

**OF VERT AND VISION
ENSURING THE LEGACY OF THE
NORTHERN FOREST OF NEW ENGLAND AND NEW YORK**

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92-13 DECEMBER 1992

Report of the Harvard Project on the Economies of Forested Regions

CITATION AND REPRODUCTION

This document appears as Discussion Paper 92-13 of the Center for Science and International Affairs and as contribution E-92-07 to the Center's Environment and Natural Resources Program. CSIA Discussion papers are works in progress. Comments are welcome and may be directed to the author in care of the Center.

This paper may be cited as: Charles H.W. Foster, "Of Vert and Vision: Ensuring the Legacy of the Northern Forest of New England and New York. CSIA Discussion Paper 92-13, Kennedy School of Government, Harvard University, December 1992.

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EXECUTIVE SUMMARY

The Harvard Project on the Economies of Forested Regions has concluded that the future of the northern forest lands of New England and New York needs to be made a matter of vital concern to its public and its leadership if the character of the region, and the prospect for its people, are not to be lost through the interplay of irresistible outside forces and the historic inertia of the region itself. There is still time to make the final decade of the twentieth century a decisive one, but only if concerted, remedial actions are designed and carried out.

The recommended framework is a northern forest region composed of discrete building blocks called *legacy forests*. These should be units of at least 10,000 acres in size composed of public, corporate, family, and other private ownerships, or combinations thereof, and dedicated to the sustained production of goods and services and the maintenance of traditional community structures and lifestyles. Over time, as much as half of the region's 26 million acres should be designated as legacy forests. A

permanent Northern Forest Lands Council, composed of individual legacy forest representatives and their state advisors, would facilitate establishment and operations. At the margins, development around still working forests, through new kinds of working forest subdivisions, would employ market forces to capture development values in ways that are respectful of the environment, appreciative of aesthetics, and mindful of economics.

In this region of national as well as local importance, future actions should be based upon four basic criteria: economic viability, environmental sensitivity, sustainability, and public participation. Only the latter will ensure that the people of the area, indeed, play a central role in guiding the future conservation and management of the northern forest region.

PREFACE

In the spring of 1992, Harvard University's John F. Kennedy School of Government offered a graduate level course, *Topics in Environmental Policy: the Economies of Forested Regions*, centered on the future of the 26 million acre northern forest lands of Maine, New Hampshire, Vermont, and New York. Its purposes were to introduce public policy students to a current topic of some magnitude and significance and, through firsthand exposure to the issues and many of the key principals, to give these largely mid-career professionals an opportunity to contribute thoughtful policy findings and recommendations of their own.

Fourteen students enrolled in the course, and four others audited most of the sessions. Their credentials and prior experience spanned many different disciplines and occupations (see Appendix A). The course instructor was *Dr. Charles H.W. Foster*, a professional forester, former Massachusetts natural resources administrator, and former dean of the Yale University School of Forestry & Environmental Studies. The U.S. Forest Service provided measurable encouragement and assistance throughout. Charles Levesque, executive director of the Northern Forest Lands Council, was also most helpful. Before they began the course, the students were given a two week short course on forestry capped by a weekend field trip to the Harvard Forest in Petersham.

Seventeen individuals traveled to Harvard to serve as guest lecturers (see, Appendix B). A special one day seminar was held on February 28, 1992, under the joint sponsorship of Harvard and the Appalachian Mountain Club, to compare regional approaches to forestry in the Pacific Northwest, the Lake States, the South, and the Northeast. Speakers included *Dr. Clark S. Binkley*, dean of the University of British Columbia's Faculty of Forestry; *Michael T. Rains*, the Forest Service's Northeastern Area director for state and private forestry; and *Dr. Arthur W. Cooper*, head of North Carolina State University's department of forestry.

To distill the information obtained, and to help organize the policy recommendations, the class held five so-called "consensus sessions" throughout the term. The first sessions

developed a common vision for the northern forests and identified policy topics or issues warranting special attention. The topics then served as the subjects for individual student working papers (see Appendix C). The final consensus sessions were used to reach agreement on a framework for the policy report and a set of recommendations.

The first sections of the report attempt to summarize the views of the students as set forth in the consensus sessions and in their individual working papers. They include not only the basic ideas but, in some instances, the actual arguments. Had these been published papers, the sources would have been cited. *The Legacy Forest Concept* section is my own responsibility although this idea, too, went through the consensus gauntlet. All sections reflect the many contributions of our visitors for which we are most grateful.

Thus, **Of Vert and Vision** represents the collective contributions of more than thirty individuals. Not all will agree with its conclusions, but few will disagree with its primary thrust - that the future of the northern forest lands of New England and New York needs to be a matter of vital concern to its public and its leadership. For what happens during the next decade will change the character of the region, and the prospect for its people, appreciably and irrevocably, an outcome that should not be allowed to happen simply through default.

INTRODUCTION

Sprawled across the northern rim of New England and New York, in 26 counties and four states, is a brawny, 26 million acre, largely wildland area termed the *Northern Forest*. The temperate climate, favorable precipitation, and generally accessible topography make it a resilient and forgiving place to grow trees. In consequence, it has been a source of forest products and services for more than two centuries. The fifth forest since colonial times is now well-established. As recently as 1982, 15% of the direct, indirect, and induced jobs, and \$1.5 billion in value added, were still attributable to the region's forest-related activities.

But there is far more to the northern forest than just trees. 7,700 lakes and ponds dots its landscape. 70,000 miles of rivers and streams have their origins in and traverse the region. More than 2.5 million acres of wetlands have been identified. Peaks of 3,000' elevation or more are plentiful. Environments ranging from valley and plateau to boreal and alpine ensure unusual biotic diversity. The very size of the region and its largely unbroken character provide habitats for even those animals with extensive home ranges.

Despite their undeveloped character, the northern forest lands are also a place for people. Approximately 1 million New Englanders and New Yorkers reside in the region. They are served by more than one hundred county, town, and village units of

government, some of great antiquity. 70 million additional people live a comfortable day's drive from the region.

84% of the 26 million acre northern forest is still in private ownership. Approximately half of the commercially productive forest is held by some 45 companies and families. More than 13 million of these acres occur in ownerships of 5,000 acres or greater. The 4.3 million acres of public land is scattered throughout the region in modest-sized holdings with three exceptions: the 2.4 million acre New York Forest Preserve; the 279,000 acre northern forest lands portion of the White Mountain National Forest in New Hampshire and Maine; and Maine's 201,000 acre Baxter State Park.

Major interjurisdictional arrangements overlay portions of the region. Examples are the 6 million acres under the authority of the Adirondack Park Agency; the 1.3 million acre Tug Hill (NY) region; the 11 million acre designated Champlain-Adirondack International Biosphere Reserve; and the 10.5 million acres of unorganized territories controlled by the Maine Land Use Regulation Commission.

In light of the above, the northern forest has been the subject of vigorous contention and debate among those with speculative and development objectives, those with recreational and preservation intentions, and those who simply wish to be left alone to pursue existing economies and life styles. New England's legendary qualities of independence and self-reliance have fortified the normal human reluctance to come to grips with future needs.

All of this changed abruptly in December of 1982 when Sir James Goldsmith, in an action described by *Fortune* magazine as one of the financial events of the 1980s, acquired the Diamond International Corporation through a leveraged buy-out. Some one million acres of northern forest lands appeared destined for the open market. As New Englanders scrambled to secure at least some of the tracts, the dark prospect of additional ownership fragmentation clouded the region's future, inspiring U.S. Senators, Patrick Leahy (VT) and Warren Rudman (NH) to seek authorization and funding for a Forest Service study of the entire northern forest. Pursued in 1988-89 with the assistance of a special task force appointed by the governors, the Northern Forest Lands Study, in April of 1990, presented 28 suggested strategies arrayed in six principal categories:

- land use controls and planning for conservation;
- easements and land purchase for conservation;
- maintaining large tracts of forest land through incentives;
- combining community improvement with land conservation;
- keeping private land open to the public;
- combining strategies in a coordinated program.

To accomplish the latter, the governors in 1990 constituted a 17 member *Northern Forest Lands Council* representative of public and private interests within the four state region. The Council, in turn, moved to create advisory committees in each state to provide a formal structure for citizen participation and public input. A Council work program has been developed with the objectives of enhancing the quality of life for

local residents through the promotion of economic stability and the maintenance of large forest areas; encouraging a sustainable yield of forest products; and protecting recreational, wildlife, scenic, and wildland resources.

