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Beyond the Spotted Owl Problem: Learning from the Old-Growth Controversy

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BEYOND THE “SPOTTED OWL PROBLEM”: LEARNING FROM THE OLD-GROWTH CONTROVERSY

*Alyson C. Flourney**

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I. INTRODUCTION

As conflicts between economic activity and environmental protection have grown more frequent and more intense in recent years, natural resource protection laws have come to play an increasingly important role in American environmental policy.¹ The preservation of unique ecosystems² and biological diversity³

1. Many of these laws relate specifically to management of natural resources on public lands. *See, e.g.*, Wilderness Act, 16 U.S.C. §§ 1131-1136 (1988 & Supp. 1991); Federal Lands Policy Management Act, 43 U.S.C. §§ 1701-1784 (1988 & Supp. 1991); National Forest Management Act, Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified as amended in scattered sections of 16 U.S.C.). Others impose constraints primarily on federal governmental activities. *See, e.g.*, Endangered Species Act, 16 U.S.C. §§ 1531-1544 (1988 & Supp. 1991); National Environmental Policy Act, 42 U.S.C. §§ 4321-4370b (1988 & Supp. 1991).

2. The ecosystem is the basic functional unit in the study of ecology. "Any unit that includes all of the organisms . . . in a given area interacting with the physical environment so that a flow of energy leads to clearly defined trophic structure, biotic diversity, and material cycles . . . within the system is an ecological system or *ecosystem*." EUGENE P. ODUM, *FUNDAMENTALS OF ECOLOGY* 8 (1971) (emphasis in the original).

3. Biological diversity has been defined as "the variety and variability among living organisms and the ecological complexes in which they occur." OFFICE OF TECHNOLOGY ASSESSMENT, *TECHNOLOGIES TO MAINTAIN BIOLOGICAL DIVERSITY* 3 (1987).

has gained recognition as an important national priority.⁴ While public awareness of the alarming loss of forests, wetlands, desert and grasslands, including the species that live in them, has motivated efforts to protect these natural areas, these efforts have repeatedly come into conflict with economic activity.

This Article is a case study of a single controversy that has been raging in the Pacific Northwest: the now infamous dispute over logging in publicly owned old-growth forests and the attendant threat to the northern spotted owl. The spotted owl, confronting extinction, sits at the center of the controversy, but the debate extends far beyond the fate of the owl, raising issues about the intrinsic value of unique and native ecosystems and the long-term consequences of logging practices on our public lands on the one hand, and about the costs of environmental protection and economic transition on the other.

The old-growth controversy is destined to leave its mark on our resource protection laws. Although litigation enforcing the mandates of the Endangered Species Act and other statutes has shaped a temporary resolution to the conflict, a full solution remains to be found.⁵ Powerful voices among timber-dependent communities in the Pacific Northwest have called for measures to weaken or bypass the protections granted by preservation laws. The history of the controversy, they assert, confirms that we have a "spotted owl problem."

This Article takes seriously but ultimately rejects both the claim that we have a spotted owl problem and the associated efforts to weaken or bypass existing laws. The perception that the spotted owl and the Endangered Species Act are our problems is an understandable reaction to the current crisis. But a close examination of the controversy reveals that the owl and actions taken

4. See EDWARD O. WILSON, *THE DIVERSITY OF LIFE* (1992); *BIODIVERSITY* (Edward O. Wilson ed., 1988) [hereinafter *BIODIVERSITY*]; OFFICE OF TECHNOLOGY ASSESSMENT, *supra* note 3; Holly Doremus, *Patching the Ark: Improving Legal Protection of Biological Diversity*, 18 *ECOLOGY L.Q.* 265 (1991); Katherine S. Yagerman, *Protecting Critical Habitat Under the Federal Endangered Species Act*, 20 *ENVTL. L.* 811, 818-22 (1990); see also Robert B. Keiter, *Taking Account of the Ecosystem on the Public Domain: Law and Ecology in the Greater Yellowstone Region*, 60 *U. COLO. L. REV.* 923, 925 (1989).

