Institutional Timberland Investment

A summary of a forum exploring changing ownership patterns and the implications for conservation of environmental values

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Institutional Timberland Investment

A summary of a forum exploring changing ownership patterns and the implications for conservation of environmental values

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Contents

Executive Summary 4
Issue Introduction 8
Presenter Summaries
  Robert Mendelsohn 11
  Eva Greger 14
  Kent Gilges 19
  Tom Colgan 26
  William McComb 32
Discussion Summary 39
Resources for More Information 47
Additional Readings 49
Executive Summary

In recent years the forest products industry has overhauled its core business model by divesting of much of its timberland. Pension fund and endowment managers, meanwhile, have been encouraged to diversify into alternative asset classes, including commercial forestlands. The intersection of these forces has spawned the creation of a new class of institutional forestland owners with new management objectives.

Some environmental groups have expressed concern over the ecological implications of the emergence of this new type of forestland owner. While integrated forest products companies may have harvested some of their lands aggressively, they also had strategic incentives to leave timber on the land and to hold large tracts of land for long periods of time. The new class of institutional investors, however, is focused primarily on maximizing the return on their timberland assets.

The recent Yale Forest Forum “Institutional Timberland Investment: Balancing Ecology, Finance and the Public Interest” offered panelists and participants an opportunity to explore the environmental implications of these changes in forestland ownership. Dr. Robert Mendelsohn, Edwin Weyerhaeuser Davis Professor of Forest Policy at the Yale School of Forestry and Environmental Studies and the Yale School of Management, began with an introduction to the issue and moderated the discussion that followed. Panelists were:

Eva Greger from GMO Renewable Resources, a timberland investment management organization (TIMO);
Tom Colgan from Wagner Forest Management, a land management company;
Dr. William McComb, an ecologist from the University of Massachusetts; and
Kent Gilges from The Nature Conservancy (TNC), the largest land conservation group in the United States.

Eva Greger’s presentation clarified a number of important questions about institutional timberland investment. She emphasized that TIMOs are long-term total return investors. Capital appreciation—that is, the growth in the price of the land from purchase to sale—typically comprises two-thirds of their total return. TIMOs are not overly focused on annual cash flows from timber sales, therefore they can time timber markets and make investments in the land. Ms Greger also described GMO Renewable Resource’s experience with forest certification—as a worthwhile investment in socially and environmentally risky areas such as the Brazilian Amazon. In more developed economies such as the U.S., however, certification has yet to show financial returns—i.e., the lack of a price premium dissuades investment in certification. Ms. Greger was more sanguine about the role of conservation easements in timberland investment citing her belief that (1) they take real estate buyers out of the bidding process and (2) markets do not yet efficiently value encumbered properties.

Tom Colgan described the history of forest management for timberland investors. Wagner Forest Management, he explained, has been managing forests as stand-alone investments for wealthy families and individuals since its founding in 1955. The emergence of TIMOs did not drastically change their style of management. Wagner’s silvicultural practices continue to emphasize risk reduction and stand improvement. Wagner also encourages forestland owners to maintain traditional recreational access—a strong social value in New England forests. Unlike individual investors, institutional investors require much more detailed financial reporting. In general, however, foresters and investors alike seek to balance annual income and long-term capital appreciation. Like Ms. Greger, Mr. Colgan also described conservation easements as sound investments, even in purely financial terms.

Bill McComb then discussed a variety of ecological considerations relevant to financially driven forest management. Dr. McComb began by describing the role of large trees—alive and standing, dead and standing and dead and fallen—in ecosystem functions and species
composition. Natural and managed forests alike produce big trees and the diversity of habitats that they support. Landowners should consider their harvest rates in the context of recovering these habitat elements and maintaining legacy trees. Dr. McComb suggested that forest managers and ecologists refine stand development models in order to better incorporate ecological variables. Better models of the relationship between animal fitness and retention tree abundance, for example, could help better identify and achieve “desired future conditions” in the forest. Finally, Dr. McComb stressed that landscape planning tools must incorporate these ecological variables and address constraints imposed by multiple ownerships.

Kent Gilges concluded the presentations by discussing conservation finance and timberland investment. Mr. Gilges first noted that TIMOs have proven to be very valuable partners in a number of large conservation deals—citing the 350,000-acre Champion/Forestland Group deal in upstate New York and a more recent 55,000-acre Hancock/TNC/GMO deal, also in upstate New York. He indicated that there is considerable variation amongst the TIMOs with respect to the compatibility of their business models with conservation.

Conservation groups have been active buyers of timberland properties, but in most cases they end up in the retail market rather than the wholesale market—i.e., they pay high prices for low acreage instead of the opposite. Mr. Gilges suggested that happens because TIMOs typically drive the deals. To play in the wholesale market, conservation groups will have to scale up, take more risk, and use leverage. This strategy can reach the same conservation outcome but at much lower cost to conservation groups.

A lively discussion with the audience followed the presentations. In responding to questions, panelists agreed on a number of themes:

- Managing large areas for timber and other values provides great conservation benefits by maintaining forested landscapes beyond set-aside reserves and by preserving ecological processes after human and natural disturbances;
- Conservation easements are extremely helpful tools for achieving certain financial and conservation goals. Timberland markets are probably still inefficiently valuing encumbered properties;
- Third-party certification has raised the bar on forest management in general, even though it has not yet delivered economic benefits to landowners. To investors in environmentally risky areas, however, certification reduces some of those risks.
Issue Introduction

Large-scale private ownership of forestlands in the United States has seen radical change in the last twenty years. Growth in low-cost international fiber supply began to depress forest product markets. The larger firms in the industry responded by consolidating in order to better control supply. Many had owned timberlands for decades and carried them at very low book values relative to their market values. Industrial owners also tended to manage their timberlands as a strategic asset—securing a cheap supply of timber for their mills when prices spiked. Timberlands managed in this manner typically yielded poor returns. Timberlands were a relatively unknown commodity in the market at this time and were greatly undervalued. The vast acreage required buyers with deep pockets willing to invest in a seemingly illiquid asset.

In 1974 Congress passed the Employee Retirement Income Security Act (ERISA). This act, along with similar legislation in many states, encouraged institutional investors such as pension plans, endowments and foundations to diversify their portfolios. Recognizing that timberlands were selling at bargain prices, timberland investment management organizations (TIMOs) emerged to organize and manage partnerships of institutional investors. Without a mill to answer to, these institutional investors could manage for returns on timberland assets.

TIMOs, Real Estate Investment Trusts (REITs) and other financial buyers accounted for about 60 percent of all publicly reported timber transactions in the U.S. from 1995-1999 (Block and Sample, 2001). Institutional investment in timberland increased from about $1 billion in 1989 (Block and Sample, 2001) to about $14.4 billion in 2002, according to recent data compiled by Yale's Program on Private Forests. Estimates of the acreage and financial value of timberlands in TIMO ownership in 2002 are presented in Table 1.

