Ecosystem Management and Drilling in our National Woodlands

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A lot of people are familiar with the controversy swirling around places like Alaska’s Artic National Wildlife Refuge (ANWR). Yet, few people are familiar with the dispute that has surrounded two Eastern national forests—Fingers Lake and Allegheny NF—in the last year. “Several companies seek to tap the estimated 16 billion cubic feet of gas below the Finger Lake forest and with more than 6,000 oil and gas wells already in the Allegheny forest, companies are putting in new wells at the accelerated rate of more than 300 a year” (PG News, 2001). What tools can the Forest Service employ to the task of petroleum drilling in areas like the Allegheny and Finger Lakes National Forests? This can be a very complex and problematic undertaking.

Ecosystem management is a tool to help resolve conflicts and accommodate multiple interests in a way that is not destructive to the environment or human needs and desires. Grumbine (1994) states that “if ecosystem management is to hold and flourish the relationship between the new goal of protecting ecological integrity and the old standard of providing goods and services for humans must be reconciled” (p. 31). We can’t diminish the importance of the oil resources in these woodlands, but by the same token we can’t diminish the importance of the environmental resources, such as, the biological community. There are many concerns that need to be addressed in addition to the unique ecosystems of these forests.

Grumbine’s concept of hierarchical context suggests that ecosystem management requires managers to focus their efforts on many different levels. Some activities may be focused on localized concerns on a small scale, for example, water quality in these forest’s watersheds. On a larger scale other activities are focused on concerns that cut across many managerial, social, and political boundaries. A good example for these concerns would be the nation’s need for oil for national security.
Mangers in these forests will need to bring all interested parties together to define common problems and boundaries of concern. “The ability to define and work within appropriate ecological boundaries and to move effectively across political and ownership boundaries is a hallmark of successful ecosystem management” (Blair, Collins, and Knapp, 2000, p. 151). Operational boundaries are defined by issue, not by jurisdiction. Grumbine’s concept of interagency cooperation involves “working across these ecological boundaries and will require cooperation between federal, state, and local management agencies, as well as, private parties” (Grumbine, 1994, p. 31). Various agencies like the US Forest Service (USFS), and Fish and Wildlife Service (FWS) could combine employees into one working, flexible, and adaptive entity as just one example of how interagency cooperation could be nurtured. Meffe and Carroll (1997) states, “Ecosystem management is based on a collaboratively developed vision of desired future conditions and no single entity can or should be doing all the work and decision making” (p.365).

Management goals will need to work toward Grumbine's concept of ecological integrity. “[Ecological integrity] will entail protecting total native diversity and the ecological patterns and processes that maintain that diversity” (Grumbine, 1994, p. 30). To insure ecological integrity, managers could employ Grumbine's concepts of data collection and monitoring. These concepts will help mangers in their tracking and best management of woodland ecosystems. For example, if data collection showed a correlation between road, pipeline, drilling pad construction and a declining trout population, monitoring this could be helpful in tracking this correlation to determine whether these disturbances are contributing to the degradation of trout streams. Studying data, managers would be able to determine which variables caused this decline in population.
Grumbine's concepts of adaptive management and successful organizational change are among the possible means of overcoming social, political, economical, and ecological barriers that will arise in forests. “Management will need to be organizations that are flexible, open-minded, and able to rapidly adjust to changing situations for these forests. Forest’s ecosystems are dynamic, requiring variability for long-term functioning, and operate across multiple spatiotemporal scales” (Grumbine, 1996, p 45).

Grumbine's final two concepts of values and humans embedded in nature will be the final deciding factors in what eventually happens in the Allegheny and Finger Lakes National Forests. As America’s changing environmental values increasingly gain public attention and political weight and how these values evolve will determine the fate of our forests. Changing values will influence whether these forest’s unique ecosystems survive or become just another statistic of man’s abuse to his world. The outcome of that process will in turn affect man in the long run. While modern technology has given people greatly increased power over nature, it has done little to reduce our dependence on nature and its resources.

America’s ecological values, needs, and connection to nature will determine the fate of ecosystem management and drilling in these woodlands. Management will need to learn from the mistakes of the past and try to improve on policy making. If the lessons of the past have not taught us anything, it should have at least taught us that when man tries to control nature, it could have unsavory results. Because these forests contain unique ecosystems, because developing these forests can come with environmental risks, and because the nation’s values could be clouded by its oil dependence, ecosystem management, assigned the task of managing petroleum drilling in our forests, should be employed with caution and wisdom.
References