5. On April 2, 1993, President Clinton and Vice President Gore attended a highly publicized conference in Portland, designed to begin the process of finding such a solution. See Timothy Egan, *Clinton Under Crossfire at Logging Conference*, *N.Y. TIMES*, Apr. 3, 1993, at A6.

pursuant to the ESA are symptoms more than causes of the problem.

Part II presents the ecological and social dimensions of the conflict surrounding old-growth forest and the spotted owl. Part III describes the legal and political history of the dispute and offers several observations on the role that natural resource laws have played, and how the laws themselves have been affected by this controversy. Part IV reveals the fallacy of claims that the owl and the ESA are our problems. It demonstrates that the ESA performed its intended role in protecting the owl's habitat. The inadequacies in other laws governing public forest management are deeper sources of the acute problems we faced in achieving the valid goal of species preservation. These made the inevitable task of reconciling economic and ecological demands unnecessarily difficult and costly. The Article concludes in Part V with suggestions for improving our laws to avoid similar future battles, including legislation protecting ecosystems or biodiversity, strengthening and clarifying NEPA and public forest management laws, and congressional responses to short-term economic hardship caused by resource protection.

II. THE OLD-GROWTH AND SPOTTED OWL CONTROVERSY: ECOLOGICAL AND SOCIAL DIMENSIONS

A. *The Ecology of Old-Growth Forests*

There is no single commonly accepted definition of "old-growth" or "ancient" forest.⁶ At a minimum, such a forest includes an area of mature conifers, with some fallen logs, and some standing dead trees ("snags"), capable of providing habitat and biomass, and of performing the natural functions required to support this unique ecosystem.⁷

6. See ELLIOT A. NORSE, *ANCIENT FORESTS OF THE PACIFIC NORTHWEST* 22 (1990).

7. See U.S. FISH AND WILDLIFE SERVICE, *CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL* 66-70 (1992) [hereinafter *CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL*] (describing functions and benefits of old-growth ecosystems). See also NORSE, *supra* note 6, Table 3.2 (listing Forest Service and Bureau of Land Management Interim Definitions for Westside Old Growth).

The old-growth forests of the Pacific Northwest are characterized by conifers that often attain 500 years of age and can have a lifespan of 1200 years.⁸ Old-growth Douglas firs, which dominate some of the forests, are profitably cut as a source of framing lumber and plywood.⁹ Other species, including western red cedars, western hemlocks, and Sitka spruce, are also found in old-growth forests.¹⁰

Many have long recognized the esthetic, recreational, and spiritual value of these forests' majestic natural environment,¹¹ but only recently have scientists studied the ecological value of old-growth forests.¹² Now scientists widely recognize old-growth stands as unique ecosystems, noted for the rich soil they generate, the protection they provide from erosion, the still unidentified genetic diversity of valuable species found in these forests, and the flood prevention and water cleansing they provide.¹³ Recent

8. NORSE, *supra* note 6, at 21.

9. *Id.* at 22.

10. *Id.*

11. See NORSE, *supra* note 6, at 8; see also ROBERT P. HARRISON, *FORESTS, THE SHADOW OF CIVILIZATION* (1992) (surveying cultural importance of forests to Western society); Victor M. Sher & Andy Stahl, *Spotted Owls, Ancient Forests, Courts and Congress: An Overview of Citizens' Efforts to Protect Old Growth and the Species that Live in Them*, 6 N.W. ENVTL. J. 361, 362 (1990). Such values have been recognized eloquently in agency planning from time to time. See, e.g., CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL, *supra* note 7, at B-16 (describing esthetic benefits of critical habitat preservation as part of analysis of economic impacts); FOREST SERVICE, U.S. DEPARTMENT OF AGRICULTURE, ANN. REP. OF THE CHIEF 2 (1927) (quoted in CHARLES F. WILKINSON & H. MICHAEL ANDERSON, *LAND AND RESOURCE PLANNING IN THE NATIONAL FORESTS* 338 n.1820 (1987)) (Annual Report of Forest Service Chief Greeley); WILKINSON & ANDERSON, *supra*, at 319 n.1706 (citing writings of Robert Marshall, co-founder of the Wilderness Society).

