New England’s Forests in Context: An Insider’s Outsider Perspective

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In May 2010, Harvard University released a report by Harvard Forest and several partner organizations documenting that, after 200 years of natural reforestation, forest cover is declining in all six New England States. The authors of Wildlands and Woodlands: A Vision for the New England Landscape (http://www.wildlandsandwoodlands.org/) call for conserving 70 percent of New England as forest land—7 percent as wildland reserves, and 63 percent as working woodlands owned and managed by private landowners. The report offers a compelling vision of not only the challenges faced by the region’s forests, but also the opportunities for forest conservation that are still at hand if timely and effective action is taken. As expansive as this vision is, viewing these opportunities in their broader geographic context reveals the national and perhaps global significance of this ecological, economic, and cultural resource.

The increasing influence of climate and energy on the future of forests

Globally the future of forests and forestry is being determined more in the context of climate policy and energy policy than in what we traditionally think of as forest policy. The forest biome is one of the largest and most important ecological systems on Earth. The forest biome constitutes about one-third of the planet’s terrestrial ecosystems by area, but represents more than two-thirds of all the carbon stored in living organisms, with a capacity to store far more. Whatever the outcome of international negotiations such as those of the Intergovernmental Panel on Climate Change in Copenhagen last year on “Reducing Emissions from Deforestation and Degradation” (REDD), the conservation of the world’s forest ecosystems for the carbon they contain and the greenhouse gases they can continue to sequester through net growth is critically important—in temperate and boreal forests as well as in forests in the tropics.

Achieving the ambitious national and state policy targets set for renewable energy production, both for transportation biofuels and renewable electricity, could eventually double the current level of wood harvesting in the US from an average of 16 billion cubic feet per year (bcf/yr) to more than 33 bcf/yr, with more wood going into energy than is currently being utilized by the entire US forest products industry. Under the right conditions this could be highly beneficial for sustainable forest management, for forest owners, and for forest-based rural communities across the country. Without adequate planning and foresight, however, there could be significant impacts on forests and their future productivity, and a replay of the highly divisive public controversies that have characterized forest management during the past three decades.

For New England’s working forests, this could have particular significance given the extent to which the region is dependent upon imported oil for heating and electric power. Communities throughout the region are discovering the benefits of asserting greater control over their energy futures through the use of efficient, appropriately scaled wood energy facilities supplied through the sustainable utilization of local forest resources. New England’s relatively long experience with wood bioenergy, such as the 50 MW wood-fired power plant that has operated successfully in Burlington, Vermont...
for more than 25 years, demonstrates that the expansion of wood bioenergy does not have to equate to overharvesting of a region’s forests.

**Conservation strategies for adaptation to major environmental change**

Global trends in energy and climate have other implications for New England forests as well, which is another reason to look at them within a larger geographic context. In so many areas of environmental conservation, there is a sense that we are in uncharted waters. History is turning out to be much less reliable as a guide or predictor than we expected it would be. Most of the science underpinning our knowledge of environmental management and natural resource conservation was developed during the past two centuries — which turn out to have been a period of extraordinary climatic stability when considered in the long sweep of natural history.

Basic concepts like the “historic range of variability” are out the window in terms of everything from wildfire behavior, to biodiversity, to climate patterns. In many instances, we are already outside historic ranges and veering further all the time. The prevailing strategy for biodiversity conservation is based on habitat protection, but what good are national parks and ecological reserves that are fixed on the landscape when the habitat range for key species is drifting northward? Ecological communities are being pulled apart and reassembled in unprecedented ways as the most mobile species migrate out and others arrive. Changes in temperature and precipitation patterns are creating deserts where once there were forests, shallow bays where once there were fertile deltas supporting millions of people as well as diverse ecosystems. How do we plan for such unpredictable and large-scale changes in the environment?

To deal with potential adverse environmental effects, we have relied heavily on two main strategies. The first main strategy is prevention, which has been applied widely to things like air pollution, species extinctions, and oil spills. At times the prevention strategy fails, sometimes spectacularly, which then triggers the second main strategy — mitigation. When these failures occur we are reminded of the increasing difficulty, expense, and in some cases the near impossibility of mitigation.