According to our research, TIMOs currently manage over 18 million acres of land valued at over $14.4 billion, including international holdings. This is a conservative estimate of the total value and acreage under TIMO management, since a few of the largest players would not disclose their holdings. It should be noted that Plum Creek is not a TIMO but is a publicly traded REIT. Nevertheless, we have included Plum Creek because 83% of its assets are timberlands. These figures indicate an average value of $793 per acre, however individual firm averages range from $399 to $1,993 per acre. This range reflects the varying geographic foci of the different firms: timberland values in the U.S. Pacific Northwest, for example, currently average about $2,000 per acre while those in the Northeast average less than $500 per acre (HTRG, 2002). Timberland values in developing countries are typically even lower.

The TIMOs listed in Table 1 range from large managers of both internal and external capital to smaller private equity managers serving institutional investors and high net worth individuals. Some firms use only equity

Table 1: Private Equity Timberland Investment as of December 2002

<table>
<thead>
<tr>
<th>Company</th>
<th>Value (millions)</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plum Creek Timber</td>
<td>$3,500</td>
<td>7,800,000</td>
</tr>
<tr>
<td>Hancock Timber Resource Group</td>
<td>$2,700</td>
<td>3,085,000</td>
</tr>
<tr>
<td>The Campbell Group</td>
<td>$1,600</td>
<td>813,000</td>
</tr>
<tr>
<td>Forest Investment Associates</td>
<td>$1,500</td>
<td>980,000</td>
</tr>
<tr>
<td>UBS Timber Investments</td>
<td>$1,200</td>
<td>1,129,000</td>
</tr>
<tr>
<td>The Forestland Group</td>
<td>na</td>
<td>*1,100,000</td>
</tr>
<tr>
<td>Wachovia Evergreen Timberland Trust</td>
<td>$1,200</td>
<td>900,000</td>
</tr>
<tr>
<td>Molpus Woodland Group</td>
<td>$ 877</td>
<td>692,000</td>
</tr>
<tr>
<td>Prudential Timber</td>
<td>$ 489</td>
<td>na</td>
</tr>
<tr>
<td>Timervest</td>
<td>$ 430</td>
<td>330,000</td>
</tr>
<tr>
<td>Forest Systems</td>
<td>$ 400</td>
<td>340,000</td>
</tr>
<tr>
<td>GMO Renewable Resources</td>
<td>$ 307</td>
<td>770,035</td>
</tr>
<tr>
<td>Forest Capital Partners</td>
<td>$ 190</td>
<td>250,000</td>
</tr>
<tr>
<td>Citigroup Global Investments</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$14.4 billion</strong></td>
<td><strong>18,189,035</strong></td>
</tr>
</tbody>
</table>

* Includes timberlands under purchase agreement contracts
na: Information not publically available
financing, while others use leverage through various debt instruments. Some focus on one region in the U.S. while others diversify regionally or internationally. The divestiture of timberlands from integrated forest products companies has stimulated tremendous diversification in the timberland investment management industry.

The financial implications of these trends in forestland ownership have been well explored by the timberland investment community, but ecological implications have thus far received little attention. TIMOs confer a number of conservation benefits:

- Large tracts of timberlands have remained under management for timber rather than other less conservation-friendly land uses;
- Financial markets now assign more value to timberlands and are now a more accessible source of capital;
- Many TIMOs have partnered with conservation organizations to set aside sensitive lands and develop working forest easements.

Nevertheless, the institutional investor’s legal obligation to maximize returns for investors has the potential to conflict with the interests of long-term forest productivity.

In order to explore the implications of these changes in timberland ownership, the Program on Private Forests at the Yale School of Forestry and Environmental Studies hosted a panel discussion titled “Institutional Timberland Investment: Balancing Ecology, Finance and the Public Interest” on January 21, 2002 in New Haven, Connecticut. The panel addressed questions about how institutional ownership influences forest management practices, long-term forest productivity, and non-market values associated with forestlands.

**Robert Mendelsohn**

Edwin W. Davis Professor of Forest Policy and Professor of Economics
Yale School of Forestry and Environmental Studies and Yale School of Management

While the forest products industry is not known for being quick on its feet, it hardly stands still. In fact, in recent years the industry has undergone some dramatic changes, especially with respect to its timberlands. Integrated forest products companies have been selling their timberlands—not just amongst themselves as they have for decades, but selling them out of industrial ownership altogether. The productive foundation of the forest products industry is being sold to the highest bidder. Who is buying this land? What has happened to it? These are important questions that we hope to address.

Two new classes of timberland owners have emerged that simply did not exist before. The first is real estate investment trusts, REITs, and the second is institutional investors, who tend to rely on timberland investment management organizations, TIMOs. These organizations represent new financial instruments and institutions that are buying, managing, and selling timberlands.

Why are integrated forest products companies selling off their timberlands? Surprisingly, it turns out that forest products companies are not always the best timberland managers. The industry—and indeed forestry educational institutions such as Yale F&ES—have generally failed to truly integrate the management of timberlands with the management of sawmills and pulp mills. Although the strategy of vertical integration may have succeeded during the emergence of the industry, it appears to be losing favor today. While timberland management may have previously focused simply on harvest scheduling, timberland managers today face the more complex challenge of growing trees in an economical fashion.
The failure of vertical integration in the forest products industry is not clearly understood, but a number of theories have been proposed:

*Union labor proved too expensive.* Labor unions are a normal part of managing a very capital-intensive mill. Unionized labor for land management work, however, proved to be burdensomely expensive. Many companies created separate divisions to solve this problem.

*Timberlands were owned to feed the mill.* In an integrated company, managers focus on optimizing the productivity of their capital-intensive mills. A state of the art pulp mill, after all, costs about $2 billion and carries substantial interest payments. In this context, timberland assets were managed for their strategic contribution to mill returns rather than for maximized return on their own asset value.

*Managers failed to communicate across interdisciplinary divides.* Mill owners and managers ultimately in charge of their company's timberlands failed to communicate effectively with biologists and silviculturalists managing the land. Good timberland management requires a thorough understanding of both the biology and the economics of tree growth. Management decisions must be consistent with both disciplines. Integrated company leaders may not have been very good at this kind of interdisciplinary thinking.

Regardless of the cause, Wall Street punished the forest products industry for its poor performance. This pressure caused managers to look for unproductive assets to sell and get off of their balance sheets. Because their timberlands were producing such low returns, integrated companies began selling them off.

One of the questions addressed with this forum is, What difference does it make when you have these new owners rather than the traditional integrated forest owners? Another is, Will they manage the lands any differently? One difference you might expect to see is that new timberland owners will only cut their trees when it is profitable. They will manage the land to maximize their own returns rather than the returns of a pulp or saw mill. The timing of timber harvesting may change dramatically.