12. NORSE, *supra* note 6, at 8; Sher & Stahl, *supra* note 11, at 362. In the late 1960s, two groups of scientists, one led by Eric Forsman, a graduate student studying raptor biology at Oregon State University, and another led by Dr. Jerry Franklin, a Forest Service scientist in the region, began studying old-growth ecology. Sher & Stahl, *supra* note 11, at 363. Forsman studied the spotted owl on the advice of Dr. Howard Wight. His resulting thesis and dissertation confirmed Wight's speculation that the owl might be a species that existed primarily in old-growth forests, a situation not previously contemplated by others. *Id.* Franklin's research, on the other hand, led to the first formal characterization of old-growth forests as distinctive ecosystems. *Id.*

13. See CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL, *supra* note 7, at 66-67, app. C; NORSE, *supra* note 6, at 8-9; Gary D. Meyers, *Old-Growth Forests, the Owl, and Yew: Environmental Ethics Versus Traditional Dispute Resolution Under the Endangered Species Act and Other Public Lands and Resources Laws*, 18 B.C. ENVTL. AFF. L. REV. 623, 632-33 (1991). A frequently cited example of the benefit of the genetic information found in nature is the Pacific yew, whose bark can produce the drug taxol, now being used successfully to treat ovarian cancer. See *id.* at 624; Sallie Tisdale, *Save a Life, Kill a Tree?*, N.Y. TIMES, Oct. 26, 1991, at A19.

research suggests that the diversity of plant species found in old-growth forests may not be duplicated even in second-growth forests¹⁴ 100 years old.¹⁵

Although there are no precise figures, estimates suggest that between sixty and ninety percent of the old-growth forest in the Pacific Northwest has been cut down.¹⁶ The foundations of the old-growth crisis were laid after World War II, when demand for public timber skyrocketed.¹⁷ During the post-war boom, private landowners exhausted their old growth through excessive logging.¹⁸ The federal government dramatically increased timber sales from national forests to fill the gap.¹⁹ By 1966, annual timber production from national forests reached an all-time high of 12.1 billion board feet ("bbf"),²⁰ up from an annual average of one bbf before World War II.²¹ Foreign demand for high-quality timber from old growth further encouraged rapid depletion of American forests,²² as did the pressure of heavy debt incurred by some timber companies during the frantic leveraged buyouts of the 1980s.²³ Some predict that thirty or fewer years of continued har-

14. Second-growth forest is what regenerates in an area after the original old growth is cleared.

15. See Catherine Dold, *Study Casts Doubt on Belief in Self-Revival of Cleared Forests*, N.Y. TIMES, Sept. 1, 1992, at C4.

16. See NORSE, *supra* note 6, at 6; INTERAGENCY SCIENTIFIC COMMITTEE TO ADDRESS THE CONSERVATION OF THE NORTHERN SPOTTED OWL, A CONSERVATION STRATEGY FOR THE NORTHERN SPOTTED OWL 20 (May 1990) [hereinafter ISC REPORT]; Kathie Durbin & Paul Koberstein, *Forests in Distress*, in *Special Report, Northwest Forests: Day of Reckoning*, THE OREGONIAN, Oct. 15, 1990, at 24 [hereinafter *Special Report, Northwest Forests*] (estimating that 12-15% of old growth remains, and reporting Forest Service data suggesting there are 4 million acres of old growth on its land west of the Cascades, but that study by Wilderness Society concludes only 2.3 million acres remain); Ted Gup, *Owl v. Man*, TIME, June 25, 1990, at 59.

