

Costs and Benefits of Forest Policies in Wisconsin: An Assessment of Research Needs and Priorities

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Executive Summary

Forest policies in Wisconsin have been evolving rapidly in recent decades in response to stakeholder interest in biodiversity conservation and federal mandates to implement conservation programs. Substantial areas of forest land in Wisconsin have been dedicated exclusively or primarily to conservation and recreational purposes while regulatory constraints on working forests have increased in cost and complexity. Many loggers, forest owners, and wood buyers in the state are concerned about the cumulative economic effects of these trends including long-term implications for jobs supported by forest-based manufacturing industries. There is an urgent need for research to better define the benefits and costs of forest policies, regulations and guidelines in Wisconsin.

Introduction

Forest products industries in Wisconsin employ 52,000 people and account for 13% of all manufacturing jobs in the state. These industries support additional jobs in forestry and logging companies, engineering and environmental consultants, equipment suppliers, and other allied businesses.

Employment in forest products industries and other manufacturing sectors has been declining in Wisconsin and across the United States. Challenges facing forest products industries include global competition; structural change in markets for some traditional forest products; the large decline in home building triggered by the 2008 financial crisis; and a variety of public policy issues (tax, environment, energy, health care, etc.).

Despite significant challenges, forest products industries in Wisconsin have potential to grow and prosper. Global demand for forest products is growing and there are signs of recovery in U.S. home building. Growth in demand will be sustained by market expansion in developing countries and by new product innovations based on R&D in areas such as performance fibers, nonwovens, bio-plastics, composites, nanotechnology, and biorefining.

Reliable, high-quality wood supplies are prerequisites for long-term investment in forest products manufacturing facilities in any region. On the surface, Wisconsin would appear to have some important advantages with respect to wood supplies. Forests in WI are abundant and diverse; wood growth exceeds harvest by a wide margin; and the state is a recognized leader in forest certification and conservation.

Nevertheless, many stakeholders in Wisconsin's forest products industries are expressing concern about the cost and availability of wood in the state. These stakeholders note that a substantial portion of Wisconsin's timber inventory is not available for harvest and that substantial areas of "working forest" are being taken out of production and dedicated primarily or exclusively to conservation or recreation purposes. In addition, working forests that remain available for timber production are subject to increasing costs and constraints associated with forestry regulations and guidelines.

Statement of Need and Opportunity

There are large and important gaps in information about the costs and benefits of forest policies, regulations and guidelines in Wisconsin. Addressing these information gaps through a well-focused program of research would establish a knowledge platform for addressing stakeholder concerns about current policies and for ensuring that the forestry situation in Wisconsin is favorable for long-term capital investment in forest-based manufacturing industries.

Priority Information Gaps / Research Needs

1. How many acres of "working forests" exist in WI; where are they located; and what is their capacity to produce reliable, high-quality supplies of wood over the long term?
 - How will the extent and productivity of "working forests" in WI be affected by announced plans to expand parks, wildlife habitat reserves, ecological corridors and other conservation lands in the state?
 - How does proximity to conservation lands affect the economics of working forests? (e.g., costs of restrictions on access to working forests through conservation lands)
2. What are the economic and ecological consequences of regulations and guidelines related to:
 - rotation lengths in aspen and red pine stands?
 - retention of large trees past economic maturity in natural hardwood stands?
 - seasonal and weather-related restrictions on timber harvest operations?
 - management of invasive species?
 - protection of T&E species; species of concern; and rare plant communities?
 - stump treatment and / or seasonal harvest restrictions to reduce risk of fungal disease in oak and pine?
 - stream crossings, grading permits, stormwater, and wetlands?

Research Strategy and Cost

Gap #1 could be addressed through a comprehensive statewide analysis requiring a budget on the order of \$200,000 per year for three years. The extent and productive capacities of working forest (i.e., non-reserved areas where timber harvest is possible) will be estimated for several land categories defined by variables such as ownership class, tract size, and current forest cover type.

A lower-risk alternative approach to Gap #1 is to focus initial efforts on a smaller pilot analysis of a selected region in Wisconsin with a budget on the order of \$75,000 per year for two years. Methods developed and tested in the pilot could then be applied in other regions of the state.

Gap #2 could be addressed through a series of case studies focused on selected properties where forest managers and / or loggers are willing to share information with researchers about silvicultural objectives, stand conditions, management costs, and timber values. Deliverables from each case study will include stand-level models of the economic costs and ecological benefits of a specific set of regulations or guidelines. Economic models will allocate costs explicitly to forest owners, loggers, and wood buyers. Collectively, results of case studies focused on specific regulations and guidelines will provide a basis for (i) identifying opportunities to improve forest policies in Wisconsin; and (ii) stand and landscape-scale modeling of the cumulative effects of Wisconsin's forestry regulations and guidelines.

Case studies will vary somewhat in cost and duration with averages on the order of \$50,000 and 12 months per study. Average cost and duration would be somewhat higher than this for case studies conducted by graduate students at universities.

Suggested Next Steps

1. Determine whether there is support for the research priorities and approaches outlined in this document within the Council of Forestry and Wisconsin DNR.
2. If there is support for the priorities and approaches identified herein, identify options for funding, organizing, and executing the work.

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