To preserve full local autonomy, regional interests have been insistent upon a Council that is advisory only. It has no formal planning or regulatory responsibilities. It does not acquire, own, or manage land. It respects private property rights and existing state and local governmental authorities. And at the end of four years' time, the Council will be discontinued unless extension is clearly warranted.

In addition to the Study and the Council, the northern forest lands issues have inspired one other initiative - a new, voluntary, federal program called *Forest Legacy*. Authorized in the omnibus 1990 Farm Bill, the program's intent is to promote the long-term integrity of forest lands threatened by conversion to non-forest uses. It does so through the acquisition of lands or interests in land, especially the latter. Unlike conventional conservation easement approaches, rights are not selected by the buyer; they are reserved by the landowner. Anything not expressly reserved is then conveyed to the federal government in a willing buyer, willing seller transaction.

States are the key actors under *Forest Legacy*. They serve as lead agencies, conduct assessments of need, review and recommend applications, and ultimately oversee the continued integrity of the properties acquired. They must also contribute 25% of the costs. Reflecting the experimental nature of the program, Congress appropriated a modest \$4.93 million for the initial activities. Projects were authorized in six states only: the northern forest states of Maine, New Hampshire, Vermont, and New York; plus Massachusetts and Washington. The Senate version of the Interior and Related Appropriations Bill calls for an increase to \$15 million in Fiscal Year 1993.

Given this backdrop of resources, issues and events, the Harvard group set about determining how the basic mission expressed by the Study, and confirmed by the Council - to reinforce the continued existence and traditional land uses of large forest areas in the northern forests of Maine, New Hampshire, New York, and Vermont - could be attained in practice. It began by framing a common vision for the region and then identifying problems, issues, and obstacles warranting further attention. Mindful of the Council's already extensive work program, it concentrated on items seemingly underrepresented or overlooked, and areas where the Harvard group's particular perspective or experience could be useful. Finally, it settled on one recommendation - the establishment of a system of individual legacy forests within the region - as its major contribution to the northern forest lands effort. Given the time limitations of an academic term, the observations are framed largely as concepts. They will need to be followed up in more detail by others if they appear to have merit.

THE NORTHERN FOREST LANDS REGION

Likely scenario

The scenario we visualize for the northern forest lands region, between now and the turn of the century, is not promising. All indications are that the New England economy will remain sluggish and that economic recovery will be slow. The trend away from high wage manufacturing rates to low wage service jobs will continue. Local tax bases will shrink, and the states will have limited resources to contribute. A combination of high real interest rates and local fiscal crises will encourage development and further fragmentation of the ownership base, especially at the margins of the region where urban owners with different values will establish seasonal residences. For the larger, traditional, forest ownerships, most of the present disincentives for long-term investment and management will remain. One answer - more intensive management of the tracts that remain - could exacerbate the clash between what is economically sound but perhaps environmentally unwise. Thus, there will be continuing conflict between different kinds of stakeholders, between those at home and from afar, and between public interest advocates and private property rights defenders. At the same time, the region is likely to face gradual emigration of year-round residents; a decreasing quality of education, health, and social services for those who remain; and a steady loss of traditional culture and life styles. It will be slow to recognize the need for change even to preserve the status quo.

Yet, all is not entirely bleak. For example, we see no resurgence of development pressure for the northern forest region as a whole in the foreseeable future. Although some parcelization will occur at the margins, there should be no immediate, drastic change in the overall pattern of land ownership. The demand for forest products should at least remain steady, and there could be a price rise if western supplies of timber are curtailed by environmental events. This will decrease the pressure to dispose of forest lands and encourage their retention. Leveraged buy-outs by cash-rich investors are likely to run into outright public disfavor and new, legal roadblocks at the state level. Driven by commodity needs and the over-arching prospect of global warming, the spotlight will be on the region's forests as never before. This will generate a widespread, positive attitude toward forestry. Although governmental intervention will still remain suspect, reasonable protection will begin to occur at reasonable costs. Efforts will be made to maintain and/or aggregate critical masses of forest lands. There will be a growing recognition that landowners should be compensated for public values occurring on private lands. The bottom line of the above is that there is still time to make the final decade of the twentieth century a decisive one, but only if concerted, remedial actions are designed and carried out.

The vision

To do so will require a clear sense of the future. Our vision of the northern forest recognizes the inevitability of change and deliberately plans and manages for it. The vision takes the best of what we have now and tries to make the future even better.

Its essence is a fuller and better organized public and community involvement in natural resources decision-making. We begin with a grand view of what the region should be, and advance that vision through suggestions for participatory planning, program innovations, and institutional reforms.

To begin with, we foresee a diversified economy with a wide range of timber and non-timber values, and a working landscape that balances economic, social, and environmental interests. It includes wild and special areas, but also those elements of the traditional, forest-based economy that can remain viable without artificial subsidies. Such a region will provide a secure home for permanent residents under improved economic circumstances, but also an attractive haven for visitors from outside the area. The adaptation to change we recommend should occur in a way that does not destroy traditional culture, community structure, or customary lifestyles. Development can and should occur, especially on the fringes to the south, but only in designated areas subject to politically agreed-upon processes and standards. Efforts to arrest environmental degradation will be encouraged, but not to the extent that they bankrupt the region.

Some kind of comprehensive planning or strategizing is inevitable in order to balance needs and desires. The general plan should provide for both single and multiple uses, seeking to produce the highest net present values for all of the parties involved. Its underpinning should be a careful inventory of all resources, uses, and needs. It should respect private property rights. The plan visualized would be premised upon a stable forest ecosystem and at least a stable, if not increasing, flow of goods and services from the northern forest. Thus, its essence would be forest, not land planning. The net result would be a virtual collage of forest and other land uses, including timber, agriculture, development, recreation, and preservation. To implement the plan's objectives will require a number of innovations. We will discuss them generally here, and then suggest specific policies, programs, and actions in the final sections of the report.

First, since economic well-being must be the cornerstone of any regional strategy for the northern forest, we urge a substantial measure of tax reform. For example, the disincentives for long-term ownership and management of forest lands should be reduced or eliminated. Encouragement should be provided for investments, new processes, modernization, and environmental compliance. Tax incentives should be provided for conservation and recreation, and for improved land stewardship. Relief should be provided for local levels of government where parcelization, development, and unwise use are often triggered by the need to enlarge the tax base.

Second, special attention must be paid to the needs of forest landowners. A critical mass of large tracts should be maintained to ensure the character and economy of the region. Public acquisition by fee or easement purchase, in creative new forms of parks, forests, or reserves, should be put to use in designated areas. Where substantial public values occur on private land, the owners should be suitably compensated. Agreement should be reached on acceptable harvest practices. The objective should be to achieve a sustainable

forest ecosystem that produces a stable investment climate for the forest industry and a higher added value for its products and services.

Third, programs will be needed for education and outreach into the region. Small ownerships should be a special target - also local communities. Every effort should be made to identify subregions that could serve as modest pilot projects and, eventually, as the primary building blocks for a regional program. This is where the required resource, economic, and human inputs can be brought together most credibly and effectively. Education should stress the region's fundamental interdependence and concentrate on building trust. It should also provide mechanisms for identifying and managing conflict.

Fourth, there will need to be an accepted, permanent focal point for resource decision-making if the regional vision is to become reality. Such an institution should have clearly-identified stakeholders. It should use partnerships and coalitions to ensure full involvement and enable consensus. It will need the capacity to compose and implement solutions to problems, either by itself or through others. And most important of all, the entity must be one where local, state, and regional - not national - interests play the dominant leadership role.

The stresses

Compounding the difficulty of securing this vision are four key stresses: economic survival, conflict between development and non-development, division over the respective roles of the private and public sectors, and debate over what the future should be.

Economic survival understandably tops the list. For example, per capita income in all but one county falls below the national average. In half of the northern forest region, families never even reach the established poverty level. Two-thirds of the counties have unemployment rates above the national average, and the rate of unemployment in the north country as a whole is almost double that of its states. Spending for education and health services is similarly reduced; welfare expenditures are proportionately higher. For these reasons, there has been a steady outmigration of young people from much of the region since 1980. With one out of every six jobs linked in some way to forest products, the northern forest is largely a one industry region.