You also might find that some of the new owners simply are interested in profits. They are not going to hold on to old trees longer than their economic returns would suggest. So you might see new owners look for forest companies that for one reason or another have kept their trees too long. They will come in and buy those companies up and cut those trees as fast as they can.

The third difference with the new timberland owners is the fact that they are invisible. Whereas the large integrated timber companies were high profile members of their local and national communities, one may not even know who the new timberland owners are. They may be a partnership of pension funds, endowments, or wealthy individuals. Many conservation organizations were able to leverage the public exposure of industrial timberland owners to achieve conservation goals. With this invisibility, these kinds of partnerships may be less common going forward.
Eva Greger
Managing Partner, GMO Renewable Resources

Renewable Resources is a timberland investment division of Grantham, Mayo, Van Otterloo (GMO). We fit the description of a timberland investment management organization (TIMO): we acquire and manage timberland primarily on behalf of institutional investors, pension funds, foundations, and endowments. We invest in both plantation and natural forests in the U.S. and overseas.

Once capital has been committed to one of our funds, we have investment discretion to decide what forests to buy and how we will manage them, within the terms of the fund. These typically include a target rate of return, a time horizon, and often some geographic limitations. Our fee structure ensures that if the investors make a profit we also personally make a profit, so you can make a simplified assumption that profit maximization for my client is also profit maximization for me, although that may not always be the case.

The key question for a conference like this is “Do timberland investors have any special obligations in forest stewardship?” A classical economic explanation would suggest that I am an agent on behalf of investors: I have promised to provide them with the best return on their investment that I can manage. That is my only duty. In the real world, however, society values other non-market benefits, such as honesty and environmental benefits. Although they may not maximize profits, these values are important for each of us to cultivate.

At Renewable Resources, we pursue environmental goals in our forest management because we are legally required to comply with current environmental regulations; our investment strategy emphasizes these benefits; and we are people, with personal beliefs that inform our decisions.

I see what I would call a bimodal distribution in investor perspectives on environmental stewardship issues: some are highly concerned and some are not. We work with both individuals who are investing their own money and managers of pooled funds for other beneficiaries, e.g., pension funds. Individuals managing their own capital are often highly interested in how their investment affects the environment. Investors who represent other beneficiaries may or may not be so interested. If they believe that their clients have environmental interests, then they want to minimize the risk of upsetting them. On the other hand, I have definitely encountered investors who believe that by pursuing environmental goals they sacrifice their rate of return. These investors emphasize their fiduciary duty as a pension fund manager. People have to live from the money that’s generated by these funds when they retire, so they really emphasize profit-maximization.

At Renewable Resources, we believe there are a number of strong economic arguments for forest stewardship. During the 1990s, for example, we owned some Douglas fir plantations in the Pacific Northwest. When the spotted owl crisis stopped harvests on public lands, supply dropped so dramatically that prices tripled over a short period of time for Douglas fir sawtimber. As a good corporate citizen managing according to the rules, we still had wood available for harvest. We were able to take advantage of those much higher prices caused by the reduction in supply. Similarly, in New England we expect to see an overall shift in species composition toward red maple. With careful management, however, we can grow quality hard maple, which is significantly more valuable. We expect to realize additional profits for this management in the future as scarcity drives up prices for this higher value species.

We have also had positive experience with forest certification. We have not yet seen a price premium in the U.S. for certified logs, but we have gained access to new markets. Internationally, we have invested in Gethal Amazonas, a Brazilian company that owns an area of tropical rain forest and a plywood mill. The economic risk in this region—both perceived and real—is much higher than what we see in the U.S. We simply would not have made this investment if we were not for Forest Stewardship Council (FSC) certification. The potential returns for this kind of deal should be high enough to attract venture capitalists. Tropical forests unfortunately face high industry and
country risk, which increase the rate of return required by investors. So we marketed this fund primarily to environmentally conscious investors interested in the notion of a triple bottom line—financial, social, and environmental.

The environmental strategy with Gethal Amazonas is to maintain the forest by finding economic incentives for the local residents to leave land in forest as opposed to converting it to, say, cattle ranching. We have found that reduced-impact logging techniques have actually lowered our operating costs. We have better information about the forest inventory before the timber comes into the mill. We have set up more efficient skidding trails, which saved energy costs. Because we owned an operating facility, certification allowed us to sell the end product into markets that otherwise would not have been available to us. Certified finished wood products can command price premiums in Italy and Europe, and we are beginning to see this now in the U.S.

Unfortunately this investment strategy doesn’t work for us as a major business model. Gethal Amazonas was a very small deal—only a small amount of capital was needed. We were not able to scale it up to a level that would really pay us for our management time. We were only able to do this project because we have many other “plain vanilla” timberland investments that afford us the time and energy.

As representatives of long-term pension investors, we have a privileged position relative to forest products companies. We do not have to generate quarterly earnings. Instead we look for a high total rate of return. Unlike Generally Accepted Accounting Principles (GAAP) for public companies, the accounting rules for pension funds allow us to annually recognize our return from the growth of our trees. We get an appraisal every year that accounts for the increased volume. Public forest products companies cannot do this, so they have forests on their books at a very low value. The stock market does not recognize the fact that forest products companies still get growth if they defer harvests.

Because we focus on total returns, we can negotiate a better price generally on properties that don’t have current cash flow. Therefore, we present to investors that most of their return will come when we sell the land at the end of the fund. Of the net present value return about one-third typically comes from current cash flow, and two-thirds from the value at exit. So you can see that maximizing the attractiveness of the property to the next potential buyer is critical to us. We want healthy forests that offer the next buyer the opportunity to generate some cash from harvesting timber. That for us is what constitutes sustainability: we want an asset to be in better condition at the end of our fund than it was in the beginning. To do this we structure our contracts with local consulting foresters so as to motivate them to maximize total end return rather than just income from one harvest.

We do make the case to our investors that most of their returns come from that natural tree growth. Now of course the rate of return you earn from that growth is critically impacted by what you paid for the forest up front. Conservation easements have proven very useful to us in this regard. They take buyers looking for real estate development potential out of the bidding process. Alternatively, we periodically team up with a conservation organization to submit a competitive bid for a property that might otherwise be subdivided.
Forest certification, as I described earlier, has helped us gain access to some niche markets. Unfortunately, the market for lower-grade certified forest products is poorly developed. I am skeptical that forest certification will show an economic return in terms of a market price premium. Nevertheless, it can really help with risk management when working in an environmentally sensitive area.

The most speculative of the ecosystem services markets is carbon. Carbon credits could be very valuable to a forest owner, but the system is still subject to a political process that we have no claim of controlling. So we do not currently emphasize it to our investors. One of the major issues that will arise with a system of tradable carbon credits is its effect on the rest of the timber market. Will carbon credits encourage people to convert natural forests to higher yielding tree plantations that will conserve more carbon per acre, but may not provide as many other non-carbon environmental values? Furthermore, if much of this wood is planted, it will generally be managed on short rotations and will affect pulpwood markets substantially. One of the ways we can make management of natural forests sustainable is by selling lower value species and grades as pulpwood. This is true in Brazil and in New England: in order to manage sustainably we need good pulpwood markets. Carbon credits greatly weaken these critical markets.

