

Southern Group of State Foresters - Issue Paper

Subject:

Forest Parcelization and Fragmentation (or Fractured Forests)

Situation:

Several recent studies have documented that southern forests are experiencing numerous forces of change that are reshaping their status, condition, management, biological functions and values to society. Among the forces, urbanization, large scale ownership changes and several related factors are directly or indirectly fracturing the southern forest land base into more and smaller parcels. Parcelized ownership generally fragments the forest landscape, constrains management options, adversely influences forest health and wildlife habitats, and directly and indirectly leads to forest loss. Already formidable, these forces are accelerating rapidly in the South.

It is important to distinguish between parcelization and fragmentation of the forest, as their causes and effects can be different. The terms are sometimes used interchangeably, but actually have different meanings. Parcelization in the context of forestry generally refers to division of ownerships that result in smaller holdings. This can result from inheritance of forests by multiple heirs, subdividing large blocks into smaller forest parcels or “ranchettes”, or sale of large holdings to multiple buyers or to single purchasers who in turn subdivide the land at some future date. Absentee ownership tends to increase correspondingly.

Fragmentation refers to isolation of forest tracts from one another. It generally results from parcelization of ownership, but can also be caused by introducing infrastructure (roads, power lines etc.) into the forest or even forest management activities that have the same effect.

While a more parcelized and fragmented forest land base in the region are all but assured, specific implications of these changes are not as clear or well understood. Effects on habitat of certain wildlife species have been well documented, for example, but effects on timber availability, water quality and forest manageability, while believed to be negative, are less certain.

If public forest policies and programs are to be responsive to the threats posed by parcelization and fragmentation, it will be necessary to meet several key challenges: Among them, understanding where they are most likely to occur; which forest types and habitats are most vulnerable, how a fragmented landscape should best be managed; how owners of these forests can be effectively assisted; how public policymakers can be informed of consequences of land use decisions; and how public policy can be shaped. New and different approaches to silviculture, landowner assistance, public information, education and awareness may be required. These approaches, however, will have to be developed, articulated and adopted.

While understanding and effecting change in a landscape and social setting as diverse and complex as the South's is a formidable challenge, the Southern Group of State Foresters and its members, as forest resource leaders in the South, are the most appropriate organizations to focus attention on forest parcelization and fragmentation, understand the implications, and respond in the management, assistance and public policy arenas.

Background:

The South has a long history of dependence on its forests for its economic and environmental well being. The region's forests are notoriously diverse and productive. About 89% are privately owned; much of this acreage (about 40 million acres) having been in large blocks of industrial ownership. These blocks, along with National Forests and Parks, have long served as anchors for much of the non-fragmented forest in the region and have been especially valuable for a variety of wildlife species that depend on large forest blocks.

A recent study by Clutter et al. for the SGSF, however, found that more than ½ of forest industry land has changed hands since 1996, mostly into ownership by Timber Investment Management Organizations (TIMOs). More of these transactions are expected in the next few years as forest industry, for a variety of reasons, continues to divest themselves of their land holdings.

TIMOs acquire and manage forests on behalf of financial institutions, pension funds and other institutional investors. While in TIMO ownership, forest management decisions are necessarily focused on obtaining favorable return on investment during the anticipated ownership time horizon (generally 12 – 15 years) and upon eventual sale of the land. While this mega-trend is yet to play out (TIMOs are a phenomenon of the past 15 or so years), each generation of transactions is likely to result in more parcelized ownerships and consequently a more fragmented forest resource.

This trend will also likely continue and even amplify the pattern of ownership changes reported for the South. The SFRA noted, for example, that between 1978 and 1994, tracts sized 100 – 1000 acres had declined by 24 percent and tracts sized less than 10 acres increased 51 percent. It is widely acknowledged that declining ownership parcel size complicates and can even preclude active forest management, e.g. timber production and prescribed burning, and inevitably fragments the forest landscape.

Urbanization can also exert insurmountable pressure on forest landowners to alter management, parcelize holdings, and fragment the forest. During 2005-2006 forest landowner focus groups conducted by the SGSF to ascertain landowner motivations and needs for services, urban-related pressures, e.g. high land values and increased regulations, emerged as highly significant factors likely to influence them to directly or indirectly (by sale) convert their forests to other uses. Wear (2006, in publication) updated land use forecasts reported in SFRA in 2002, and found that in virtually all scenarios examined, urbanization will continue to expand and forest acreage will decline, particularly in certain parts of the South. Again, an inevitable result of these changes will be an increasingly fragmented forest land base.

Relevance to the South:

The economic and ecologic importance of southern forests remains extremely high, not only for southern states and the region as a whole, but for the entire U.S. Besides the economic contributions of forests for timber and other forest products, other functions such as clean water production, forest-based recreation, hunting and non-consumptive wildlife enjoyment, biological diversity and air quality improvement are vital assets of southern forests; all at risk if forests are over-parcelized and fragmented. Aesthetics and “quality of life” values are equally threatened.

Human dependence on southern forests will not decline but will only intensify, as urbanization expands and the region’s population continues to grow. The nature of demands may change proportionally, but management will remain necessary. Nowhere in the U.S. are these changes and challenges more concentrated than in the South.