Economic development is the obvious answer, but the inevitable *conflict* between advocates of development and proponents of non-development constitutes a second major stress. This takes several forms. One is the clash between traditional uses and the newer desires for recreation and leisure opportunities. There is also the confrontation of values locally with those from away. This is manifest in the growing tension between advocates of local autonomy and the aspirations of external groups such as environmentalists.

A third stress involves the respective *roles* of the public and private sectors. Should the region be simply left alone, or should government intervene? If the latter, how might one balance local empowerment with the exercise of state, regional, and federal authority? There is a marked schizophrenia among many local residents who may

genuinely favor a measure of conservation even while advocating unfettered local autonomy.

The final stress sums up the individual debates - how should the *future* of the region be framed and structured? There is a widespread suspicion that the present process favors a predetermined, not an open outcome. Under such circumstances, is there a role here for some kind of enduring, representative entity to ensure that the needs of the region as a whole are addressed properly?

The strategies

Stresses lead logically to strategies. But before regional strategies are put in place, one needs to look critically at the northern forest as a region. Is it legitimately a single region or simply a composite of areas with their own peculiarities and identities?

Regions, as one observer has noted, do not have truth - only utility. They provide a rationale for getting something done. Solving problems requires an appropriate scale, good leadership, and a set of activities that are visible, tangible, and doable. If the regional program meets the needs of its community when and as the community itself defines them, only then is it likely to be successful.

The present northern forest region consists simply of lines on a map imposed from on high. It has no distinguishable community of its own as yet. Its citizens still have to collect their own thoughts on what needs to be done. Until that happens, they will be resistant to any outside proposal. Thus, as set forth in later sections of this paper, we recommend early efforts to identify where people and resources come together in meaningful associations in order to place the regional program on a more secure foundation.

Second, the need for careful planning is self-evident, but what should be included, who should do it, and how? Can priority elements of goals and values be identified? Should some sorts of constraints be placed on the planning process to keep it in bounds, on target, and on time?

Articulation of a commonly-desired outcome represents a third needed strategy, but how does one achieve consensus in a region marked by such variability? And what should be done in the absence of total consensus?

Doing something with the planning products, and about the problems, represents the final strategy. It is here that the question about respective roles becomes especially important.

The Northern Forest Lands Council has been sensitive to many of these points. For example, it has sensibly built its initial inquiry around tangible issues common to the region - property taxes, state/federal taxes, land conversion, local forest based economies, and biological resources. As the working group approach demonstrates its utility, we are confident that other targets of opportunity will be explored. In all such

activities, it would be important to have the root causes, not just the surface manifestations, examined. As an example, the autopsies of prominent ownership transfers (e.g., the Diamond lands) seem especially valuable, because they help determine the key outside triggers, the effects, and the likelihood of repetition. But we would also like to see more attention paid to trends analysis so that the region can get a step ahead of its day-to-day crises. And we are much taken with the prospect of prototypical subareas serving as the initial foci for programmatic action.

In the end, we have been inspired to look pragmatically at several elements of the present northern forest lands program. Ways to adapt to coming change is one. Examples are the "weatherproofing" of rural economies through diversification; the special problem of mills and mill communities, forest products companies, and large land ownerships; and the system needed to predict and prepare for change. Strategies for informing and educating the public, and involving them in decision-making, is another. Ways to heighten and utilize the sense of place and the natural empowerment of the region's residents represents a third element. The tools and incentives needed to encourage responsible resource usage and long-time ownership integrity and stewardship are a fourth category. We have also tried our hands at a prescription for governance that would attract regional support through an emphasis upon soft (planning and coordination) services interspersed with private market incentives.

General reactions

Speaking generally, we have been utterly captivated by the potential of the northern forest. As impressive as its natural assets are its human qualities - the region's heritage as the cradle of the United States, the utilitarian and individualistic philosophy and the fierce sense of caring that continue to pervade the region, and the prevailing skepticism about whether there really is a problem or not. Under such circumstances, political stalemate or, at best, tenuous agreement are all that can be expected. The polarized debate over future needs and actions is symptomatic of the most difficult question of all - the role of local interests in a region of national importance. Unless conditions change, the future of the northern forest will simply be the end result of the interplay between irresistible, outside forces and the historic inertia of the region itself. Must this be? We think not if future actions reflect the following four basic needs: *economic viability, environmental sensitivity, sustainability, and public participation*. What we visualize as emerging is a quilt of policies and actions, not a blanket.

Overlaying all of these standards is the need to marry conservation and resource management with real economic development. Indeed, the Northern Forest Lands Study echoes that observation in its recommendation for community development. Old-fashioned community banking, with its emphasis upon a geographic rationale and a sense of responsibility for the area served, is one way to achieve this objective. As Vermont's experience would indicate, there is a strong positive correlation between planned development and financial sector stability.

Development proposals range from efforts to encourage homespun crafts and local industries to wholesale conversion of the region from a production to a service economy. The catch is that displacement rather than replacement is more apt to occur. The result can be a primary workforce and a set of dependent communities cast substantially adrift. Compounding this problem is the region's extensive infrastructure of plants and mills accumulated over the years. Despite their age and approaching obsolescence, they are still generators of substantial economic activity. The high wage rates and stable employment base cannot be replaced readily. And so efforts to encourage plant modernization in selected locations through public sector financing - what seems to be sending good money after bad - may actually be justified. At the least, it buys time. In approaching the problem of economic diversification, several points need to be kept in mind.

First, despite assertions of cohesiveness, the northern forest is actually a heterogeneous, not a homogeneous region. The management approaches needed are likely to be as diverse as the forests themselves. There is no single, quick fix that applies - no single, new industry that can replace overnight its centuries-old, natural resources-based economy. In fact, common sense would suggest that diversification should start from what is already in place - an extensive, productive forest capable of supplying a range of products, values, and services well beyond the limits of the region itself.

The second caveat would be not to forget the basic tool of economic analysis. Arraying benefits and costs carefully helps display the tradeoffs that must be made in carrying out change. The approach is especially valuable where protective measures are under consideration. Economic analysis can help identify the benefits and costs of restricting the development of forests; it can demonstrate the magnitude of benefits or losses (including opportunity costs) resulting from different degrees of protection; and it can help determine which forest lands are most appropriate for preservation, recreation, and conservation. In short, economic analysis can be inordinately useful in making the right choices.

Third, economic diversification is perhaps best achieved incrementally through bottom-up approaches driven by local initiative and control. Small-scale, home-grown development has a better chance of becoming self-sustaining. It also better fits the tradition and character of the region. We have been impressed by recent efforts to stimulate responsible development privately. Examples are the North Community Investment Corporation based in St. Johnsbury, VT; and James Lowell's Boston-based effort to manage and develop portions of the former Coburn forest lands in Maine. The New Hampshire state planning office's effort to direct federal rural development resources into the region is also noteworthy.

But we are especially intrigued with the potential applicability of the Shorebank model, the community banking approach that has turned around the ravaged, minority neighborhoods of south-side Chicago by attracting outside and inside investment capital, providing full-service commercial banking, and offering technical assistance through non-profit

subsidiaries. A program to interlink the region's existing community banks, emphasize the close connection between environmentally-sound development and financial sector stability (as Vermont has done through its Act 250 program), and reinforce the tradition of human-oriented, service banking, would be well worth exploring. A potential model is *North Coast Bidco*, located in Marquette, MI, a subsidiary of the Shorebank bank holding company that is now extending the approach to help relieve the Upper Peninsula's traditional economic dependence on mining and timber.

A fourth element is recognition of the historic presence of a public good on private land - the recreational opportunities that so many have come to expect for nothing. By internalizing this externality and compensating the owners appropriately, an incentive can be furnished to provide a socially optimal level of recreation opportunity and to have the owner fully consider such benefits in subsequent land use decisions. If public agencies provide the "market" for recreational rights, the troubling matters of equity for the user and liability for the landowner can be resolved readily.