In summary, at GMO-Renewable Resources we do not believe that good forest stewardship and maximizing investment returns are incompatible. We make this case to investors, they are responsive to the idea, and they have seemed willing to invest in better environmental stewardship in the expectation of a longer term return. Our long-term outlook for our investors means that we don’t have to generate quarterly earnings. This gives us the flexibility to develop longer-term forest plans that maximize the quality of the forest in the future. We have successfully incorporated market-based conservation tools such as forest certification and conservation easements into our business model. Carbon credits, however, remain unpredictable, so we are waiting to see how that market will develop.

**Kent Gilges**
Director, Compatible Ventures Group, Forest Conservation Program
The Nature Conservancy

At The Nature Conservancy (TNC), we’ve recently begun to think about what it means to achieve mission success across a much wider scale. We have found that looking at big landscapes often means looking at working forests.

I have three points I’d like to touch on. First, we have done some very effective partnering with TIMOs, and in fact with some of the parties at this table. Second, we should not think of TIMOs as monolithic. They have over 14-15 institutions, and these groups differentiate themselves in their business models. Some of their business models are more compatible with conservation and some are less so. Third, to reach a meaningful scale, we’re going to have to integrate our work more closely with the private equity represented by TIMOs where possible.

Investment in timberlands has grown remarkably and today we have just over $9.4 billion invested through TIMOs and about $15 billion if you include the REITs. Sixty percent of the timberland sold by vertically integrated forestry companies in 1999 was sold to TIMOs and 30% was inter-company trades. Conservation organizations were a small but effective buyer—there were basically two big deals: one with the Nature Conservancy in Maine and another with the Conservation Fund in northern New York, New Hampshire and Vermont.

The Conservation Fund deal with the Forestland Group and Champion International set the standard for how conservation organizations could get involved with these deals. The Conservation Fund bought 350,000 acres from Champion. They sold easements to the states and through Forest Legacy, and they partnered with the Forestland Group, who bought the timber portion of the land in New York. The Conservation Fund also sold 18,000 acres to TNC in New Hampshire, and we
partnered with GMO Renewable Resources, protecting half as permanent preserve and half as working forest. It was a very effective overall program that protected a lot of land.

In a similar deal, The Nature Conservancy bought 55,000 acres from Hancock in an area of the Northern Forest in New York called Tug Hill. New York State bought an easement and two river corridors, and we sold the 35,000 acres under a conservation easement to GMO. The Open Space Institute, the Forest Service’s Forest Legacy Program, and others helped make this deal work.

One of the real strengths of The Nature Conservancy is the development of our ecoregional plans. These are blueprints for our conservation work in an area, and they define the portfolio of sites we feel must be protected in order to conserve biodiversity. Deals like those described above have helped to protect some of our portfolio. In general, these large landscape deals have been sourced by the conservation entity.

There are two ways conservation deals occur. They are either sourced by the conservation entity or sourced by the TIMO. If the conservation entity sources the deal, we put our money down, take the risk on the deal, and set aside areas that we want to keep in reserves. We also craft some kind of working forest easement for the rest of the property. That’s all scientifically and biologically driven. We then try to find a timber partner for the remaining land. The TIMOs buy the cash flows that remain, but these are restricted by conservation easements that will run with the land in perpetuity. Deals like this achieve the scale we need, but conservation funding is at much greater risk. What if we can’t find a timber buyer?

What has happened more often in the past is that a TIMO sources a deal. It acquires a large tract of timberland, which it puts into production. The TIMO then looks for ways to maximize the return on areas with low productivity or with environmental concerns by selling these to conservation interests or government entities. It further maximizes return by selling off the developable land or HBU property (“highest and best use”). These outsales—whether easement or fee simple—are generally at a much higher per-acre cost, and conservation has had limited or no input into the overall conservation design for the landscape or property.

Looking at the National Council of Real Estate Fiduciaries Timberland Index Returns, about 1/3 of the total return comes from operating income, and 2/3 from capital appreciation. Hancock’s website describes part of their approach to capital appreciation: “We focus on buying large commercial timberland properties. Large purchases give us most potential for passing on volume discounts to our investors. Also when parcelled or divided into smaller properties, large acquisitions give moderate-sized investors equal opportunity to participate in large-sized transactions.”

TIMOs typically incorporate as a ten year Limited Liability Partnership, or in some cases as Master Limited Partnerships or Limited Liability Corporations. We have seen some deals where, in order to achieve their target of 6-7% operating income, they front-load their revenue stream.
by compressing a 20-year timber flow down into a 10-year timber flow. I don’t know of many forests in the Northeast that can produce a 7% operating income from a sustainable flow of timber. Then the TIMOs manage their outsales to conservation interests and HBU properties. This is all found money.

Plum Creek has created a division in its corporate structure called Plum Creek HBU. Given the cash constraints created by their merger with The Timber Company (Georgia-Pacific’s landowning subsidiary) and the need to meet a dividend payout over 7%, asset sales are a critical part of their business model. Even the parcels that are sold as timberland by the TIMOs are generally sold in smaller sizes than they were acquired. This captures some of the value in the wholesale/retail dynamic, and opens up the market to smaller regional buyers such as sawmills. We often see those retail buyers liquidate the standing timber fairly quickly in order to pay down the debt they accumulated to buy the property.

In the long run, is it negative that they liquidate the timber? Probably not in the resilient northern forest, but the subdivision of properties, fragmentation, is a big issue for conservation.

We have done some analysis of the forestland sales that occurred from 1998-2001 focusing on who is buying. Figure 2 is a scatter plot of the relationship between parcel size and per acre price, with industry deals in gray and conservation deals in black. This is not comprehensive; it is only based on the data to which I had access. What is interesting is that conservation buyers are playing up in the retail end where there are high prices for low acreage, especially when buying from the TIMOs who are driving the deals. This makes it very tough for us to get to scale and be effective with our conservation dollars.

To summarize the conservation problem from my perspective, large tracts of forestland are being sold to TIMOs, which is not necessarily a problem since we have found that we can work with them. However, at times the TIMO business model is antithetical to conservation because of the drive to subdivide and to pull off those HBU parcels. We participate at the retail end of the market, which makes it very expensive for us and doesn’t allow us to get to the landscape scale. To be effective, conservation has to move beyond being dumb money. We have to understand the cash flows on these properties.

At TNC, we’ve begun to think about how to integrate timberland investment and conservation. Theoretically, any given property will produce a set of cash flows, and its value is based on the present value of discounted future cash flows. If conservation steps in and restricts those cash flows, we should be able to model the change in value that results. Conservation should pay for the delta between restricted and unrestricted, but both conservation and the TIMO would then participate in the wholesale pricing of a property.