What former Yale School of Forestry & Environmental Studies dean Gus Speth described in his book *Red Sky at Morning* as “the mother of all environmental issues” — global climate change — has prompted a fundamental reconsideration of these predominant strategies. Prevention is no longer an option. Whether mitigation will be a relevant strategy depends heavily on our political will, and what science can tell us about whether we are approaching—or perhaps have already passed — the “tipping point” where the runaway feedback loops take over.

By necessity, we are now devoting significant intellectual energy to a third strategy — adaptation. In other words, major environmental change is inevitable, so get used to it. But this is easier said than done. Recently the UN Foundation published a report on adaptation to climate change, cleverly but aptly subtitled *Avoiding the Unmanageable and Managing the Unavoidable.* It contained far more questions than answers, going beyond the simple changes in physical infrastructure needed to accommodate rising sea levels, and hinting at the complexity of modifying environmental, economic, social, and political systems to deal with the new realities of global climate change.

**Viewing the New England Wildlands and Woodlands vision in its larger context**

The New England Wildlands and Woodlands vision can be an important component in an adaptation strategy to conserve forests and the host of values they represent. There are few places in the US where an opportunity remains to create a continental-scale corridor along which species can move in response to climate change, and New England is one of them. It may not be as grand an opportunity as Yellowstone-to-Yukon, but there is a significant potential to maintain forest ecosystem continuity and connectivity from the northern Appalachians and Adirondacks all the way through to the Laurentian Plateau, Gaspé Peninsula, and the Maritime Provinces. Presenting this big-picture vision could be important to attracting outside interest and resources in support of this effort.

But since there will never be enough money to do everything, choices will have to be made and some means of conservation prioritization is needed. The *Wildlands and Woodlands* report describes an “array of wildland reserves” and “interconnected areas of woodland,” but there will be certain areas of the landscape that are key potential links in this interconnectedness that are not currently protected. While it may not be desirable to publicly identify the

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“In the face of all current and future threats to our forests, the single most important action that we can take is to protect our intact landscapes on a scale that allows nature to flourish.”
mentation of this strategy. There is a potential national/international constitu-
yty around the rare opportu-
nity this represents to create a continental-scale north-south habitat
corridor from the northern
Appalachians to the Laurentian
Plateau to facilitate movement by
plant and animal communities in
response to climate change. But
there is a local constituency that may
prove even more important. Several
years ago, Harvard Forest published
a Massachusetts Wildlands &
Woodlands report, specific to not
only the forests and other biophysical
features of Massachusetts, but also
the unique characteristics of its econ-
omy and culture. The New England
Wildlands & Woodlands report pro-
vides the broader context and frame-
work for the discussion of challenges
and opportunities across the region,
but stepping this vision down to each
state would make this more concrete
for many individuals and communi-
ties whose understanding and sup-
port is essential, and give them a
more direct sense of the challenges
and opportunities in the ecological
and cultural landscape to which they
most closely relate.

**Forests will be protected as one com-
ponent of an integrated cultural
landscape that has widespread appeal.**

A large measure of the appeal of the
New England cultural landscape is its
integration of forests, agriculture,
and rural communities. As a New
England expatriate who has lived in
several other regions of the US and
abroad, I can vouch for the unique-
ness and aesthetic appeal of the New
England cultural landscape of forests,
fields, stone walls, and rural commu-
nities. I wonder sometimes whether
this character and aesthetic value is
fully appreciated by individuals who
have lived their entire lives in New
England and perhaps assume that (a)
cultural landscapes such as these are
common, and/or (b) the key charac-
teristics of this cultural landscape will
remain unchanged. Ecological and
economic arguments will be impor-
tant, but it may just as well be the
simple aesthetic appeal of characteris-
tic New England landscapes that
evokes the passion for conservation
and leads people to say to themselves,
“this is beautiful, this is home, and
this is worth working to save.”

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**End Notes**

1 Based on a keynote address presented
at a conference on Conserving Forests for
Future Generations, convened by the
New England Forestry Foundation and
Harvard University at Concord, New
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