The final area of economic opportunity resides with the products of the forests themselves. The region's woods are far from being managed optimally. Indeed, the increasing tax burden on owners and the declining rates of return on capital are discouraging needed improvement cuttings and shortening rotations to harvest. Mill modernization has had to be deferred. The result is silviculturally deficient management, parcelization of large forest tracts, and discontinuity in the community and service structure underpinning the forest products sector. Under such circumstances, alternative uses of the forest, such as for second home development, become irresistibly attractive.

Environmental sensitivity

We have also asked ourselves how aware the region is of its extraordinary environmental amenities. There are those, for example, who have asserted that only massive governmental intervention can head off the changes in land use that seem so inevitable. A major park, forest, or reserve - preferably under federal auspices - is their answer. After reflection, we do not agree. Not only is the likelihood of that event remote in this age of increasing fiscal austerity, but the approach begs the basic need to fit the human presence and activities more closely to the region's environment. Large conservation ownerships seem to result in either a displacement of the human element entirely, or a grudging accommodation of particular uses in particular places. Further, the conventional jurisdictional categories of parks, forests, refuges, wilderness, wild and scenic areas carry major procedural baggage. They lack the flexibility needed in the northern forest land region. With this approach, one could end up with islands of conservation surrounded by areas determined by *laissez faire*, land use practices. This would diminish the prospect of a region determined truly by and for its people.

The federal Forest Legacy program

Intrigued by the new federal Forest Legacy program, we spent considerable time examining the prospect for its use in the northern forest lands region, especially the

provision for acquisition of less than the full fee in the land. In principle, easement approaches are attractive, for they can deal with a particular bundle of rights and leave the others undiminished. All compatible current uses are maintained in private hands and, at least in theory, the costs of the acquisition will be lower. Development rights are a case in point. The right to develop can be separated from the land and sold, leaving the forest still intact for management and use. Public access for recreation is another right with potential market value even though New Englanders have been free-riding for years on the goodwill of private landowners. Economists argue that establishing value for these so-called "free goods" creates an incentive for the landowner to consider them seriously in future land-use decisions.

In the past, most conservation easements have been obtained as gifts. The donor can qualify for a charitable deduction to offset current income amounting to at least 10% of the value of the property. A corresponding reduction in value for estate purposes also occurs. If the land is not already in current use classification, a case can be made for lowered property taxes. Not surprisingly, the typical easement donor is fairly affluent, has owned the property for some time, wishes to keep it as it is but with tax benefits, cherishes privacy, and enjoys a shared vision with the acquiring party. By way of contrast, the best candidate for an easement purchase is one where an immediate cash return is attractive and a property tax reduction is more important than a charitable deduction. If all normal uses are retained by the landowner, and the acquired public uses are compatible with his own use of the property, easements purchases can be an attractive proposition. Because of these differences in owner attitudes, the fear is unfounded that an easement purchase program will dry up the market for gifts.

But for Forest Legacy, a number of problems do appear imminent. The present policy of federal acquisition of all but the privately-reserved rights - a provision insisted upon by cost-conscious Congressmen and by national environmental organizations - will needlessly disenfranchise owners. Those holding forested land chiefly for wood production may not object, but non-corporate owners are certain to resist such approaches as an unwarranted invasion of personal rights. At the heart of the matter is the purpose of the acquisition. In our view, Forest Legacy should be utilized to preserve forests, not contain development.

We are also concerned about the seeming tendency of the states (and their Council) to regard Forest Legacy as just another federal grant-in-aid program. It is proper to facilitate land acquisition in accord with state priorities, but there should also be a larger purpose achieved. What we recommend most strongly is a priority use of Forest Legacy funds to develop the network of legacy forests we are proposing. In that fashion, the federal government would be investing its limited funds not in random tracts, but in a system of permanently managed forest complexes yielding products, values, and services over time.

Forest Legacy has one other troubling attribute - the tendency of some to dismiss any other form of conservation action. Although governmental acquisition is not the sole

answer to the region's future, we believe that it can play a useful role and should be employed in selected instances. Where major ecosystems need to be protected, and where willing buyer/willing seller relationships occur, expanding the limited public land base (just 16% at present) may well be in the region's best interest.

A case in point is the Northern Forest Alliance's list of priority areas (*A New Year's Resolution for the Northern Forest*, December 31, 1991) identifying the nine "critical jewels" meriting acquisition. Many of the tracts are now for sale. In our view, the list should be reviewed carefully by the Northern Forest Lands Council and not dismissed out-of-hand as a prospective landgrab. There is merit in the Alliance's suggestions, and it would be only common sense to encourage those with the interests and the connections to effectuate this part of the northern forest lands conservation strategy while they can.

But there does seem to be a need for a wholly new kind of environmental entity - a category of secure ownership distinctive to the northern forest. These areas should be reasonably-sized and geographically-distinct. Each should have a broad-based constituency committed to appropriate management and use. The conventional labels of park, forest, refuge, or wilderness are inappropriate, as are the proscriptions that go with them. The closest approximations might be the lands termed public domain in the West, Maine's unorganized townships, or what the colonial settlers used to call "commons". Within these newly-designated areas, the concept of ownership should be elastic. For example, the entity might consist of property committed to common management but still owned privately. An extensive use of easements, covenants, and cooperative agreements, rather than fee ownership, might be employed" to achieve its purposes. Boundaries should remain soft and flexible permitting properties to be added or subtracted at will. The designation should carry the imprimatur of government, enjoy the flexibility of the private sector, and merit the recognition and support of the public.

THE LEGACY FOREST CONCEPT

The framework for our recommendations is a northern forest region composed of discrete building blocks we call *legacy forests*. These would be largely private holdings assembled voluntarily and managed jointly. Each would include a critical mass of forested lands sized and fitted to the social, economic, political, and environmental peculiarities of that portion of the region. Rather than decreed from on high, they would be inspired locally, nominated for designation, and then chartered as official legacy forests. Not every portion of the northern forest lands region would be included in such a unit but, over time, sufficient legacy forests would be established to accomplish the region's goal of achieving an enduring core of productive and managed forests, sustaining local and regional economies, and maintaining the traditional community structure and lifestyle.

How large would the typical legacy forest be? Quite arbitrarily, we pick 10,000 acres as the minimum size. Larger, of course, would be better. But given normal conditions of growth and stocking, and the availability of markets for uses and products, at this size sufficient revenues should be available to afford at least a modest level of management and improvement services. Blocks of 10,000 acres or more also provide ecological and recreational benefits. There is room for large animal home ranges. Significant watershed protection values can accrue. And human uses are sufficiently dispersed to keep conflict at a minimum.

How many legacy forests should there be? At least two per state within two years is our initial response. Over time, we would like to see as much as half of the northern forest placed in such a category. This would be a challenge for the northern forest region, but it could be done. But where might appropriate legacy forests be found? We suggest several promising categories of forest ownership.

Public ownerships

One place to look would be forests already in public ownership - the nearly 8 million acres listed in the Northern Forest Lands Study report. The principal federal properties (approximately 300,000 acres) lie in the New Hampshire and Maine portions of the White Mountain National Forest. The newly-authorized Lake Umbagog National Wildlife Refuge will add another 17,000 acres soon in the vicinity of New Hampshire's Canadian border. Although these units may provide legacy functions, they are irretrievably bound within their own land management systems and are probably not available for formal legacy designation. New York's 2.8 million acre Forest Preserve and the region's 400,000 acres of park, wildlife, and wilderness are similarly encumbered.

More promising are the states' multiple-use holdings (e.g., state forests). These cover nearly three-quarters of a million acres of northern forest lands. Many state forests are small and highly localized in the functions they perform. They already constitute a significant legacy for their host communities. It would be a logical extension to designate the larger of these tracts as units of a northern forest legacy system. Where such public holdings are small (less than 10,000 acres), they could provide the core for a legacy forest incorporating adjacent private lands.

Corporate ownerships

Legacy forests can also be created from lands in corporate ownership. The potential here is sizable, for 37% (9.7 million acres) of the northern forest is currently in such hands. There is particular merit in encouraging industry cooperation, for by reaching agreement on just a few corporate tracts, a substantial proportion of the needed forest base can be secured. There are other reasons for paying prompt and careful attention to this particular component of forest land ownership. For example, forest products companies are often only components of far-flung business empires. Less frequent these days are land use and management decisions made with care and concern for

local conditions, for forest managers are no longer the exclusive, forest land decision-makers for their companies.