Figure 2: Forestland Sales 1998-2001: TNC and Industry

Dollars per acre by parcel size, all regions. Black squares represent TNC purchases; gray diamonds represent Industry purchases. Circled points represent TIMO sales to TNC. Source: The Nature Conservancy.
In 1999, TNC bought 185,000 acres of forestland in Maine from International Paper for $35 million. We went out and raised the $35 million from philanthropic donors. Subsequently, we looked back at the deal to see if we could have done it more efficiently. We are now managing the land with J.M. Huber and we’re producing about $1-2 million a year in cash flow under a sustainable forestry easement. We also set aside 45,000 acres of the most mature timber into permanent reserves, so it’s a very good conservation deal. With an 8% rate of return to the TIMOs investors, we probably could have raised $15 to $17 million in private equity by partnering with a TIMO or other investors. St. John was a great deal, but if we’re going to repeat that deal in multiple places, we’ll need to become more efficient with our capital.

The key going forward is to figure out how to institutionalize a process that accomplishes three things: 1) brings value to the TIMO partner by improving their risk/return profile—for example by bringing conservation dollars into the deal at the front end or by lowering the environmental risks perceived by their investors; 2) streamlines the process for easement negotiations so that conservation and private equity can remain nimble in acquisitions; and 3) provides a transparent process for valuation in the deal so that conservation and the TIMO both participate in the benefits of wholesale pricing and have a shared risk.

For any of these options, we have established five guiding principles to measure their value. These are:

- Conservation should shape the deal so that long-term conservation success is achieved on priority landscapes at a meaningful scale;
- Conservation should participate in the wholesale pricing of large acquisitions;
- Conservation should leverage its philanthropic dollars through partnership with private equity;
- Sustainable forestry cannot be controlled through an easement, but rather through the choice of the forest manager;
- Results must be lasting.

The key to partnerships will be leverage. TNC is willing to invest significant dollars in these deals. We are willing to leave our money in the ground. We raise around $450 million each year and we operate a revolving capital fund that is valued at roughly $300 million today. But as in the many examples given above, we want to leverage each $30 million investment to protect $100 million in forestland.

Conservation entities, particularly the three largest nationally, The Nature Conservancy, Conservation Fund, and the Trust for Public Land, are all moving in this general direction. It behooves TIMOs to partner with us in such a way that both investors and conservation benefit.
Tom Colgan
President and CEO, Wagner Forest Management, Ltd.

Wagner Forest Management has been in the business of timberland management for forty-six years. We’re based in the little town of Lyme, New Hampshire, just up the Connecticut River Valley near Hanover and Dartmouth College. We employ over fifty forestry professionals to manage approximately three million acres of land for about twenty-six different clients in eight states in the Northeast, the Appalachians and in the province of Ontario, Canada. We’re strictly land managers, and have been for all these years. We have absolutely no manufacturing facilities, so all we worry about is trees.

One of the questions I have been asked to address is, How has the growth of institutional ownership of timberland changed the nature of business for forest managers? I can only speak to what I’ve seen with Wagner. Back in the early seventies, Mr. Wagner was a bit visionary in seeing the appeal of timberland investment to high net worth individuals. He was very good at cultivating relationships among wealthy people in the Boston and Chicago areas. He formed partnerships of high net worth individuals and pooled their money to buy timberlands. Through these partnerships he amassed between 150,000 to 200,000 acres of land on behalf of very prominent people, mostly from New England.

By the 1990s, the ownership interest in these partnerships was no longer held by the original investors but by their children. These children had generally lost touch with the conservatism of their parents. They grew up thinking that investments had names like Microsoft and Netscape and they had virtually no interest in the timberland as an investment. So those investments that were made back in the seventies were basically unwound without a passing on to the next generation.

But in the early 1990s a group of institutions began to look at timberlands as a possible long-term investment and this affected Wagner. They were pension funds, foundation endowments, and as before high net worth individuals—but interestingly, not the same group that Mr. Wagner had dealt with in the 1970s. In 1993 the John Hancock Timber Resource Group—which is the largest representative in the U.S. of pension clients making timberland investments—chose Wagner to be their northeast affiliate. We help them make timberland investments in the northeast.

In New England, large industrial owners dominated forestland ownership for years. Invariably, management of these lands focused on using the land base as a supply for manufacturing facilities. Often, forest products companies have a recognizable asset in a local mill. They typically try to build a brand image. That is neither good nor bad, but it is different from how we work at Wagner. We do not have an interest in advertising in magazines and talking a whole lot about what we do.

We do, however, remain an integral part of the community. All of our foresters live in the communities where they work. We demand that. We want them going right from their house out into the woods. I’m a big advocate of the belief that a lot more management gets done by wearing out shoe leather in the woods than it does by going to an office every day. Timber—that is, the property we manage—continues to get cut and sold to local mills. We hire local workers to help us with all aspects of land management. We don’t pretend that there is not a national scope to what we do, but we are a bit parochial in our management.
Have silvicultural systems changed under institutional ownership? I don’t think the systems themselves have changed. As an example, our forest management plans typically target stands that are at higher than average risk of mortality, such as a diseased beech stand or pure balsam fir. We have had ice storms that have damaged our stands badly. Almost all of our cuts are improvement cuts or multi-stage shelterwoods. Our staff tries to be very localized in making decisions based on what is right for the land.

Our silvicultural outlook will often differ from that of the previous owner of the land we acquire. For example, we bought a large tract of land in New England from a company that operated a hardwood pulp mill. They practiced excellent hardwood silviculture, but they were so hardwood oriented that they let their softwood resource grow old and die rather than manage it. We don’t have a focus on hardwood or softwood. We work with what needs to be managed at the time and focus on risk reduction and stand improvement.

In the Northeast we do not practice intensive plantation forestry. In many cases, it would cost as much to plant an acre as to buy it outright. Most of our clients do not plan on owning the land more than ten or twenty years. In an area where it takes 80 years to grow trees, trying to recoup an investment in planting in 20 years is unrealistic. That is why we focus on managing natural stands.

When I worked for Scott Paper Company, I was very proud of our intensive management program in Maine. But that program was really an insurance policy for the crown jewel—the company’s mills. It was an investment based less on inherent economics than it was a comfort for the mill to have a secure wood supply.

I was also asked whether consideration is given to conservation of environmental and societal values along with timber values? That’s easy: absolutely. In virtually every area we manage timberland, there are strong traditional uses of the land. In New England, this can be in the form of the tradition of hunting, fishing, open public access, or snowmobile corridors. That is a huge and growing business. There were many lease lots given out to the employees of the previous industrial landowners—half and one acre lots on lakes. As managers we continue these traditions in virtually all cases. We see this as a very important part of acting locally.

