The Sustainable Wood Production Initiative

BY ROBERT DEAL

To address concerns about sustainable forestry in the region, the Focused Science Delivery Program is sponsoring a three-year Sustainable Wood Production Initiative. The Pacific Northwest is one of the world's major timber producing regions, and the ability of this region to produce wood on a sustained yield basis is widely recognized. Concerns relating to the ecological, social and economic contributions of sustainable forestry, however, will play a major role in future wood production of the region.

Sustainable forestry is related to, but different from sustained yield—the amount of wood that a forest can produce continually. The Society of American Foresters (Helms 1998) defines sustainable forestry as "The capacity of forests ranging from stands to ecoregions, to maintain their health, productivity, diversity and overall integrity, in the long run, in the context of human activity and use." The Sustainable Wood Production Initiative merges evolving definitions to define sustainable wood production as the capacity of forests to produce wood, products and services on a long-term basis, in the context of human activity and use.

To identify and understand important issues for sustainable wood production, we conducted a series of client meetings and invited representatives from forest industry, small private forest landowners, state forestry and others who were interested in growing and producing wood. The single most important topic mentioned by almost all forest landowners and managers was the need to identify and understand barriers to sustainable forestry. Overall, our focus groups identified six major topics that affect the ability of landowners to sustainably produce wood in the region:

1. Identify and understand the major issues relating to wood production in the Pacific Northwest in the broad context of sustainable forestry.
2. Identify barriers to sustainable forestry and assess the impacts of market incentives and environmental regulations on sustainable forest management.
3. Develop a regional assessment of resource trends and market conditions, including the long-term economic viability of forestry in the region.
4. Identify and assess niche market opportunities for small woodland owners.
5. Identify emerging technologies for wood products and synthesize new and existing information on wood technology.
6. Develop a comprehensive communication strategy for reporting findings to a broad client base of land managers, researchers and the general public.

We are working with a number of university cooperators and PNW Research Station scientists to address the major issues of the Sustainable Wood Production Initiative. Our initial results suggest the following seven summary findings.

1. Private lands in the Pacific Northwest, given unchanged policies, should be able to maintain at least recent historical harvest levels over the next 50 years. These results could be realized with stable to rising inventories and nearly stable real prices. Concentration of lands in younger age and tree size classes will continue in some cases for industrial owners and to a lesser extent on non-industrial private forestlands. The pace of the shifts to more intensive manage-

ment will slow in coming decades, but the proportion of harvest coming from managed stands will increase.

2. Forest products operations in the Pacific Northwest have changed dramatically over the last several decades. Observed trends include a decline in sawmill numbers, an increase in the largest sized mills, less dependence on timber from public lands, greater use of out-of-state logs by sawmills, and a decline in log exports in the last decade.

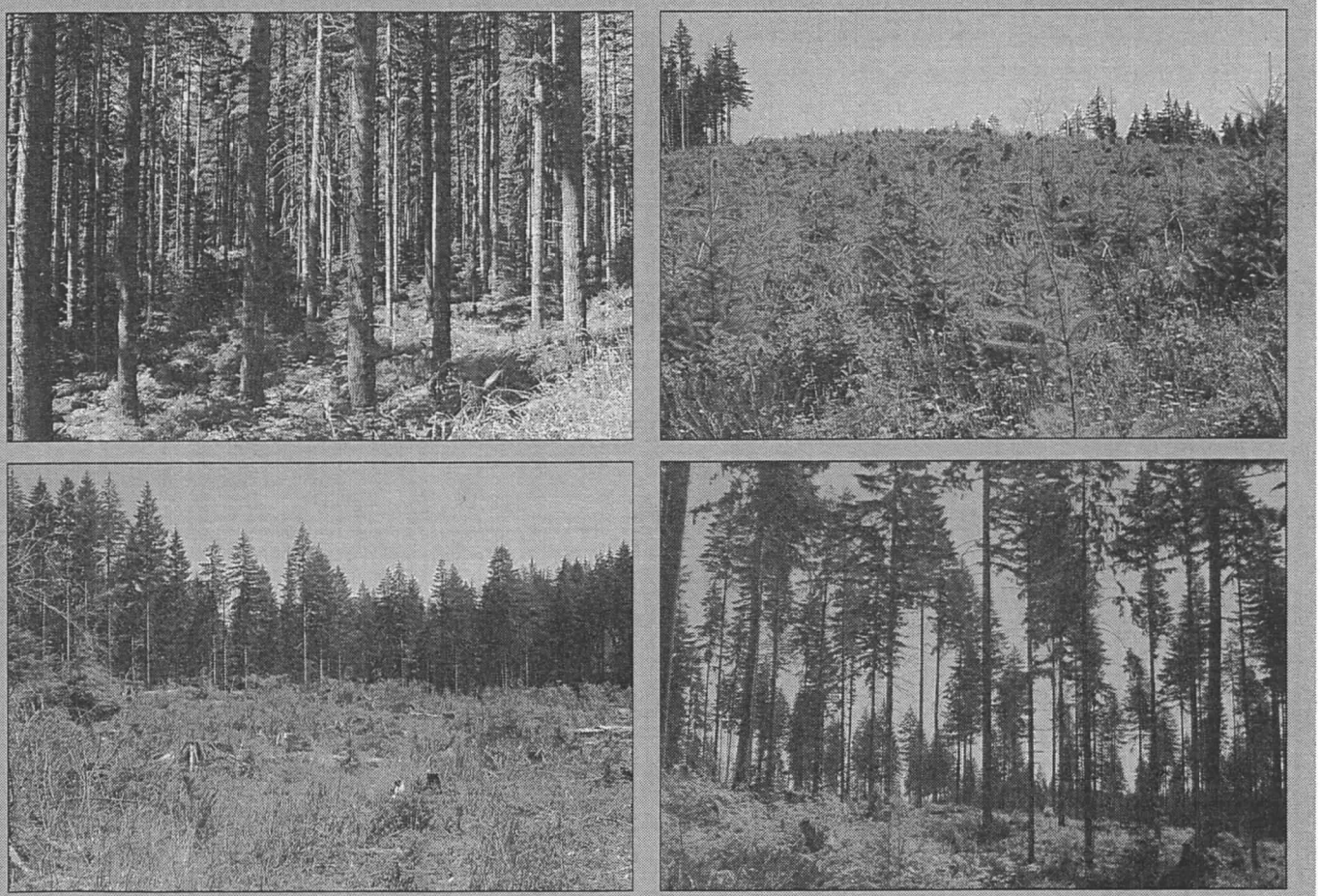
3. The renewed interest in sustainable forestry also raises questions about the role that market prices have for management decisions made by individual landowners and managers. Evidence from the Douglas-fir region suggests that management decisions have relied on sustained increases in timber prices to provide positive incentives to increase the intensity of forest management practices. We now face a future of relatively stable prices, and some forest management advocates are concerned that expectations of lower returns to various forestry practices may lead many landowners to respond to markets in ways that are not supportive of sustainable forest management.