The fluidity of business affairs in what has now become a global market leads to concern for the future of lands requiring at least sixty years to produce a final crop and needing stable ownership to guarantee sustainable production. Forested lands are typically regarded as an undervalued asset on the corporation's balance sheet. The rapid pace of business decision-making is also beginning to affect forest practices. There is evidence of a move to shorter rotations, use of cultural and harvesting techniques that are cost-effective but not necessarily environmentally-benign, conversion of mixed forests to monocultures, and ready fragmentation of the ownership where an immediate cash return can be obtained.

But there may be a silver lining to the cloud. If properly applied, the legacy forest approach could be a win-win proposition for both the corporate owner and the region. The tax benefits available to legacy participants would help reduce the company's operating expenses. If federal Forest Legacy funds were employed, a direct cash return could also be obtained without having to dispose of the land outright and lose access to its raw materials. The region would win, too, by being assured of a stable forest land base and continued public access for recreational purposes.

Individual ownerships

The prospect for aggregating privately owned land for management purposes is equally promising: The trend toward more seasonal use and ownership accentuates its attractiveness, for cooperative action could alleviate the problems of the absentee owner. There is already a rich heritage of experimentation with forest cooperatives. Upwards of one hundred ventures were in existence at one time in 26 different states. Some have proved more successful than others. The private experience, and the provisions for cooperative units authorized by the Sustained-Yield Unit Act of 1944 (P.L. 273), should be dusted off and looked at in the modern context of the northern forest lands. When all is said and done, the heart and soul of the legacy forest system should be its voluntary aggregations of like-minded, private, forest owners.

How might a privately-constituted legacy forest come about? Local initiative would be essential. Examples would be a private owner willing to engage in cooperative activity with his neighbors; a state manager concerned with enhanced forest management and protection adjacent to his forest; a consulting forester aware of the marketing advantages of pooled ownerships; a forest products concern looking for a dependable source of raw materials; a nonprofit organization concerned with sustainability and biotic diversity; an area wide business association advancing regional economic growth and development; or an outdoor group interested in securing and expanding recreational opportunities. Where possible, such forests should have ecological integrity, but they should be assembled fortuitously from willing and available cooperators. Once a minimum critical mass has been established, the margins should be left purposely flexible, thus permitting tracts to be added and subtracted at will. The

benefits of mutual action, rather than the requirements of law, will provide the glue to bind them together.

As we see it, landowners electing to form a legacy forest would receive special privileges. They would be eligible for state tax and investment credits. They would be accorded significant property tax reductions and/or tax deferrals. They would receive heightened levels of technical forestry services. Their aggregated holdings would be eligible for assistance in use and product marketing. As units of a designated legacy forest, the ownerships would enjoy priority for federal legacy funds. In return, landowners should agree to have their lands managed professionally, assure ownership integrity for a period consistent with long-term management, and permit a measure of controlled, public access.

Since legacy forests can be expected to extend beyond conventional town, county, and even state boundaries, assistance must be provided to host jurisdictions. State reimbursement for property tax reductions would be one form. Another would be state-provided advisory services for local land use planning and zoning. A third would be a streamlining of environmental assessment and permit procedures for host Legacy Forest communities.

Where would the money come from? We would trust that a measure of general federal and state aid would continue to be available. Although a detailed examination of tax policy is beyond the scope of this report, we do support the reforms advocated relating to income and estate taxes, and we do urge full funding by the states of the local property tax reductions caused by current use classification practices. But we would also suggest a look at new revenue sources, and an earmarking of such funds to support the legacy forest incentives we are advocating.

In some of the northern forest states, for example, a sales tax is collected routinely on forest products and services. An effort should be made to capture a portion of these levies and redirect them to forest legacy programs. A modest tax could be imposed on imports to encourage the use of indigenous materials. The funds collected would then be earmarked to support legacy activities. Private contributions should also be sought. A dedicated income tax check-off is one possibility. A special northern forest license plate (or decal) could be sold at a premium. The Tri-state Lottery could be persuaded to market a new game whose proceeds would be used by the states to advance legacy activities. If so, lottery tickets should be sold in states adjoining the region so that those creating the problems could contribute to their solution.

Although a bottom-up approach is strongly recommended, initiating action could be encouraged through state or regional efforts. For example, the states (or the Council) could undertake a survey of potential legacy forests. An outline of needed steps and actions could be prepared and distributed to candidate areas. A list of the services and incentives available could be compiled. Service foresters and extension agents could be enlisted to talk up the idea during their contacts with landowners. The institutional manifestations of a legacy forest should also be researched carefully. For example,

existing institutions - soil and water conservation districts, agricultural cooperatives, Tree Farms - might be employed. As an alternative, a case could be made for an entirely new legacy forest system authorized by state legislative action. Under those circumstances, a model act would be desirable. This would be the place to provide the details of procedures, qualifications, tax and other financial incentives.

The special case of the large family ownership

The Northern Forest Lands Study (Harper et al., 1990) estimated that 84% of the region's 26 million acres (21.7 million acres) are held privately. In Maine alone, 18 million acres are believed to be in non-governmental ownership. 6 million acres of that total are controlled by non-industrial, private families in blocks of 100,000 acres or more. There is a colorful history to many of these ownerships. In one case, a New England merchant family decided to reinvest the profits from earlier shipping activities into the long-term growth, management, and harvest of forested lands. Family ownerships of this size are unusual, but not unique to Maine, for the so-called Adirondack "camps" and other large non-industrial private ownerships in New York state control another one million acres of forested land in the aggregate.

The potential of these tracts to provide a stabilizing influence on the economic, social, and environmental character of forested regions prompted us to examine three such ownerships in some detail, two in Maine and one outside the region (South Carolina). Our purpose was to determine their goals, management objectives, decision-making processes, and prospects for serving as a continuing force for the preservation of traditional patterns of ownership and use within the region.

With respect to goals and objectives, these were found to vary by family and by individual location, but to generally embrace three common principles: 1) at least financial self-sufficiency and, hopefully, an annual profit; 2) practices that maintain or advance traditional natural resources, environmental, aesthetic, and even sociological conditions; and 3) management results that enhance the long-term economic value of the land.

Attainment of these objectives is constrained by a number of factors. For example, a major problem for most family landowners is the low current yield and modest capital appreciation of timberlands, a circumstance that proves acceptable only if the investment is at low risk. When changes occur in the tax and regulatory environments, heightened risk turns the inadequate rate of return into a problem. There is immediate pressure on landowners to sell the land and reinvest more profitably.

Three provisions of the Tax Reform Act of 1986 have triggered such responses: 1) elimination of the preferential treatment for capital gains; 2) termination of the right to exclude 60% of current timber income from taxation; and 3) elimination of the generation skipping trust, which enabled individuals to postpone taxes on a transfer of assets to the next generation. The net result has been to force most families to take a shorter-term view of their management objectives.

Yet, one other characteristic of these ownerships provides some hope for stability in the future, and that is their peculiar form of governance. As properties in one family for literally generations, the ownerships are likely to have hundreds of individual beneficiaries. The common practice is to constitute a governing board comprised of elected family members, and engage or create a land management company or staff to handle day-to-day operations. But major decisions are typically reserved for all the shareholders. As heirs proliferate, and the need for direct financial returns compounds, it becomes increasingly difficult to achieve consensus. The problem is especially acute in cases where economic and environmental objectives collide. Under such circumstances, the status quo will usually prevail and abrupt change will be postponed.

We believe retention of the large family ownerships is in the region's interest and, thus, warrants special attention. For example, creation of a market for the recreational use of such lands would open up new sources of revenue and heighten financial returns. This would ease the pressures for sale and encourage long-term management. If the recreational rights were obtained through governmental leasing, problems of liability and control could be addressed. Purchase of conservation easements through such programs as Forest Legacy would provide another potential income stream, fully compatible with the goal of long-term, professional, land management. Family owners are likely to be receptive to easements if their ownership integrity remains intact. Tax incentives are also needed to reward patient capital and encourage responsible timber management. Given the unlikely prospect of federal tax reform, these initiatives may need to be pursued at the state level.

A final problem for family owners of forested land is the growing regulatory burden they face. Clear, fair, legal, and enforceable regulations can be lived with, but uncertainty cannot. Regulation cuts two ways. It increases the cost of doing business, thereby reducing an already low rate of return. It also discourages new investment. In some instances, the prospect of lengthy and burdensome regulatory negotiations can tip the scales and trigger a decision to simply cash in the land's present value for development.