The key point for the institutional owners that we work with is that we purchase land as a timber investment, not for development. There certainly is development potential on much of the land that we buy, but we do not make these investments as development opportunities. As a matter of fact, we helped one client buy 6,000 acres in New York and we managed it for about 9 years. The managers of the investor group changed and they asked us to start subdividing the property. We resigned our contract. We just said “we are not in that business, perhaps you should find someone else.” So we stick very close to our roots in timberland investment.

Being the stewards of land is very important to us. We certainly need income from the cutting of trees, but we also want to improve the quality
of timber so it will appreciate the land value. Our investors look at both the value that they get from the dividend from timber harvest income, and from the asset appreciation. When I worked in the forest products industry I had a much stronger motivation to maintain the acres that the company owned than I ever had to sell them. There was a certain possessiveness we had as land managers: we just did not want to get rid of land. That's not the case with us as professional managers for institutions.

Institutional owners and land managers such as us have also been very active in the sale of ecologically sensitive land and conservation easements; even more so, I would say, than many forest products companies. While some companies have been motivated by brand recognition, our motives are in some ways even purer than that. We are not trying to promote ourselves in any way. We make these sales as good investments and we have done a tremendous number of them over the years.

Ten years ago Wagner sold the second working forest easement ever done in the state of New York, on 20,000 acres of timberland. In Vermont, we sold a conservation easement to the U.S. Forest Service that was the second Forest Legacy project in the nation. In total we have placed conservation easements on over 66,000 acres of land in New England, and we sold over 70,000 acres of special land to conservation organizations or public agencies. This is in addition to wildlife refuges and river corridors within our managed properties. We've been very active in these measures.

My final question was, In what ways are foresters’ goals consistent with institutional investors’ goals and in what ways are they different? Our clients want both annual income from their holdings and long-term appreciation in the value of their holdings. Our foresters’ goals are really very consistent with that. We ask our foresters to work with natural forests, to practice good stewardship and to work towards improving the quality of the resources. They want to feel good at the end of the day about what they’re doing, about how they’re working, and what they accomplished in the woods. They are locals. They have to live with what they do every day and have to live with the community. If a forester tells us that the price of a particular species of wood has dropped to the point where it is better not to sell, then we have the flexibility to leave it on the stump and wait for prices to improve. If our investors had a goal of cash generation at any cost, we would not be able to do that.

Our investors do not need a constant stream of cash; they look at both the cash and the appreciation of their property. At the same time our clients realize that maintaining a professional logging force is important for community stability. In New England it is harder, I believe, for loggers to start and stop working than it may be in other areas. So for the future success of our management we try to avoid really volatile swings in annual cutting levels as a way to help keep loggers’ business somewhat stable. That is important to us. Foresters are instruments of getting land managed, but it is always somebody else who is doing most of the grunt work out there. If you do not have those people—and they are very professional at what they do—if they are not economically stable, you cannot get done what you want in forest management.
Live large trees provide a source of large dead wood and, in this part of the world, they are prone to the formation of cavities that are used by a host of species. Bird species diversity has been shown to be associated with species composition and structural diversity, as are a number of other levels of vertebrate complexity of forest mammals, reptiles and amphibians. Large trees also produce large quantities of fruits—e.g. oak mast—that are eaten by wildlife. And one thing we don’t typically think about is bark structure. A number of tree species, such as white oak, have a very rough and overlapping bark that supports over-wintering insect populations that are in turn significant to over-wintering bark foraging bird populations.

So as we change the species composition of our forests say from white oak, red oak, black oak, to red maple, which has smoother bark, we affect the long-term food production over the winter for some of these birds. The brown creeper, for example, is a bark foraging bird that also nests under overlapping bark on dead and dying trees. It occurs primarily in hardwood trees that have some level of decay. Such trees would ordinarily be removed from the forest if it is being managed to maximize economic income because they take up growing space that otherwise could be occupied by faster-growing trees.

Large live trees become large dead trees. We know that there are a group of species that require large dead trees to nest and reproduce. In fact, the woodpeckers, which are primary cavity nesters, will only reproduce if they first excavate a cavity as part of their nesting ritual. There are a whole host of secondary cavity nesters that also are associated with the cavities produced by the primary cavity nesters. Species such as pileated woodpeckers make holes in the dead trees, which are subsequently used by southern flying squirrels and other flying squirrels. There are literally hundreds of species in the U.S. that are associated with dead, dying trees, and holes in trees.

Eventually the large dead trees fall and become large dead fallen wood, which supports reptiles, amphibians, small mammals and many invertebrates. Hollow logs, for example, are used as den sites. It is
important to remember that logs don't become hollow after they fall on the ground; they come from hollow live trees. So you have to recruit those even though they take up growing space in an otherwise economically managed forest. Decomposition of this dead fallen wood releases energy to other trophic levels in the system. When this wood falls into streams, it alters stream structure and often adds in-stream habitat diversity. Fallen dead drumming logs for ruffed grouse and nurse logs for some tree species also play important roles. Now they certainly aren't required—ruffed grouse will drum on stone walls and hemlocks will grow up on things besides nurse logs—but fallen logs do play an important role.

It's clear that we should maintain some of these functions in managed forests. The question is how many large trees should be left behind and where should they be left? Let's look at a theoretical example where we have 10 residual trees in a stand that are all located along a stream. This makes a lot of sense from a stream protection perspective and an economic perspective—harvest areas can be spatially concentrated. Now let's look at it from the perspective of territorial bird habitat. Concentrating the residual trees along the stream may support far fewer individuals than distributing them more widely throughout the stand. The point is that regulations may ensure that a certain number of residual trees are left behind, but distribution and location greatly influence how well they provide their intended function.

At the stand level, if you are interested in growing a stand that will support cavity-nesting species—assuming you do not need to feed a mill, but rather are playing the markets for high-value sawtimber—you may want to thin from below. This treatment will allow the remaining crowns to grow rapidly, develop volume and add value. You may also kill some trees of low commercial value to create some coarse woody debris. This style of management would support bird species such as the nuthatch. Alternatively, you could take the highest-value wood out now and leave behind the mid and understory trees. In many forest types, these trees will have small crowns that will be unable to respond well to full sun and wind conditions. Such a residual stand would be unlikely or, at best, very slow to produce the big trees that become big dead trees and big dead fallen trees. Without those elements, the stand will lose the ecological functions described earlier over the long-term.

At the landscape level, it's important to recognize that organisms look at landscapes as a mosaic of habitat quality. The Swainson's Thrush, for example, nests in understory and midstory shrubs and feeds on the ground. Wherever you find those structural elements—in a Douglas fir old-growth stand in Washington or a hardwood forest in New Hampshire—you will find the Swainson's Thrush. That bird's view of a habitat mosaic is very different from our own view of a habitat mosaic, that is, size classes and species composition of trees. It's also very different from that of a pine marten.