17. ISC REPORT, *supra* note 16, at 20. A recent report by the staff of the House of Representatives Committee on Interior and Insular Affairs, chaired by Representative George Miller, reports U.S. Fish and Wildlife Service figures suggesting that 57% of the native old-growth forests on Forest Service lands in Oregon and Washington have been cut since 1955. See STAFF OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS, U.S. HOUSE OF REPRESENTATIVES, *MANAGEMENT OF FEDERAL TIMBER RESOURCES: THE LOSS OF ACCOUNTABILITY 1* (June 15, 1992) [hereinafter *MANAGEMENT OF FEDERAL TIMBER RESOURCES*].

18. NORSE, *supra* note 6, at 22.

19. Timber sale receipts tripled from 1946 to 1950 and again from 1950 to 1956. WILKINSON & ANDERSON, *supra* note 11, at 137.

20. *Id.* at 138. A board foot represents a piece of timber 12 inches square and one inch thick. *Id.* at 123 n.645.

21. *Id.* at 135.

22. Paul Koberstein, *Private Forests Face Critical Shortages*, in *Special Report, Northwest Forests*, *supra* note 16, at 3 (discussing Asian buyers of old-growth timber).

23. See Kathie Durbin, *Redwood Summer: Taking the Initiative*, in *Special Report, Northwest Forests*, *supra* note 16, at 4.

vesting at recent levels would deplete all of the remaining old growth in western Washington and Oregon.²⁴

Recently, the Bureau of Land Management ("BLM") and the Forest Service have sold more than 70,000 acres of trees, or 5 billion board feet, each year to be cut by private logging interests.²⁵ During the last ten years Congress has repeatedly imposed higher cut rates on the agencies managing these forests than the agencies have felt appropriate.²⁶ Although the economics of these sales are not always simple,²⁷ the federal government loses money each year from the logging operations in many of our national forests.²⁸

The lure of the profits for the industry, the counties,²⁹ and the agencies involved³⁰ has led to decades of logging at unsustainable levels,³¹ neglected reforestry efforts,³² waning owl habitat, and the possibility of other old-growth-dependent species facing extinction.³³

24. NORSE, *supra* note 6, at 7-8.

25. Gup, *supra* note 16, at 59. About 85% of the remaining old growth in the western Pacific Northwest is managed by either BLM or the Forest Service. Sher & Stahl, *supra* note 11, at 362.

26. See WILLIAM DIETRICH, *THE FINAL FOREST: THE BATTLE FOR THE LAST GREAT TREES OF THE PACIFIC NORTHWEST* 176 (1992); Kathie Durbin, *Rangers Scramble to Meet Timber Quotas*, in *Special Report, Northwest Forests*, *supra* note 16, at 7.

27. See generally RANDALL O'TOOLE, *REFORMING THE FOREST SERVICE* (1988) (providing critical review of economic forces driving Forest Service decisions). See also Charles F. Wilkinson, *The Forest Service: A Call for a Return to First Principles*, 5 PUB. LAND L. REV. 1, 20-25 (1984).

28. See WILKINSON & ANDERSON, *supra* note 11, at 117-18; see also O'TOOLE, *supra* note 27, at 28-34. However, the old-growth Douglas fir forests of the Pacific Northwest account for a significant portion of the forests in which Forest Service revenues are higher than management costs.

29. Counties in forest regions have profited from the liquidation of the national forests, recovering 25% to 50% of the timber sale fees collected by the federal government. See WILKINSON & ANDERSON, *supra* note 11, at 117-18; 43 U.S.C. § 1181f(a). Counties such as Douglas County in Oregon stand to lose an estimated \$13 million a year from timber revenues if old-growth logging is ended. Gup, *supra* note 16, at 60. The profitable arrangement with the federal agencies has allowed Oregon to avoid imposing a sales tax.

30. O'Toole believes the direct link between Forest Service budget levels and timber sales volume is a critical factor in the current pattern of timber harvest. O'TOOLE, *supra* note 27, at 139-71. See also DIETRICH, *supra* note 26, at 168, 174-75.

31. For a partial history of the unsustainable cutting of forests on public lands, see DIETRICH, *supra* note 26, at 168-77; see also WILKINSON & ANDERSON, *supra* note 11, at 125-28, 184-86; Gup, *supra* note 16, at 58 (remarks of Forest Service Research scientist Jerry Franklin).