Candidate legacy forest subregions

But where geographically might prospective legacy forests be found? We offer four examples to illustrate the potential within the region.

In the northeastern corner of New York state, flanked by Lake Ontario to the east and the Adirondacks to the west, lies an area called *Tug Hill* (Temporary Commission on Tug Hill, 1976). Designated an official region by special state legislation in 1972, Tug Hill encompasses 1.3 million acres of largely forested land, 41 separate towns lying in four counties, and a population of approximately 100,000 people (1990 census). The core of the region consists of 15 towns with a combined population of just over 12,000. The land is chiefly in private ownership.

Largely agricultural and rural, the area is of such modest means that governmental services are principally part-time and volunteer in nature. But when the Horizon Corporation optioned 55,000 acres of former Georgia-Pacific lands in the core for development purposes, the need for local cooperation became paramount. Local residents pressed for the creation of a Temporary State Commission on Tug Hill, whose report to the governor and the legislature in 1976 confirmed the need for action. But unlike the neighboring Adirondacks, where the solution was the formation of an Adirondack Park Agency with land use regulatory powers, Tug Hill opted for an agency that simply provides resources for its local governments.

The six person Tug Hill Commission staff now serves as facilitator, technical expert, data base source, problem solver, trainer, and nurturer of cooperation, utilizing such innovative approaches as circuit riders, computer networks, cooperative planning, model rural development codes, inter-municipal agreements, and subregional organizational structures. Towns have been encouraged to develop mutual assistance mechanisms of their own at any scale fitted to their needs. These are serviced by Commission staff and consultants. At present, four subregional cooperative councils are active within the region. The Commission has also stimulated the formation of a not-for-profit group, Tug Hill Tomorrow, Inc., to add a private dimension to the effort.

It is important to note that all of these initiatives are utterly dependent upon public goodwill and support. None is permanent. The Commission itself, even fifteen years after its creation, is still a temporary state agency and subject to annual renewal through the appropriations process.

Some 2 million acres of the Northern Forest Lands lie in the north-central and the so-called "Northeast Kingdom" portions of Vermont. The region known as the *Worcester Mountains*, located in Lamoille and Washington counties, is particularly distinctive. It serves as the backbone of a continuous block of 120,000 acres of forested lands capped by the 3,000' peaks of Mount Worcester and Hunger Mountain. Still rural and largely undeveloped, the bulk of the private ownerships are in units of 250 acres or more. They are adjoined by significant tracts of state forests and parks. Although timber growth and production can still contribute appreciably to the local economy, changes in the forest products sector and increasing land speculation and fragmentation are beginning to threaten natural resources, recreational and scenic values, and traditional lifestyles.

Sensing both a need and an opportunity, the Vermont Natural Resources Council in 1991 launched a pilot inquiry into the prospects for protecting the forest resource, enhancing the local timber economy, and strengthening sustainable development at the community level. A steering committee was formed with local representation, and informal community meetings were held in each of the six towns affected. An analysis of forest productivity, land ownership, recreational uses, wildlife habitat, and scenic values (Sternberg and Waite, 1992) now provides a factual backdrop for an effective, inter-community, action program.

It was discovered, for example, that three-quarters of the six town area (93,000 acres) constitutes potential high quality hardwood sawtimber. The region's half-million dollars in value-added annually from local timber could be increased 40% on a sustainable basis. The value of standing sawtimber is already in excess of \$12.8 million, and more than 5 million board feet are accruing annually. A mere 1% of the forest land base could supply sufficient energy from biomass to heat every public facility in the area, and this could be accomplished simply through the thinnings and improvement cuttings needed to upgrade standing timber quality.

The Vermont Natural Resources Council concluded that the forest resources of the Worcester Mountains are, indeed, valuable. With more active management of the areas identified for timber, production could increase short-term local economic benefits by as much as one-quarter million dollars annually. Further, the jobs and economic growth generated by the region's renewable and sustainable natural resources are just the "clean" enterprises needed by rural communities. Having the forest become more viable economically is also the key to ensuring a steady flow of non-economic public benefits such as water, wildlife, recreation, and aesthetics.

In southwestern Maine, on the border of New Hampshire and Quebec, lies a region termed the *Western Mountains* of Maine. More than 7 million acres in extent, it includes portions of the Appalachian Mountain chain, including every mountain in Maine over 3,000', and the great lake systems of Rangeley, Attuan and Big Woods, Moosehead, and Chesuncook-Chamberlain. The region has a combined population of about 150,000 located in Piscataquis, Somerset, Franklin, and Oxford counties. Half of the region's residents still depend on the forest resources or forest products industries for their livelihood. But, in recent years, the Western Mountains have been discovered by vacation travelers from the U.S. Northeast and Canada. Seasonal housing starts quadrupled from 1940-80. The Sugarloaf Mountain ski complex and the condominium developments at Rangeley and Bethel are among those that have added a significant tourism dimension to the region. Recreational and wilderness activities, together with the unparalleled scenic interplay of mountains, lakes, wildlands, and woods, have become resources of genuine economic significance to the region.

Impressed by this potential, but concerned about the looming conflict between traditional and modern land uses, the Mainewatch Institute in 1987 undertook a study of the Western Mountains region (Barringer et al., 1987). Its purpose was to develop a practical, appropriate, and sustainable growth strategy. At the core of its recommendations, Mainewatch foresaw centers of quality industrial and leisure service production located within a quality landscape. This would be accomplished by strengthening and diversifying natural resource industries, and protecting and enhancing the natural resources base.

But the greatest impediment, Mainewatch observed, was the absence of any tradition of effective, mutual action within the Western Mountains region. Personal self-reliance and independence, dispersed populations and economic livelihoods, and what the

authors termed a deep-seated fatalism about the effects of outside forces, all seemed to contribute to the problem. Yet, regional leaders have agreed to form a state-local compact for western Maine, and a formal Western Mountains Alliance is now well-established and functioning.

The northern tier of New Hampshire, *Coos County*, constitutes the headwaters of portions of the Connecticut and the Androscoggin rivers. A spectacular array of mountain peaks, valleys, lakes, and wilderness greets the casual visitor, but the production and processing of timber and fiber from forested lands still represents the centerpiece of the local economy. Three major pulp and paper mills, and their related service sectors, employ a sizable portion of the county's 35,000 population, spinning off some \$200 million in value-added annually. The Virginia-based James River Corporation dominates the scene with its mill ownerships and some 180,000 acres of company-owned, forest lands. In 1990, James River announced that its New Hampshire assets were for sale.

In December of 1991, a coalition of fifteen environmental organizations identified the James River lands as one of the "nine endangered jewels of the Northern Forest" and recommended a concerted effort to conserve them for the future (Adirondack Council et al., 1991). Coupled with the Dartmouth College holdings to the north, the Appalachian Trail lands to the southeast, and the White Mountain National Forest south and west, the James River ownership could constitute the core of a permanently preserved, working forest of some 500,000 acres. Since that time, the Society for the Protection of New Hampshire Forests, in conjunction with the New England Natural Resources Center and others, has been exploring a cooperative program that would bring this vision to fruition.

The marginal forests

Having secured the core legacy forests within the Northern Forest Lands region, what then should be done with the remainder? Should they be relegated simply to random development through free market forces? We think not. Our view is based upon the premise that a measure of change is certainly inevitable, and often desirable. By making provision for change, market forces can be employed in responsible ways and the development pressure lessened on the more sensitive tracts. As one approach, we recommend the encouragement of a new kind of working-forest subdivision to capture development values in ways that are respectful of the environment, appreciative of aesthetics, and mindful of economics. Before elaborating on this concept, one needs to examine the distinctions between developer and conservationist in a forest context to see whether there are legitimate grounds for the symbiosis required.

