

## PERSPECTIVE

## An Asset Management Approach to Forest Stewardship (Part II)

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*Editor's Note: The following article concludes this segment, which ran in the last issue of this newsletter (volume 7, number 3).*

Land stewardship in the context of sustainable forest management implies more than just minimizing abuse. Stewardship implies an active husbanding of the land and its resources, to provide for the needs of the current generation, but also to convey these resources to future generations in as good or better condition than they were received.

Americans today are the beneficiaries of a forest legacy created by farsighted leaders of the Conservation Movement more than a century ago. The nation now has more forest area than at any time since the American Revolution. Yet we find that in many instances, the value of these assets—in terms of timber quality, wildlife habitat, biodiversity and other measures—is declining. The notion of increasing net asset value of forest resources—building principal as it were—seems to have disappeared from the professional lexicon of forest management, even as we wax eloquent on terms like sustainable forestry and ecosystem management.

### MANAGING THE FOREST AS AN APPRECIATING ASSET

Almost since Faustmann (1848) first published his model for determining optimal rotation length on the basis of “financial maturity,” many foresters and forest owners have instinctively rejected this model, largely because it focuses so much on the value of near-term production and fails to adequately account for the ac-

cumulation of asset value. In many forest enterprises, both public and private, where ownership of the land is expected to continue into the indefinite future, a key objective is to steadily increase and concentrate the asset value of the land and timber. Current harvest levels are set to capture potential mortality before it occurs, as well as to take advantage of favorable markets.



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What the neoclassical economic paradigm would regard as an unacceptably low return on equity (relative to the cost of capital) must be viewed in a larger context. In Europe, where centuries-old forest enterprises have endured through multiple wars, currency devaluations, and other events that have put most forms of investment at great risk, forests have served as a stable, reliable, and tangible asset. In other parts of the world, the recent advent of timber investment management organizations (or

“TIMOs”) has been stimulated by investors seeking a stable, appreciating asset that, because its value tends to fluctuate in the opposite direction from most forms of equity investment, lowers the level of risk associated with their overall investment portfolio (Binkley, 1996). Ironically, prevailing accounting rules in the United States do not allow the inclusion of the appreciating value of forest assets when publicly-held corporations calculate their earnings. This may explain, in part, the continuing transfer in ownership of industrial timberlands in the U.S. from integrated forest products companies to TIMOs (Block, 2001).

Shifting from a forest management regime characterized by declining asset value, to a truly sustainable forest management one in which asset value is increasing, or at least neutral, often involves a decrease in current production. Regulated use of natural resources, limiting current production to what can be sustained without a decline in asset value, is seldom popular with resource users. Voluntary, market-based solutions are widely preferred, but to the extent that markets continue to imperfectly reflect the value of essential ecosystem services to society, there will be a continuing need for targeted intervention through government policy (Daily, 1997). This is one of the perennial and central challenges in natural resource conservation, whether the context is timber harvesting, grazing, or marine fisheries (Hardin, 1968). Successfully addressing this challenge will be one of the keys to sustainable development.

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## SUSTAINABILITY AS IF FUTURE GENERATIONS MATTERED

Over the past century, the practice of sustainable forest management has become increasingly complex. Early models of forest management, at first aimed simply toward sustaining the supply of timber by equating harvest with growth, have expanded to accommodate an array of other forest values that society has deemed important to perpetuate—water quality, wildlife habitat, recreational values and more. Most recently, these have included critical habitat for threatened or endangered species, and the capacity for sequestering atmospheric carbon to mitigate global climate change. Forest management has also been made more complex by an increasingly sophisticated understanding of the ecological functioning of forests, and the effects of management interventions in these ecosystems. A major challenge for forestry is to produce increasingly diverse products and services from the forest, while reflecting a knowledge and understanding of the natural limitations to do so in eternally sustained ways.

But to truly accomplish this in the context of land stewardship—the careful husbanding of land and resource assets so as to pass them along to the next generation in as good or better condition than they were received—requires a different conceptual framework. Much of the public debate during the past several decades over forest management, and management of the federal forests in particular, has revolved around the “forest factory” analogy—politically determining what mix of products the public wants from the factory, and operationally determining how to produce that mix when there are tradeoffs or outright conflicts in the processes by which various factory outputs are produced (Sedjo, 1996). The development of linear program-

ming and other types of optimization modeling during the early 1970s, when traditional forestry approaches were coming under unprecedented legal and political challenge, further enticed resource managers to believe that there was a rational analytic solution to their problem. Operations research developed to optimize the combination of petroleum products manufactured from a refinery (Daelenbach and George, 1978; Baumol, 1977) was expected to tell resource managers not only how to balance the production of ostensibly conflicting forest outputs, but how to do so in a way that would maximize net public benefit (Bowes and Krutilla, 1989).

A better analogy to guide forest stewardship—building net asset value over time and giving future generations due consideration—may be that of managing a perpetual trust. After all, the factory analogy assumes a steady depreciation of the factory itself, such that its value at the end of its productive life is essentially zero. A trust is a fiduciary relationship in which a trustee holds and manages property for the benefit of another (Strauss, 1998). In trusts, the purpose of this vehicle and its beneficiaries are clear, the trustee can be held accountable to legally well-defined standards of prudence, and beneficiaries are able, and expected, to actively monitor the actions of the trustee to protect their interests. Most trusts involving the management of forests, such as state trust lands and private conservation trusts are perpetual, i.e., intended to produce benefits forever (Fairfax, 2000). The trustee of a perpetual trust may not favor any generation of beneficiaries over any other. In a land management context, this amounts to a legally enforceable commitment to sustainable forest management (Souder, Fairfax and Ruth, 1994) and a presumption that the “principal”—the asset value of the land and forest itself—is maintained or enhanced over time.

## CONCLUSION

Any political and institutional framework that will allow the diminishment of asset value that has taken place on the National Forests over the past half-century is a system that is broken and needs to be fixed. Who to blame is irrelevant. Though it will never be perfect, the underlying system can be made more immune to the foibles of individual players in government and the proclivities of special interest groups that will always have an inside track over average citizens.

As in any representative democracy, it is the duty of citizens to be vigilant, to ensure that their trustees are managing the assets of the National Forests well. But transparency and meaningful periodic reports from the Forest Service on the state of the nation’s forests can foster an informed, involved citizenry—without the agency having to fritter away its resources on fruitless administrative processes and endless legal challenges.

The body of law that has developed around the enforceability of perpetual trusts, and the courts’ interpretations of reasonable prudence on the part of trustees, could be a source of new insights into models of governance for the National Forests that are more open and transparent to the beneficiaries, and at the same time, are more flexible and cost-efficient in enabling the trustees to fulfill the duties with which they have been charged.

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