Conservancy's Global Forest Initiative.

The new owners are not rival companies. Most are timber investment management organizations, financial organizations that didn't exist 20 years ago. These so-called TIMOs invest money for institutional clients and wealthy individuals seeking to diversify their portfolios. With average annual returns on timber investments outpacing the stock market, even academic institutions have jumped on the bandwagon. Harvard, Yale, and other ivy-covered universities are buying up forests along with pension funds, insurance companies, and charitable trusts. The University of Minnesota has \$18 million of its \$770 million endowment in timber, the *Wall Street Journal* reported in November.

In 1990 there were two or three TIMOs in the United States, according to Peter Stein, a manager with Lyme Timber Company, a TIMO in New Hampshire. Today there are 24 TIMOs managing timberlands valued at \$15.7 billion. The *Forestry Source* newspaper lists Hancock Timber Resources Group, a subsidiary of Manulife Financial Corporation, as the largest, with more than 3.2 million acres of forests valued at \$2.9 billion. Financial investors manage \$30 billion of American forestland, according to Hancock officials.

For America's timberlands, the implications of this rush to divestiture are enormous. After managing their holdings for 10 to 15 years, TIMOs have strong financial incentives to sell them. Their responsibility to seek the highest sale price they can get triggers sales of smaller and smaller pieces for what is known as "highest and best use," a euphemism for development.

Family forest owners have generally been bystanders to the dramatic transformations in industrial timberland ownership, but they are inevitably being drawn into the vortex. They own 59 percent of the nation's forests in holdings that range from less than 10 acres to more than a thousand. They have traditionally depended on local mills to market their products, generally small-volume sawlogs and low-value material sold to pulp and paper mills.

As industrial owners close their domestic mills and move their operations offshore, where labor costs a tenth of the U.S. rates, small landowners are left without a market for their forest products. That cuts their incentive to manage their holdings as timberlands and increases the temptation to sell to developers.

America's mom and pop forest owners are also aging. Half are at least 55 years old, according to a study by the National Commission on Science for Sustainable Forestry. When their land changes hands, through inheritance or sales, it follows a trend that mirrors the timber industry and goes into the hands of multiple owners. By 2020, the study predicts, the number of private timberland owners will expand from today's 9.9 million to 12 million.

Each additional owner increases the potential for forest fragmentation. And each fragment will be more difficult to manage as timberland. Within the next decade, the science commission projects that America will lose 10 million acres of private forestlands, an area larger than New Hampshire and Connecticut combined. By 2050 an additional 13 million acres will be lost, according to *Forests on the Edge*.

"The trends are not good," says the American Forest Foundation's Simpson. He calls this drift toward development America's invisible forest crisis.

OPPORTUNITIES

This whittling away of America's timberlands has not sparked a national outcry, but it has generated angst in the countless communities dependent on the local timber industry. After decades of relatively stable

relationships with hometown companies, which gave them access to forestlands for recreation and firewood cutting, rural communities are scrambling to protect themselves by acquiring the backyards that have dominated their local economies and lifestyles. More than 3,000 communities in 43 states own forests totaling 4.5 million acres. New England leads the pack with as many as 500 town forests (See "A Race to Reclaim Forests," *American Forests*, Autumn 2005).

This wholesale divestiture of industrial timberlands has also galvanized conservation groups alarmed by the threat to biodiversity. They have jumped into the fray, buying forests so aggressively that conservation organizations have become one of the top five land purchasers in the last two years, according to TNC's Bill Ginn. Most of these acquisitions include conservation easements that prohibit development but allow timber harvesting and other forest-management activities.

The Nature Conservancy, Trust for Public Land, Conservation Fund, and many other groups are also buying development rights on family forests. These voluntary agreements reduce the landowners' annual taxes and provide one-time cash payments that allow landowners to hold onto their forests and invest in future operations.

Other programs offer incentives to landowners who maintain or develop conservation values, including Safe Harbor agreements for endangered species and the federal Farm Bill. They work well, says the American Forest Foundation's Simpson, but they are dramatically under-funded. Less than 1 percent of the farm bill's \$39 million for conservation goes to forest programs.