Value is the key word in both forest preservation and development, but it is here where most major conflicts are rooted. For the developer, value is the bottom line of an economic enterprise. It is viewed, by necessity, in the short run. By way of contrast, the environmental advocate regards value in its broadest, longest-term sense - for example, the productive capacity of land in sustainable terms, a landscape of undiminished utility

and natural beauty. Forests add an extra dimension, for they are typically managed in rotations of sixty years or more, an attribute counter to most capitalistic enterprises. Thus, forests accrue significant carrying costs - taxes, interest payments, management and protection expenses - without appreciable amounts of off-setting income. They are notoriously illiquid assets. Unless a rising economy increases property values, doing nothing with the land is bound to cost the developer money. This means that most privately-held forests ultimately face two futures: retention as productive, natural resources enterprises, or conversion into housing developments. But with a somewhat modified perspective, we believe a middle-ground scenario is possible.

Despite conventional rhetoric, the responsible developer is not by nature insensitive to natural values. He is especially interested in anything that will raise the perceived value of his land or the structures thereon, particularly if the action can build value over a relatively short time horizon. Thus, it is not dollars that are the controlling factor, but time. Given an opportunity to cut expenses through expeditious action, most developers will willingly engage in significant tradeoffs to preserve or enhance environmental values. Enhancement can be especially fruitful, for developers have the full array of technical skills, equipment, and resources at their disposal to bring about major improvements in the land. Given the right regulatory mindset and environment, developers can add one increment of value through aesthetics, recreational opportunities, physical improvements, or simply preservation, while local officials can contribute another through timely approvals, open-minded zoning, and non-adversarial attitudes. Compatibility and shared objectives are indeed possible.

What would working-forest, residential subdivisions be like? We visualize these as dwelling units clustered around operating forests. Property owners would serve as each forest's base constituency, looking after its needs and caring for it in perpetuity. The forest, in return, would contribute a steady supply of wood products (e.g., firewood from thinnings and improvement cuttings), a modest source of revenue from periodic timber sales, a secure place to recreate, and an area for permanent wildlife and aesthetic appreciation. Adjacency to a working forest might require a measure of accommodation, and special provisions for managing the forest "commons", but as the experience with preserved open space has documented, it will be worth it, for additional economic value is likely to accrue to the surrounding, developed properties.

How to accomplish such objectives in the face of the inordinate variability and complexity of local zoning throughout the region is more of a problem. A variety of approaches will be necessary. For example, in Maine's unorganized territories, the Land Use Regulation Commission's existing authority could encourage such approaches much as it has steered development away from sensitive shoreline areas. Where existing zoning is minimal, enlightened private initiative could take up the slack. In some states (Massachusetts, for example), there are special provisions in law encouraging low income housing, historic renovation, and religious or educational land uses. Further changes in state law could similarly empower the creation of working-forest or even open space subdivisions and, in so doing, provide a measure of relief from the myriad state and local regulatory approvals.

This suggests the desirability of a model act that would spell out conditions and procedures. For example, there should be minimal eligibility standards for such forests. The preparation of a management plan for the resource, not just a development plan for the property, should be required. Existing provisions of law, such as forest land classification and reduction in assessed value, should be built in. Allowance should also be made for the permanent ownership and management of the forest lands held in common. The provisions of federal and state law encouraging the renovation of historic properties should be examined, for a similar system of developer incentives would go a long way to encouraging the working-forest subdivisions we advocate. In short, we find the prospects for protecting some of the marginal forests using market incentives at least as challenging as the preservation of a core of legacy forests, and we urge prompt attention to this significant set of opportunities.

All of the above suggests the need for a special working group of the Council to examine the legacy forest idea. This would ensure a system of legacy forests that were state-based, but consistent throughout the region. It would provide important linkages to the new federal Forest Legacy program. Further, the Council would be afforded an opportunity to become an integral part of the legacy forest network, thereby obtaining an extensive, committed, grass-roots constituency engaged directly in advancing the Council's own goals and objectives. In return, the Council would provide the legacy forests a place to express concerns of a regional nature and an instrument to represent them in the highest policy circles. This brings us to the case of the Council itself.

The Northern Forest Lands Council

The Northern Forest Lands Council is a survivor. It has toughed out a remarkably stormy beginning and now seems relatively benign to most northern forest interests. If it has no promise, at least it represents no threat. But we are distressed by the talk of phasing out the Council entirely at the end of its current four year authorization. Imperfect though it may be, the Council does constitute the sole entity at present concerned with the future of the northern forest as a whole.

The Council's principal difficulties stem from its origins. It came about through federal authorization. It is yet to be really rooted in its region. As a creature of the legislative process, and nurtured as it is through federal appropriations administered through a federal agency, there is an understandable tendency to regard the Council as simply an instrument to further a federal program. That is not the Council's position, nor is it an objective of the federal Forest Service, but the perception lingers. The well-intentioned effort to formalize the northern forest lands program, and the Council, through a special act of Congress perpetuated that illusion. Now that the legislation has been shelved, the future of the Council can be examined more dispassionately.

We are strongly in favor of a regional council that continues in some form, but we do suggest modifications in its structure and operations. For example, each designated legacy forest should be given a charter by the Council. The charter, in turn, should

require some sort of local administrative entity responsible for oversight and provide for management of the designated unit. The state committees created under the federal Forest Legacy Program should continue but they, in the aggregate, should become the core of the regional body once the term of the present Northern Forest Lands Council expires. As a subregional legacy forest comes on line, each would be given a seat on the regional council. Thus, over time, the Council would come to be constituted largely of working legacy forest representatives and their state advisors. It would then have a true grassroots constituency. The Council's principal function would be to receive and review nominations and to charter legacy forests. It would serve as an advisory body for the allocation of federal Forest Legacy funds. Under particular circumstances, it might be called upon to provide specialized information and services common to all the legacy forests. It would certainly provide advocacy at local, state, and national levels, and it would always be available to provide a forum for the airing and resolution of interjurisdictional conflicts and problems.

The Council should be weaned gradually from its dependence on federal funds. If the region is to have a council, it should be prepared to pay for it as well as use it. This will require a sharpening of the program focus to emphasize assistance to the region. Our recommendations for a chartering and oversight role for the legacy forest system, and an advisory role for the allocation of federal Forest Legacy funds, would provide just that focus. It would be further fortified if the states were prepared to legalize legacy forests through their own enabling legislation.

From our studies of other regional institutions, we are absolutely convinced that the Council should have only minimal powers. It should employ influence, not authority. Its capacity to mobilize assistance, marshal facts, plan and advise, deliver technical services, and resolve conflicts must be its primary stock in trade. As confidence in its work builds within the region, so will its influence. A small coordinating staff is all that will be required. Technical assistance should be obtained through loaned personnel or contract services. The staff should avoid getting bogged down in any substantial operating responsibilities beyond its legacy forest functions so that the Council's capacity to respond and innovate remains undiminished. But to accomplish the above, there must be an expanded effort to engage the public more directly in its program.

Public Participation

Public attitudes within the northern forest will ultimately shape the future of the region. Thus, achieving full and effective public participation has to be a primary goal for the Council. The effort to date through citizen advisory committees, work groups, and the varied membership of the Council itself has been commendable, but outreach to the residents themselves has been more limited. Thus, we would urge the Council to utilize several additional approaches in order to start to build an informed, involved, and supportive constituency.

First, there should be an organized attempt to have people express directly their perceptions about the future, the interests and activities they support, and the concepts

and values associated with those ideas. Use of advisory surrogates is no substitute for the real thing. Here, the Council might take its cue from the Delphi survey conducted prior to the Great Lakes Forest Symposium held in June of 1979 (Flader, 1983). By utilizing a sizable number of respondents, questioning them in situ, and then feeding back the results for refinement and verification, it was possible to isolate a few primary issues where consensus existed without interjecting the biases of the loudest and most strident voices at the conventional open, public meeting.

Second, the Tug Hill Commission's use of circuit riders might well be emulated by the Northern Forest Lands Council. Skilled professionals could travel from town to town conveying information and technical assistance in return for firsthand knowledge of public needs and attitudes. As the Tug Hill experience confirms, circuit riders can serve both as conduits of information and as agents of change. Operating in a low-key fashion within familiar surroundings, they provide valuable bridges to needed resources and serve as organizers of effective responses to problems.

Another approach used successfully in regions with sizable seasonal populations is the summer town meeting. Largely informational in nature, these sessions give non-residents one of their few opportunities to be heard. New Englanders respond well to the town meeting tradition, and summer sessions are particularly well-attended. The right kind of meeting can reveal reactions and concerns, elicit suggestions, and build elements of confidence and trust among all the residents of a community. The sessions could also be a useful early warning system for the Council.