4. In the Pacific Northwest, land use is dynamic and will affect the region's progress toward sustainable forestry. The region is expected to experience above-average population growth, including some in-migration of people from other regions. This will

Groups View Harvest Patterns Differently

Visual preferences for six alternative harvest patterns were evaluated by various interest groups including foresters, recreationists, educators, environmentalists and the general public. Foresters tended to show significantly greater preference than most groups for harvest treatments that left moderate to large openings in forests (clearcuts, patch cuts and group selection). The preferences of educators and environmentalists were the most similar. Most groups preferred the two-aged treatment, with the exception of the environmentalists. Foresters showed higher preference for intensive forest management, while other groups indicated a lower preference for intensive forest practices.

The findings from this study suggest that in visually sensitive landscapes such as travel corridors, practices that result in greater tree retention, smaller openings and rapid green-up will serve to reduce the visual impact of timber harvest practices. These practices can also help meet other forest resource objectives such as improving wildlife habitat and biodiversity.



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How people perceive different forest treatments plays an important role in the practice of sustainable forestry. Pictures like these were shown to a diverse array of survey participants and different groups of people responded in different ways. The upper left scene is a thinning (respondents had a high preference) upper right is clearcut (low preference), lower left is patch cut (medium-low preference) and lower right is two-aged (medium preference).

likely intensify land use pressures leading to increased forest fragmentation. In the most recent national comprehensive survey, the rate of conversion of rural land to developed land increased, with forestland being the largest source. More people on the national and regional landscapes will impact sustainable forestry options for agriculture, forestry, residential communities, biodiversity, and other land-based goods and services. Forest fragmentation also poses threats to wildlife in many parts of the Pacific Northwest.

5. Visual impacts of alternative timber harvest practices are important considerations when developing timber harvest plans. Determining visual preferences for different timber harvest practices is one means of identifying the visual effects of different treatments. Different groups, such as foresters, recreationists, environmentalists, educators and the general public, view harvesting practices in different ways. People tend to share a common preference for forests showing minimal disturbance, but groups are significantly different as the intensity of harvest practices increases.

6. Riparian forest management is another important element of sustainable forestry in the Pacific Northwest and one that is the focus of forest practices regulations. These regulations have often resulted in financial disincentives for many small, family forest owners and may lead to unintended consequences such as increased land-use conversion. Alternate plans that are easy to implement are a potential solution. An integrated approach that combines forest structure and economic criteria to develop a riparian management plan for overstocked stands could provide better protection of riparian forests, sustainable economics and easier implementation.

7. Numerous small diameter trees could potentially be available for utilization from thinning forests to reduce fire hazard. However, mean lumber recovery from these logs has been reported to be very low. The wood fiber-plastic industry is ideally suited for small forest-based rural communities with plenty of available small diameter trees. Extruded wood-plastic components for such end uses as decking, molding, siding, and other pertinent structural and non-structural components is one emerging technology and process where low quality, small diameter timber could be used to manufacture value-added products.

In summary, as one of the principal timber producing regions in the world, there has been both public interest in assuring that forests are being sustainably managed and a desire by landowners and forest managers to demonstrate their commitment to responsible stewardship. The Sustainable Wood Production Initiative was developed to create a forum for discussion about these issues and provide future guidance for landowners and managers in the Pacific Northwest. ◆

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