Despite the obvious threat of conversion to housing developments, many conservation groups view the upheaval in timberland ownership as a chance to create an entirely new approach to forest management focused on biodiversity.

Their emphasis is on working forests managed for a full array of forest goods and services to benefit both communities and ecosystems. Instead of offering a single product—traditionally pulp or sawlogs—they envi-



AP/REINCHAM HEPAID, PHILIP A. DWYER

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sion forests that provide recreation, scenic views, mushrooms, and other nontimber products as well as trees, which can be cut when prices are highest.

Ecotrust, a Portland-based nonprofit, is working to build a conservation economy in the Pacific Northwest by connecting the growing demand for responsibly harvested wood products with land managers who have

met the standards of the Forest Stewardship Council, one of several forest-certification systems. The area offers a booming green building market within a stone's throw of commercial forestlands and mills.

Ecotrust's goal is to reward good forest management in the marketplace, says Bettina von Hagen, vice president of the nonprofit's Natural Capital Fund and Forestry Program.

Conservation groups are also developing markets that pay forest owners for storing carbon, holding back stormwater, and other ecosystem services their lands provide. The San Francisco-based Pacific Forest Trust recently completed its first carbon credit transaction, brokering the sale of carbon stored on a privately owned forest to an energy company to offset its carbon dioxide emissions.

The most promising ventures involve innovative partnerships among conservation groups, timber managers, and landowners, often TIMOs. The Conservation Fund recently protected 312,000 acres in eastern Maine by purchasing a

conservation easement from Typhoon, LLC, a TIMO. The New England Forestry Foundation, a regional group dedicated to sustainable forest management, will hold the easement on the Downeast Maine lands. Wagner Forest Management will continue to harvest timber products.

The deal protects wildlife ranging from moose to pine martens, and conserves 366 miles of shoreline. The land will remain open to the public for hunting, fishing, hiking, and birding.

By keeping tracts like this intact and productive, traditional adversaries are working together to benefit the timber industry as well as the environment, says von Hagen: "Part of our approach is to entice, encourage, cajole, and reassure the forest products industry that this approach is viable and helpful."

FUNDING

Funding these efforts remains a challenge. While many sources are available, all are competitive and none are plentiful. The federal Forest Legacy program is providing \$80 million this year to protect particularly sensitive timberlands. The U.S. Forest Service uses some of it to purchase lands for its own management and some to buy conservation easements on private lands. While Forest Legacy funds are holding their own in Washington's cutthroat allocation process, most other sources are declining.

The strongest financial support for conservation projects comes directly from the American voters, who in 2003 approved 75 percent of the conservation measures on state and local ballots. That made \$1.8 billion available to create parks and preserve natural farmlands and forests, says Ernest Cook, with the Trust for Public Land in Boston. The total rose to \$4.1 billion in 2004. Three of every four dollars spent for conservation comes from voter-approved ballot measures, a clear public mandate for resource protection.

Whether this public will is strong enough to offset a future of forest fragmentation remains to be seen. The worst may be ahead. As TIMO investments reach their 10- to 15-year appreciation limits, most observers forecast heavy sales as financial managers try to maximize their returns. The most obvious and lucrative profits are from sales of smaller pieces to the retail housing market, according to the *Forestry Source*.

With development gobbling up America's timberlands at a rate of two acres a minute, even the most well-funded landowner incentives and aggressive conservation programs may not be enough to keep timberlands as working forests. What's needed is a combination of revenue incentives and regulatory controls, says Hal Salwasser, dean of the college of forestry at Oregon State University. As long as small forest owners are required to pay more for permits to harvest their timber than the income they earn, development will trump conservation, he says:

"If we lose forestland for another use we don't need to talk about sustainable forests anymore," Salwasser adds. "They're gone."

Saving America's forests will take citizen engagement and all the political will the public can muster at the local, regional, and national levels. It will require a landscape approach that crosses multiple ownerships and management practices, and collaboration among government agencies, scientists, environmental organizations, and private owners.

The nation cannot afford to lose its private timberlands. They are critical havens for wildlife, headwaters for water supplies, carbon storehouses, and the source of 90 percent of our wood products. When these trees fall in the woods, the nation should be listening. **AF**

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