Once issues have been identified, the Council's work group approach should continue to be employed. But here again, more actual outreach into the region itself is recommended. A number of techniques should be considered. *Charettes* are intensive, problem-oriented workshops that bring together stakeholders in an attempt to reach consensus. *Opinion surveys* can help focus discussions and facilitate the search for common ground. *Brainstorming* sessions encourage participants to move beyond their vested positions and explore alternative solutions. *Role playing* forces interest group representatives to step into the thinking and position of another group. *Collective image building* involves the use of outside case experience or modeling to simulate what change will actually be like.

Finally, given the breadth of opinion and depth of feeling within the region, the Council could well consider the use of impartial third parties such as mediators or facilitators in selected instances. Specialists of this sort can help the Council hone its understanding of public concerns. Mediated proceedings work best when the issue is in sharp focus, the participants are fully representative of the involved viewpoints, and the parties are agreeable in advance to negotiating in good faith and implementing the consensus decisions.

But beyond the tangible results associated with such actions, public participation has a more compelling reason for prosecution. Decisions derived from the direct

involvement of citizens and interest groups have a ring of reality to them. They build trust, improve long-term relationships within a region, and ultimately stand a better

chance of being accepted. In our case, they would give credence to the fundamental tenet of the Northern Forest Lands Study and the Council that the people of the area will, indeed, play a central role in guiding the future conservation and management of the northern forest region.

APPENDIX A

THE ECONOMIES OF FORESTED REGIONS (S-122) John F. Kennedy School of Government

Student Participants

Bowditch, Edward R. A graduate of Colorado College in history/political science, Mr. Bowditch has conducted program evaluations in rural economic development, provided staff and research support to a legislative body, and served in an advocacy capacity for national campaign finance reform.

Bright, E. Shippen. A native of Maine with professional credentials in business administration, Mr. Bright brings to the group more than five years' experience in directed marketing, planning, property management, and real estate sales.

Chang, Tai-ming. Trained in biology and environmental studies, Mr. Chang's most recent experience has been with the Environmental Protection Agency in Superfund enforcement and compliance monitoring.

Gilchrist, Timothy J. Mr. Gilchrist's credentials in economics and geography have been employed for the past eleven years in budgeting and financial management, most recently as director of transportation budgeting and as chief of staff to the commissioner of the New York State Department of Transportation.

Helman, Zena M. A native of Australia, Ms. Helman has utilized her training in genetics and environmental science within Victoria's Department of Conservation and Environment where she served most recently as a senior policy officer for natural resource policy and programs, dealing particularly with forest management issues.

Holmes, Rebecca. The recipient of specialized training in economics, Ms. Holmes has worked for Resources for the Future in Washington and has special concerns for the relationships of economics and environmental policy, such as the problems of ozone depletion and the greenhouse effect.

Pendleton, Linwood H. Trained at the master's level in biology, Mr. Pendleton has been examining forest ecology and economic development in the tropics in Belize and other Latin American countries with special attention to the prospects for the marketing of indigenous products.

Salisbury, Catherine L. An attorney with extensive private practice experience, Ms. Salisbury has also served as an elected and appointed official in municipal government, specializing in health and water supply issues.

Shefftz, Jonathan. A graduate of Amherst College in economics and political science, Mr. Shefftz has worked for Resources for the Future in Washington, participating in a comprehensive study for the U.S. Department of Energy on the social costs of fuel cycles.

Shute, Donald E. Mr. Shute is a graduate of Stanford with a master's in business administration from Columbia University. For the past ten years, he has been a builder and developer of single-family and special-needs housing in southeastern Massachusetts.

Wall, Carter. Ms. Wall's background in biology has been utilized for the past five years in immunological/virological research and will be applied in the future in the areas of environmental and land use policy. She has special skills in computer networking.

White, William N. Trained as a biologist, Mr. White has served as a research assistant and quality control specialist in medicine and public health. On assignment for the non-profit ANCON during the summer of 1991, he assisted field personnel working within the Panamanian national park system.

Wilson, John W. A Connecticut College graduate in Japanese studies and botany, Mr. Wilson has occupied progressively advanced positions in wetlands, water, and waste programs within the Environmental Protection Agency, the most recent as chief of waste policy, Office of Policy Planning and Evaluation, in Washington.

Winthrop, John, Jr. Currently an MBA candidate at the Harvard Business School, Mr. Winthrop has served as a corporate financial analyst, a specialist in mergers and acquisitions, and as a policy analyst in international affairs for the Office of Management and Budget in Washington.

Course Auditors

Siemann, Dan. Master in Public Policy candidate (1993). John F. Kennedy School of Government.

Steinbach, Thomas E. Master in Public Policy candidate (1993). John F. Kennedy School of Government.

Williamson, Susan. Director, Mid-career/MPA Program. John F. Kennedy School of Government

Winslow, Ann B. Master of Science candidate (1993). Harvard School of Public Health.

APPENDIX B

Visiting Lecturers

Dr. David R. Foster, Director
Dr. John F. O'Keefe, Fisher Museum Director
Harvard Forest
Petersham, Massachusetts

Stephen C. Harper, former Director
Northern Forest Lands Study
U.S. Forest Service
Bristol, Vermont

Michael T. Rains, Director
Northeastern Area State & Private Forestry
U.S. Forest Service
Radnor, Pennsylvania

Dr. Arthur W. Cooper, Head
Department of Forestry
North Carolina State University
Raleigh, North Carolina

Dr. Clark S. Binkley, Dean
Faculty of Forestry
University of British Columbia
Vancouver, British Columbia

E. Thomas Tuchmann, Professional Staff Member
U.S. Senate Committee on Agriculture, Nutrition, & Forestry
Washington, D.C.

Robert L. Bendick, Jr., Deputy Commissioner
New York Department of Environmental Conservation
Albany, New York

Dr. Perry R. Hagenstein, Chairman
New England Natural Resources Center
Wayland, Massachusetts

Dr. Robert W. Eisenmenger, former Chief Operating Officer
Federal Reserve Bank of Boston
South Natick, Massachusetts

Jane A. Difley, Regional Manager
American Forest Council

Troy, New York

Robert T. Perschel, President
Perschel Forest Management
Worcester, Massachusetts

Jeffrey H. Taylor, Director
New Hampshire Office of State Planning
Concord, New Hampshire

Stephen D. Blackmer, Director of Conservation Programs
Appalachian Mountain Club
Boston, Massachusetts

Catherine B. Johnson, Staff Attorney
Natural Resources Council of Maine
Augusta, Maine

Dr. John B. Currier, Assistant Director
Northeastern Area State & Private Forestry
U.S. Forest Service
Radnor, Pennsylvania

Paul O. Bofinger, President
Society for the Protection of New Hampshire Forests
Concord, New Hampshire

Mollie H. Beattie, former Deputy Secretary
Vermont Agency of Natural Resources
Grafton, Vermont

John D. Harrigan, Publisher
Coos County Democrat
Lancaster, New Hampshire

APPENDIX C

Working Papers

Bowditch, Edward. May 1992. The Northern Forest Alliance: an examination of the environmental organizations involved in the debate over the northern forest lands.

Bright, E. Shippen. May 1992. Northern forest legacy: issues and incentives for the next century.

Chang, Tai-ming. May 1992. Public participation in defining the future of the northern forest lands.

Gilchrist, Timothy. May 1992. The Temporary State Commission on Tug Hill: a model for the northern forest?

Helman, Zena. May 1992. Forest management in Australia.

Holmes, Rebecca. May 1992. Recreation values and the northern forest.

Pendleton, Linwood. May 1992. Making the right choices: economic considerations for protected areas and land use zoning.

Salisbury, Catherine. May 1992. The Forest Legacy program.

Shefftz, Jonathan. May 1992. A plan for the northern forest lands? - Vermont's Act 250.

Shute, Donald E. May 1992. Toward a working-forest residential subdivision for Massachusetts.

Wall, Carter. September 1992. What do we do when the mills close? - government's role in community survival in the Northeast.

White, William N. May 1992. Community banking: a strategy for managing change in the northern forest.

Wilson, John W. May 1992. New parks for the northern forest.

Winthrop, John, Jr. May 1992. Family owners of forested lands: a stabilizing force in the northern forest.

(Working papers available from the authors only)

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