32. See generally MANAGEMENT OF FEDERAL TIMBER RESOURCES, *supra* note 17, at 2 (citing analysis of Forest Service statistics finding current forest regrowth rate of 64%); Gup, *supra* note 16, at 56-58; Ted Gup, *Artist with a 20-Lb. Saw*, TIME, June 25, 1990, at 61.

33. According to David Marshall, a former Fish and Wildlife Service wildlife biolo-

The northern spotted owl, *Strix occidentalis caurina*, is at the symbolic center of the old-growth controversy. Individual owls are roughly twenty-two inches in height³⁴ and are dark brown with white spots and mottling.³⁵ Old-growth forest is the primary source of suitable owl habitat.³⁶ The home range for a single nesting pair of owls is 3000 to 5000 acres, although the owls may require considerably larger areas if the acreage includes sites that have been heavily logged or where the old growth within the range is fragmented.³⁷

By the late 1970s and early 1980s, scientists increasingly recognized that the owl might be an indicator species for the general health of the old-growth forests.³⁸ Thus, the debate over the owl has always been interconnected with the debate about preserving old-growth forests.³⁹

gist, other species that face threats include the flammulated owl, white-headed woodpecker, three-toed woodpecker, fisher, and marten. Kathie Durbin & Paul Koberstein, *Survival Hinges on Old-Growth Habitat*, in *Special Report, Northwest Forests*, *supra* note 16, at 17.

34. See Gup, *supra* note 16, at 67.

35. ISC REPORT, *supra* note 16, at 9.

36. While the age of the forest is not critical, the structural characteristics necessary for the species tend to be found in old-growth forests more often than in younger ones. These features include:

large, tall, live trees with cavities, broken tops, dwarfmistletoe or platforms of branches capable of holding organic matter suitable for use as a nest, dead standing trees and fallen, decaying trees and limbs to support abundant populations of prey species, especially northern flying squirrels and woodrats; dominant trees in the stand with relatively large diameters; and multilayered tree canopies with a moderate to high canopy closure in overstory, midstory, and understory.

Id. at 62.

37. *Id.* at 197. The median acreage of old growth found within a pair's home range in various studies has ranged from 615 to 2484 acres. *Id.* The owl also needs dispersal areas, which permit juvenile owls to move from their natal area to a breeding site. *Id.* at 303. For the owl to survive, not only must there exist a minimum amount of suitable old-growth acreage within home ranges, but the distribution of that acreage must account for dispersal needs through corridors, connecting zones, or management of the landscape between habitat areas. *Id.* at 304.

38. An indicator species is one whose threatened status is thought to signal the general decline of the ecosystem in which it lives. The decline of an indicator species also warns that the ecosystem likely contains other threatened or endangered species. See NORMAN MYERS, *THE SINKING ARK* 50-51 (1979).

39. "Why all the fuss about the status and welfare of this particular bird? The numbers, distribution, and welfare of spotted owls are widely believed to be inextricably tied to mature and old-growth forests." ISC REPORT, *supra* note 16, at 7. As Jack Ward Thomas, chair of the committee that authored the ISC Report noted, "[t]his issue was never just about a bird The owl was a surrogate." DIETRICH, *supra* note 26, at 231.

Scientists estimate that a total of only 3000 to 4000 owl pairs remains,⁴⁰ and the population continues to decline.⁴¹ The Interagency Scientific Committee Report analyzing the owl's status in 1990 concluded that "the persistence of the owl is imperiled in significant portions of its range by continued loss and concomitant fragmentation of its habitat."⁴²

B. The Conflict in Values

Although the debate about old-growth forests is often coyly characterized as "owl v. man," the controversy has broad ethical, economic, spiritual, and esthetic implications. Only a deeper concern with preservation of the forests has provided the fight to save the owl with sufficient support to attain some success. The controversy is not about owls alone or jobs alone, but about competing priorities and values.⁴³

