

Speech

U.S. Forest Service
Washington, DC



Forest Trends: Ownership, Markets, and Ecosystem Services

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It's a pleasure to be here today, especially with such a forward-thinking group of people. For all of us, managing our environmental footprint is critically important in today's business world. I commend the Gravure Association of America for hosting this series of workshops to explore, step-by-step, the environmental footprint associated with your work.

Whether our business is making paper, selling magazines, or managing forests, our work takes place in a global context that has greatly changed in the last 20 years, if not just the last 2. Like all of you, the Forest Service is coming to grips with these new realities, which is what I would like to talk to you about today.

Forest Service Mission

First, a little about who we are. *[slide 2]* Most people know that we manage the National Forest System—155 national forests and grasslands in 42 states and Puerto Rico, totaling about 193 million acres, or about 8 percent of the land area of the United States. *[slide 3]* Many people think most forestland is public. In the United States, that is emphatically not the case. The vast majority of forests are in private ownership, especially by small private landowners. *[slide 4]* Many people also believe that most of the timber we consume in the United States comes from national forest land. It has never been more than 20 percent, even in the heyday of national forest timber production, and today it is negligible. Timber production from national forest land covers less than 5 percent of what Americans consume.

[slide 5] In most other countries, the situation is very different. Governments administer the vast majority of forests, with communities and indigenous groups or private landowners managing the rest. That model is breaking down due to the inefficiencies inherent in centralized forest governance, and other countries are looking for alternatives. They are looking at our own system, where so much more forestland is in private hands.

[slide 6] However, people do value public forestlands in the United States for all the ecosystem services they deliver. I'll come back to the notion of ecosystem services, but people get a tremendous number of these services from the national forests and grasslands, ranging from food, to water, to flood control, to soil protection, to biodiversity, to carbon sequestration, to outdoor recreation. By way of illustration:

- *[slide 7]* About 60 million people get their drinking water from water sources that originate on national forest land.

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- *[slide 8]* The national forests hold 80 percent of the habitat for elk and bighorn sheep in the lower 48 states; 50 percent of the nation's premiere trout and salmon habitat; and 60 percent of the downhill skiing in this country.

In a study we are jointly conducting with the University of Florida, we estimate the dollar value of ecosystem assets and annual services on national forest land to be well into the trillions of dollars.

[slide 9] Our mission extends to other public and private lands as well. The Forest Service is charged with helping to sustain the health, diversity, and productivity of *all* of the nation's forests. Working through State Foresters primarily, we help landowners in a variety of ways, including developing management plans for working forests and helping landowners establish working-land conservation easements. *[click]* As the U.S. population grows and landownership changes, land managers are increasingly driven to consider whole landscapes—private and public, forest and farmland—in our thinking and planning.

[slide 10] The same applies on an international scale. Through our international programs, we work with partners from around the globe to promote sustainable forest management. Our international role has become especially important in this era of businesses going global. In fact, almost everything the Forest Service does these days, whether it's managing public lands or working through the states to assist private forest landowners, has global ramifications. That's an important point, and it can be illustrated through the loss of so many working forests, farms, and ranches in the United States.

Trends in U.S. Forests

[slide 11] Since the 1600s, the United States has lost about a quarter of its original forest estate, mostly due to conversion into cropland. In the 1900s, the net area of forestland stabilized due to conservation measures and to reforestation of idle cropland.

[slide 12] Now, for the first time in a hundred years, we are starting to see the erosion of our forested land base, as these projected figures show. Age and demographics are driving the trend. Private forest landowners account for almost 60 percent of America's forests, and many of them are now selling their lands to developers. If current trends continue, we will lose about 23 million acres from 1997 to 2050, an area the size of Maine.

- *[slide 13]* As small woodlot owners age, one-sixth of privately owned forests are expected to change hands in the next 5 years. Eighty percent of our population now lives in cities, which are expanding into the countryside at an alarming rate. *[click]* From 1982 to 2003, rural land was converted to urban uses at a rate of more than 4,000 acres per day. *[click]* This loss of open space is having an enormous impact on water quality, wildlife habitat, and other values.
- *[slide 14]* A recent Forest Service study, *Forests on the Edge*, found that the number of watersheds subject to growing housing density in the next 25 years is huge. On the map, forests subject to high or medium change are in red and pink. The ecological value of these areas, in terms of the ecosystem services they can still deliver, will be greatly reduced. As the

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number of forest landowners grows, the size of landownerships is shrinking at an alarming rate. This makes managing whole landscapes for wildlife, water quality, or fire prevention more and more difficult.

[slide 15] The industrial forest land base in the United States has also seen some dramatic changes. To understand why, we need to step back and look at some of the global trends that are driving changes in forests and forestry:

- *[click]* Natural forests are giving way to intensively managed plantations as the major source of the world's wood. In the United States, fully 60 percent of our softwood harvest is expected to come from 9 percent of our timberland base by 2050, mostly in the U.S. South. *[click]* Plantations now supply about a quarter of the world's timber, and in 20 years it is expected to be half. This will come mostly from overseas, where the factors of production are cheaper.
- *[slide 16]* According to a MeadWestvaco study a few years back, it was actually cheaper to produce timber in Europe or South America and import it to Baltimore, Maryland, than to produce it in North Carolina or Virginia. That has implications for forest landownership in the United States. Why own and manage your own forestland when cheap wood is plentiful and looks to be even more so in the future? In the 11-year period from 1995 to 2006, about 80 percent of private industrial timberland in the United States was sold, and much of it went to TIMOs and REITs. For our forested land base, the future appears highly uncertain.
- *[slide 17]* Some of these trends have resulted in loss of milling capacity nationwide. Milling capacity has decreased 25 percent in the past decade or so and close to 50 percent in the West. With this loss of capacity and proximity, small woodlot owners across the country are losing an important income stream that helps them stay on their land.
- *[slide 18]* Internationally, deforestation rates in many large forested countries are disturbing, due to the aggressiveness of both legal and illegal timber harvesting as well as forestland conversion to agriculture. Illegal logging further depresses U.S. timber markets—by as much as 9 percent, according to the American Forest and Paper Association.
- *[slide 19]* Finally, demand for wood products in the United States will continue to grow, but at a lower rate than in the past. Due to a global market glut, prices will remain relatively flat.