Land ownership patterns across a landscape have a tremendous impact on ecosystem functions. I have been working with Tom Spies at the Corvallis Forestry Services Laboratory, USFS Pacific Northwest Research Station studying the likelihood that current forest management policies in the Northwest will achieve the long-term goals of society, industry, and the public agencies. In that part of the world, forest management varies quite a lot by ownership. When an organism's territory size covers multiple stands, and possibly multiple owners, how is that species likely to respond to changing forest structure conditions over time?
To address that question, we took 1995 satellite images and analyzed the stand conditions on about 1 million acres in the Oregon coast range. We then projected those stands forward for 15 and 65 years using a stand dynamics model and assessed habitat quality for several species. We found that habitat quality changes, but not uniformly over the landscape, because of ownership patterns. In areas where land ownership is in alternating sections, some of those sections will always be low quality habitat because of the management decisions made on the adjacent ownership. So one might ask, is there a better arrangement for land management decisions over this area that might achieve ecological goals while also maintaining economic income? This is the basis for the Umpqua Land Exchange Project, a jointly funded industry-agency initiative to rearrange land ownership in the west.

When looking at the arrangement of habitat elements across a landscape, connectivity plays an important role in their ecological function for species that move from patch to patch either over time or over generations. Once you get down to about 50% of the landscape in suitable habitat, theoretically at least, we see a fairly sharp threshold in the probability that an animal is going to be able to make it from one side of the landscape to the other. This threshold varies depending on the gap-crossing ability of the organism.

So how do we actively address some of these issues? One approach is to ask, Do the conditions that we see on the landscape fall within the range of variability that we might expect under the natural disturbance regimes? We don’t expect all stands to meet those conditions all of the time, but if many of them don’t it should raise a red flag. The other approach is to ask, What are the requirements for the species that we’re concerned with and how do we go about meeting them? As described earlier, this means prescribing not only the number of things we want to leave (or grow) on that site, but also the spatial arrangement.

When developing management guidelines to ensure properly functioning forested ecosystems over time, a few considerations deserve mention.

First, a delay in recruiting certain elements into the stand now may have long-term implications on the landscape. Second, having a few stands in a landscape that don’t have these elements is not a great problem; but if the majority of the landscape lacks them and only a minority has them, then they will not function very well. Finally, coordinating management across ownerships—fighting the status quo—can gain some big dividends and provide landowners a lot of flexibility in terms of what they could do over the long haul.

I’d like to close with some ideas for further study. Recruitment rates for large trees, snags and logs are known for some forest types, but hardly all. This information could greatly improve the ability of stand dynamics models to capture ecological values as well as their traditional economic values. We are only now beginning to see the development of landscape planning tools that can address issues such as the amount and distribution of habitat elements such as woody debris and large trees across large areas. These tools need further development. We also need to develop our ability to carry out multi-ownership planning and monitoring in order to clarify our goals and really understand whether we’re meeting them.
Following is a brief summary of the panel’s responses to questions raised by the audience.

**Sustainability of timber valuations**

**Eva Greger**

First of all, I agree that the total supply demand feature for all wood is probably not as optimistic as some might suggest. Many who sell timberland deals try to make a case for continuously increasing timber prices, but I don’t believe that’s possible. However, I do think there are certain niches of the market—the high-value hardwood in New England, for example—that are in high demand, and have shrinking supply. The legacy of management practices, the fragmentation of the landscape, and changes in land use all suggest a shrinking supply. So we’re basically making a bet that by using a different sort of forest management strategy we’ll end up with the type of timber that is scarcer in the future. Secondly, I think that return expectations are unrealistically high right now. People who had been earning 20% in the stock market have very high expectations for returns on any alternative asset. As those expectations come back down to reality, closer to 6.75%, then the next buyer applying that lower discount rate will in effect value the forest at a higher net present value.

**Exit Strategies and Fragmentation**

**Tom Colgan**

We never buy lands with very apparent subdivision potential in the first place. We still manage lands in areas of Maine that are unincorporated. There’s literally no government that oversees them except the state. If parts of a larger block have subdivision potential, we don’t aggressively subdivide them. But in the end, I think you have to take a triage approach. Do you really want to spend your money trying to keep that land from being subdivided, or is it better to spend that money protecting a much bigger area that can be unfragmented for a longer time? To answer your question, yes some property does get subdivided upon exit. But that’s not part of our strategy at the front end and that’s why
we spend a lot of time looking at conservation easements. We have put easements on tens of thousand of acres. That's really our preferred exit strategy.

Eva Greger
I think this issue highlights distinctions in the corporate cultures of the different investment organizations. Some are more focused on real estate value and they tend to get matched up with investors of like mind. I could offer a 20% return deal selling off 100 home lots from a forest in the middle of nowhere in Maine. On paper it would look great and would attract the kind of investors who just want the highest apparent return and are not skeptical. At GMO we tend to get investors who respond to a more conservative story and are looking for forestry returns, not real estate returns.

Coordinated Management of Fragmented Landscapes
Eva Greger
Interestingly, here in New England and down in southern Appalachia, we have recently bought properties that were aggregated from smaller landowners. We assembled them into a portfolio that makes more sense for an investor. So there are opportunities to move the other way. The other point I would make is that when forestlands are sold or divided there are also opportunities for continuity of land management and increasing coordination with neighbors. We would be interested in cooperating with other landowners, and in educating our neighbors as to how we all might jointly maximize the value of our forests.

Tom Colgan
I think that conservation easements may help meet some of those landscape coordination objectives. Many landowners prefer to keep to themselves and are reluctant to experiment with something new. But if they see their neighbors make successful easement deals, you might see multiple owners take the same road. This may not be coordinated, per se, but the end result is multiple properties getting some level of protection.

Municipal Bonds for Working Forest Conservation
Kent Gilges
Tax-exempt bonds differ greatly from other financial instruments. The cost of capital is much lower, but you have to make annual payments on bonds. This takes you away from the total return management style we discussed earlier. If you end up in a down market for a few years and can’t match payments, you forfeit the property.

Eva Greger
I agree that it’s a very different strategy, so I don’t foresee competition between private equity investors and municipal bond investors. In fact, they might be an appropriate buyer for a property that I have grown from pulpwood to sawtimber. Properties with more mature timber would produce the regular cash flows they’re looking for.

Is TNC Compromising its Mission by Cutting Trees?
Kent Gilges
I would answer that there are mainly three strategies. The first is we buy it and protect it all. This might provide the best outcome from the ecological perspective but it uses the least amount of leverage and is the most expensive. The second is where we buy it and work with a partner who brings in private equity. There is some sort of sustainable forestry easement and also set-aside untouched areas within that property. That gives us more leverage. It isn’t 100% ecological protection, but maybe it’s a good tradeoff because it allows us to cover more ground with the same amount of money. And the third is to work like a private equity investor, not only having set-asides and easements—that’s the safety net—but also having proactive management of ecological values. I think that last scenario is the ideal because it makes efficient use of capital and conservation drives the deal.