Depending on whom one asks, the economic issues involved can be framed quite differently. To timber interests, forest preservation for spotted owl habitat threatens to reduce short-term profits, interrupt commerce, and cause economic loss.⁴⁴ They argue that rising timber prices and widespread job loss will harm the American public as a whole. At the very least, the owl's preservation will require adjustment by industry, which necessarily involves short-term costs.⁴⁵

For many who depend on the timber industry for their livelihoods, preserving the forest has little or no value when compared with their personal needs, or their view of society's needs.⁴⁶ "We

40. See ISC REPORT, *supra* note 16, at 2, 64-65.

41. *Id.* at 2.

42. *Id.* at 23.

43. See generally DIETRICH, *supra* note 26 (focusing on this tangle of values and presenting stories of a wide range of people involved in and affected by dispute).

44. Since January 1989, 48 timber mills have closed in Oregon, Washington, and Idaho and some 5500 workers have lost their jobs. Durbin & Koberstein, *supra* note 16, at 1.

45. See Jessica Mathews, *It's Not 'Jobs vs. the Earth'*, WASH. POST, Apr. 26, 1992, at C7.

46. In general, the decisions to boost harvest levels have served those with vested economic interests in the timber of the region: logging companies and mills, their employees, and those whose income depends on the prosperity of loggers. For a discussion of the dynamic roles played by these local interests and broader national interests, see *infra* notes 272-279 (discussing public choice theory). People who have worked in the logging industry

survived without the dinosaur. What's the big deal about the owl?" asked one car salesman in a town dependent on logging.⁴⁷ Some of the most zealous timber advocates speak of old growth as "overripe," "wasteful," and "inefficient."⁴⁸ For many, timber is nothing but a crop,⁴⁹ and owls are nothing but hated symbols to be killed or hung in effigy.⁵⁰ For these people, preservation seems to place their jobs, community, and entire way of life at risk.⁵¹

Most people who live in timber-dependent communities are employees of a mill or timber company, and their relationship to the land is necessarily contingent and commodified. Their jobs permit them to live and work in the forests, but their connection to the forest depends upon the wage that a corporation is willing to pay them. With little or no control over the practices that have impact on the forests, these employees simply carry out the orders of enterprises driven often by short-term profit incentives and world markets. Rather than benign forces of an invisible hand,⁵² these incentives are sometimes tempered by perverse and inefficient investment motivations⁵³ and are the product of a history of government subsidies for logging.

for their entire lives or for generations are often aware of the problems with ongoing logging. See, e.g.; DIETRICH, *supra* note 26, at 203 (quoting Anne Goos, Republican candidate for the Twenty-fourth Congressional District in Washington state). But they still may believe that they should not suffer for industry and government short-sightedness, a view shared by some who would preserve the forest and the owl.

47. Gup, *supra* note 16, at 60. For an exposition of a philosophy favoring limited concern about species extinction because of the compensating contributions brought about by human consciousness and endeavor, see Thomas Palmer, *The Case for Human Beings*, ATL. MONTHLY, Jan. 1992, at 83; see also Charles C. Mann & Mark L. Plummer, *The Butterfly Problem*, ATL. MONTHLY, Jan. 1992, at 48.

48. Gup, *supra* note 16, at 61 (remarks of Rod Greene, logging manager of SunStuds Inc.).

49. Gup, *supra* note 16, at 61-62.

50. See *Endangered Owl Nailed to Park Sign*, CHI. TRIB., Jan. 17, 1991, at 11; Gup, *supra* note 16, at 60; DIETRICH, *supra* note 26, at 262.

51. The logging tradition has deep roots in the forest of the Pacific Northwest. It is one of a dwindling number of jobs that enable people to make an income from the land and to be outdoors. See Gup, *supra* note 16, at 61; see generally DIETRICH, *supra* note 26 (presenting accounts of numerous people who work in Northwest logging industry). Dietrich describes one logger and his family, the Tuttle, who live off the land and attempt to make sure their use of the land is sustainable. Tuttle says of his connection to the land and his lifestyle: "It's not necessarily a way of life, so much—it's a place of life. These are roots that most people never get to know. If we sold it, we'd be rich on paper. But the truth is, we'd be poor. How could I come back here and know someone else had it?" *Id.* at 279.

