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# A KINDER, GENTLER FORESTRY IN OUR FUTURE: THE RISE OF ALTERNATIVE FORESTRY

Jerry Franklin

What do I see as essential to Oregon's forests in 2010?

I see a kinder and gentler forestry. I see a forestry which is probably less efficient on a per unit basis of producing wood fiber, but a forestry which accommodates a whole range of ecological values while yielding at the same time economic benefits.

What we've tended to do, conceptually and literally, is try to divide our forests into commodity lands and the preserved lands, to divide the baby into parts.

The commodity lands are presumably to be managed "intensively," based on short-term economics and a very limited view of ecological values.

Preserved lands, on the other hand, are presumably to be totally withdrawn from timber harvest.... Total preservation often seems to be--to some people at least--the only response to foresters' inabilities to convincingly address long-term and ecological values.

As an ecologist, I view this as an undesirable solution. Society wants and needs commodities from its forest lands. But society also clearly wants amenities and other values maintained. We can see this, for example, in their concern for biological diversity and threatened and endangered species. It's also clear that they want a longer view rather than a short-term view. Hence, the increasing concern with the issue of sustainable productivity. I think that a lot of us in society, maybe the majority of us, want options maintained in the face of uncertainty.... A good example of this is the uncertainty of global climatic change.

Given these societal objectives, what I see as at least one desirable solution, is what I call a **new forestry**, a forestry which effectively addresses both commodity and ecological values and is applied in one form or another to a majority of our forest lands.

What do I see as some of the elements of this new forestry? One major element is something that the group I work with is calling the development and application of alternative silvicultural systems. Alternative silvicultural systems use ecological principles to create managed forest stands and landscapes...

Conceptually, silviculture is the manipulation of forests for the production of any set of goods and services. But in fact, standard silvicultural systems have actually focused on how to remove wood products and reforestation. The perspective of these traditional systems which we know as clearcut, shelterwood, and selection, are relatively limited since they are concerned primarily with re-establishment of trees and not necessarily a complex forest ecosystem. Traditional silviculture has attempted to in-

corporate new objectives, such as providing for standing dead trees and down wood for wildlife, but this has been done piecemeal since the philosophical and technical bases for systematically incorporating such findings tend to be lacking. What's happened is a forestry--which was very soundly based ecologically given the time in which it evolved in Europe--that just hasn't kept up with our developing understanding of forest ecosystems and how they work....

Maintaining or rapidly redeveloping complex forest ecosystems (in effect systems with functional and structural diversity) is the object of alternative silvicultural systems--not just re-establishing trees. Management is designed either to retain elements of this diversity or to provide for their reintroduction. Hence, biological legacies, what is being left behind on the site, becomes the prescriptive focus rather than the material that's being removed. The objective becomes one of assuring that many forest elements are perpetuated and not just crop trees....

The issue is not how big an area is cut, or how often it's cut, but what's really important is what's being left behind at each harvest operation.

Elements of alternative silviculture at the stand level includes retention of more organisms and structures in stands at the time of harvest. An example is to retain some of the large green trees for their various functional values, including provision of habitat for organisms ranging from microbes to vertebrates. Another common example is providing for a sustained yield of coarse woody debris, large standing dead trees and downlogs, because they are so important in their ecological function and in providing for the diversity of organisms. Creation of stands of mixed composition and structure can be a valuable stand level objective. Keeping structurally and functionally complex riparian stands can assure appropriate inputs to streams, providing the structural and food base for aquatic ecosystems.

I've been talking about stands. Now let's talk about landscapes for a moment. Considerations of alternative silviculture at the landscape level include thinking about patch sizes and arrangements, cumulative impacts of treatments, and the role of natural or semi-natural patches and corridors. We select patch sizes which fulfill management objectives, including provision of habitat for forest species that require interior forest conditions.

Amounts, types and the multiple effects of stand edges are a major consideration. The connectedness among the natural and semi-natural patches--for example, spotted owl reserves, stream side corridors, areas of unstable soil, natural research areas-- the relationship between those kinds of patches and the managed

landscape are a concern. This mutualistic relationship between the commodity or intensively managed land areas and the natural areas, we've tended to ignore or view as negative. Yet the exchanges or flows between those patches are extremely important to the welfare of both kinds of land.

Any management that we can do that reduces the contrast between those lands, facilitating movements of materials and organisms, is going to benefit both. Consider biological diversity specifically. We aren't going to be able to deal with (it) exclusively with the use of set-asides--not even primarily through the use of set asides. Maintaining biological diversity has to be integrated into the management of commodity lands because they dominate and always will dominant our landscapes.

The limited acreage and increased isolation of reserved areas--whether they are national parks, wilderness or an ecological

reserve--and the vulnerability of these areas to global change are further reasons why silvicultural systems which incorporate diversity are absolutely essential.

About the Author: Jerry Franklin, a member of the faculty of the College of Forest Resources at the University of Washington, discussed the future of forestry at Oregon's Forests in 2010, a conference sponsored by Congressman Peter DeFazio and State Representative David Dix, in Eugene, Oregon, on February 11, 1989. He is a former Director of the Andrews Experimental Forest, has authored many articles on old growth and forest ecology, and has served as a Forest Service Research Scientist for over 30 years. He is also the Bloedel Professor of Ecosystem Analysis in the College of Forest Resources at the University of Washington in Seattle. This article is excerpted from his remarks at the 2010 Conference.