[slide 20] What does all this mean for forestry in the United States? As exports of forest products decrease ... imports increase ... demand for wood in the United States stagnates ... and plantation production in the Southern Hemisphere comes into play—and as real estate values steadily rise—our ability to keep forested lands forested steadily declines. Industrial timberlands have historically played an important role in providing ecosystem services, as have family forests and public lands managed for forest products. However, it becomes less a matter of *should* we have commercial timber production than *can* we, given today's global markets.

So to me the question becomes—how do we establish value in our forested landscapes? If not timber, then what? Because it would appear that the market could drive forests—large blocks of



land that provide countless societal benefits—from the landscape. We need to find a way to steer this contraption before that happens.

Valuing Ecosystem Services

[slide 21] That's why the concept of ecosystem services is so important. Its focus is not on managing nature for nature's sake, but rather on managing ecosystems for the services they deliver to people—wood, water, pollination, soil formation, biodiversity, medicinal herbs, aesthetic beauty, and so on. It lets us place the wants and needs of people in proper perspective, at the center of what we do, taking into account drivers like demographics, global markets, and climate change. It lets us begin to conceptualize ecosystem services as values—and we can begin to measure those values, maybe even to some degree in terms of dollars and cents. If we can find a way of attaching market value to ecosystem services, then maybe we can reverse forest decline.

Carbon Markets. *[slide 22]* As you well know, trees sequester carbon. Trees can be part of a climate change solution. Through sequestration, U.S. forests currently offset 10 percent of our national carbon emissions, and it could be as much as 25 percent. Carbon markets appear to hold huge potential for giving forest landowners new income streams.

[slide 23] Through research, the Forest Service is setting the stage for carbon trading while exploring the feasibility of new carbon offsets, such as for biofuels or for reduced wildfire emissions. We helped the Department of Energy update a federal carbon registry that accepts a wide range of forestry offsets, and we have registered carbon sequestration projects with the California Climate Action Registry and the Chicago Climate Exchange. Through projects on national forest land, we are helping businesses, organizations, and individuals pursue their goal of carbon neutrality. We ourselves are pursuing that goal by finding ways to reduce our environmental footprint.

Other Ecosystem Services Markets. *[slide 24]* But it's not all going to be carbon. The Forest Service is pursuing other areas as well, such as biodiversity trading, wetland mitigation banking, and water nutrient trading.

- For example, we helped formulate a title in the 2007 Farm Bill to stimulate markets for carbon, biodiversity, and other ecosystem services.
- We have also promoted wetland credit trading through wetlands restoration on national forest land. Wetland credits have traded from as little as \$4,000 to as much as \$125,000 per acre, an incentive to “grow” wetlands.
- And we signed an agreement with EPA on nutrient trading in water markets. As you know, forests trap and absorb nutrients before they reach streams. Nutrient trading to meet EPA water quality standards is really taking off.

Biomass fuels. *[slide 25]* Biomass fuels also offer an opportunity for additional income streams for private landowners, and woody biomass from working forests holds enormous potential for helping to replace our nation's current petroleum consumption. The Forest Service not only fuels

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some of our own facilities with biomass, but also provides grants to communities to develop new industry. We are also doing research into transforming wood into biofuels such as ethanol.

Certification. *[slide 26]* Finally, a word about certification. More and more consumers are demanding to know that the wood products they purchase, including furniture and paper, come from forests that are managed not just for wood, but also for water, wildlife, and other values. As the Forest Service helps other countries like Indonesia, Brazil, or Gabon develop mechanisms to ensure sustainable forest operations, certification is one possible approach.

But when these countries turn to us and ask, “Are you certifying your own lands?”—meaning the 193 million acres of the National Forest System—we have had to say no.

[slide 27] So two years ago, we initiated a certification test on seven national forests, and our initial findings from audits under two sets of certification standards—from the Forest Stewardship Council and from the Sustainable Forestry Initiative—will be completed by July. As you probably know, the national forests provide less than 5 percent of the nation’s timber, but we manage the largest forest landownership in America, and the statement we make here carries some weight.

As we move towards a decision on a broader certification of national forests, we’ll be talking to lots of people and interest groups. We would welcome your comments and views as well. Perhaps one day, we might also consider certifying other ecosystem services—like clean water—certainly fitting, considering our broad mission for national forest management.

Conservation Working for People

[slide 28] It all comes back to this: The changes in landownership patterns we are seeing—just like the changes we are seeing in landscapes, with more fires and insect outbreaks—are best understood in a global context. The world has changed, and we must change with it. Other countries are wrestling with these changes, too, and forestry leaders from governments around the world have begun meeting to discuss forest governance issues.

For the United States, the bottom line is this: We can no longer so easily and readily rely on markets for traditional forest products—paper included—to keep it profitable and desirable to own and actively manage forestland in the United States. If we truly want to keep America’s forests, then we have to give America’s forest landowners additional incentives to stay on the land and manage it sustainably. For people to work for conservation, conservation must work for people.