Bill McComb
Setting aside large reserves is no silver bullet. You’re then relying on natural disturbances to maintain the mix of successional stages and
I actually done one project in cooperation with the World Wildlife Fund where they're providing a grant for the local area to improve prenatal care. I can't really take investors' capital and spend it on these kinds of social infrastructure projects. Implementing these programs well is not easy and would take up a great deal of our management time. That's the sense in which forestry investment in the tropics is not really a sustainable business model for us. But partnerships offer opportunities to coordinate our work with others who specialize in developing these critical social services.

Third-Party Sustainable Forestry Certification

**Eva Greger**

I think certification is a great idea. But I really need consumers to be demanding certified wood. I really need to see a price premium here in the U.S. Right now it doesn't feed back into the value of the logs that I'm sending out of the forest. I think a fundamental issue here is the fact that the buyers of wood are typically not the end consumers. I personally might prefer to have a house that's built out of certified wood, but I probably bought it from a builder who was trying to minimize costs. Maybe more education and public relations work will help over time. In the meantime the real benefit of certification is for me to feel more comfortable about investing in areas that are environmentally sensitive or where I want to show that our company is a preferable owner over other buyers who might choose to liquidate the wood right away. It helps me get over that hump of bringing investors into an area that would be seen as risky. It's a seal of approval. We are getting some premiums in Europe for finished products. I have hopes for the future, but unfortunately you still have to show me the money.

**Tom Colgan**

We sell wood to probably 250 different end users. We have no manufacturing facilities ourselves so our clients have no ability to get any hard dollar value for certification other than just selling their wood into a certified chain of custody. I think in general certification programs have raised the bar on forest management throughout the country. We...
Continuity of Land Managers and Forestry Knowledge Base

Tom Colgan
If there’s one stable element, it’s that the person who knows the local ground keeps the job. We have alumni from every major forest products company in the Northeast, people who have spent a career in the same area. So in terms of the local knowledge, that’s vital to managing the land correctly, and many times we’ll hire, en masse at times, local managers. I would not have the hubris to say that just because you manage trees that take a long time to grow, life won’t change. But if someone wants to stay locally, and they have honed their skills on a certain land base, regardless of who ends up owning it or how often it turns over, they’ll often stay there.

Valuation of Encumbered Properties

Eva Greger
We certainly think that conservation easements improve our bottom line; otherwise we wouldn’t be doing them. Our bet is that right now there are some market inefficiencies. These things are not well known. They haven’t been demonstrated over time, so right now there’s a very large discount on the purchase price of something with a conservation easement. We would guess that over time that discount will disappear as we show that you can actually manage the forest and get your returns, even with the conservation easement.

Kent Gilges
From the conservation perspective, I agree with Tom. Certification has raised the bar. At first blush you would think that certification would be the ideal way to set prescriptions for conservation easements. But there are some problems with that approach. An easement is perpetual and who knows what certification scheme is going to be around in five years. So if you specify a certification scheme in the terms of the easement, you better have an alternative in case that scheme disappears. Also, certification standards have changed over the years and in all likelihood will change again in the future. Timberland investment managers sell investments based on their future cash flows, so committing to certification could compromise their ability to deliver their expected returns.

Bill McComb
I think that much would depend on the nature of the environmental goals and the expected land tenure for that parcel. If it’s a long-term holding by a company and if certified products become more in demand, then I think you could achieve your environmental goals through certification. This strategy might even be better than using a conservation easement because it is an incentive-based approach rather than a regulatory one. On the other hand, if the land tenure is likely to be short, and the next landowner abandons certification, then a conservation restriction might better meet those goals.

continuously go back to our customers and ask do you need certified wood, and the honest answer is no. It’s not on the consumer’s mind. If there were a demonstrable benefit to our clients, they would jump at certification. But we currently manage the land, I believe, under the same standards that it would take to be certified. At this point most landowners see no economic benefit to certification.

Eva Greger
We certainly think that conservation easements improve our bottom line; otherwise we wouldn’t be doing them. Our bet is that right now there are some market inefficiencies. These things are not well known. They haven’t been demonstrated over time, so right now there’s a very large discount on the purchase price of something with a conservation easement. We would guess that over time that discount will disappear as we show that you can actually manage the forest and get your returns, even with the conservation easement.

Tom Colgan
We’ve done a lot of conservation easements and we wouldn’t have done them if we didn’t think it was the right thing to do. But we’ve also walked away from easements where we could not strike a deal that we were comfortable with. So not every proposal works.
Resources for More Information

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Resources for More Information

The Campbell Group
www.campbellgroup.com

The Conservation Fund
www.conservationfund.org

Forest Investment Associates
www.forestinvest.com

The Forestland Group
www.forestlandgroup.com

Hancock Timber Resource Group
www.htrg.com

Molpus Woodland Group
www.molpus.com

The Nature Conservancy
nature.org

New England Forestry Foundation
www.newenglandforestry.org

Pacific Forest Trust
www.pacificforest.org

Pinchot Institute for Conservation
www.pinchot.org

Plum Creek Timber Company, Inc.
www.plumcreek.com

Redwood Forest Foundation
www.rff.org

Timbervest
www.timbervest.net

US Forest Capital
www.usforestcapital.com

Additional Readings


The Yale Forest Forum (YFF) was established in 1994 by a diverse group of leaders in forestry to focus national attention on forest policy and management in the United States. The group convened the Seventh American Forest Congress (SAFC) to collaboratively develop and articulate a common vision of forest management to diverse stakeholders.

For over 100 years, the Yale School of Forestry and Environmental Studies (FES) has had a rich history in the pursuit of sustainable forestry. From the establishment of the School in 1901 Yale has played an integral role in the development of leaders who are prepared to confront the environmental challenges of the day.

The School's Global Institute of Sustainable Forestry (GISF), housed in historic Marsh Hall, continues this rich tradition. Established by the Dean and a group of FES faculty members in 2000, GISF has launched new, innovative initiatives while coalescing and coordinating the many activities related to sustainable forest management at the School, including the School Forests and the Yale Forest Forum. The Institute was created to address the management and conservation of both domestic and international forestlands in a holistic and comprehensive fashion. In pursuit of these ideals, GISF has developed several formal programs including the Program on Private Forests, the Program on Forest Certification, The Forests Dialogue, the Program on Forest Physiology and Biotechnology, the Program on Landscape Management, and the Program in Tropical Forestry.

The Yale Forest Forum is now the convening body of the Global Institute of Sustainable Forestry. Through YFF, GISF often holds multiple events each week at the Yale School of Forestry and Environmental Studies, and hosts workshops and seminars held outside the School, involving stakeholders from all sectors.

Mission of the Global Institute of Sustainable Forestry
"To foster leadership through innovative programs and activities in research, education and outreach; to create and test new tools and methods; and to understand better and support sustainable forest management worldwide."