52. See Richard B. Norgaard, *The Rise of the Global Exchange Economy and the Loss of Biological Diversity*, in BIODIVERSITY, *supra* note 4, at 206-11.

53. See Mathews, *supra* note 45.

To those who favor greater preservation of the forests, the economic, ethical, and esthetic issues add up quite differently. From this perspective, the economics of old-growth logging seem like a bonanza for the few at the expense of the many. Although few favor the possibility of work loss for timber industry employees, this group sees the controversy not as "owls v. people," but as "jobs and quick profits now v. long-term jobs and profit."⁵⁴ Even accepting that jobs will be lost, many favor both preservation of the owl and expenditures to lessen the hardship on those affected.

Moreover, many refuse to view the loss of 30,000 timber industry jobs⁵⁵ as a crisis when the timber companies have fired at least that many workers over the past five years as a result of increased automation.⁵⁶ Some estimates predict that in the next fifteen years technological changes will displace approximately thirteen percent of the timber workforce.⁵⁷ If the timber industry can make these choices unhampered by public policy, why should similar consequences arising out of the preservation of public resources be decried?⁵⁸

54. See William K. Stevens, *Economists Strive to Find Environment's Bottom Line*, N.Y. TIMES, Sept. 8, 1992, at C1, C8.

55. Estimates of the numbers of jobs at stake vary widely, from under 10,000, T.H. Watkins, *Dialogue: Showdown on Endangered Species; The Peggy Syndrome*, N.Y. TIMES, May 11, 1992, at A15, to 100,000, see, e.g., Bill Dietrich, *Profusion of Agencies, Suits Surround the Owl*, SEATTLE TIMES, Apr. 28, 1991, at B2. See also Scott Thurm & Bert Robinson, *At War over "The Law of Last Resort,"* CHI. TRIB., May 11, 1992, at 8 (reporting logging industry estimate of 140,000 jobs and American Forestry Association estimate of 20,000 to 34,000 over next 10 years). Most estimates fall in the range of 20,000 to 40,000.

56. The significant impact of the export of raw logs and of corporate decisions to move log-processing operations to the South are also noted. See Watkins, *supra* note 55; see also John Head, *Owl Decision Part of Scam*, ATLANTA J. & CONST., May 18, 1992, at A12 (commenting on Louisiana-Pacific's new processing plant in Mexico to which it sends California redwoods); Dori J. Yang, *High-Tech Heaven*, BUSINESS WEEK, May 25, 1992, at 50 (discussing emerging role of high technology in region's economy).

57. Gup, *supra* note 16, at 61. One report suggested that although timber output rose by 16% in the 1980s, employment in Oregon's logging industry fell by the same percentage due to automation. Brad Knickerbocker, *Split Decision on Owl is Inconclusive*, CHRISTIAN SCI. MONITOR, May 18, 1992, at 8; see also Watkins, *supra* note 55 (estimating that the owl will cause the loss of only 9000 jobs over several years compared with 26,000 lost due to computerization, exports, and flight to the South).

58. See Richard J. Cattani, *The Parade of Champions*, CHRISTIAN SCI. MONITOR, Nov. 13, 1991, at 23 (comparing IBM's plan to reduce its workforce by 20,000 jobs with 20,000 jobs at stake in the old-growth controversy). Cf. Steve Lohr, *IBM Posts \$5.46 Billion Loss for 4th Quarter, 1992's Deficit is Biggest in U.S. Business*, N.Y. TIMES, Jan. 20, 1993, at C1 (noting 1992 job cuts totalling 42,900 and projected cuts of 25,000 in 1993); Steve Lohr, *Job Cuts by IBM May Rise*, N.Y. TIMES, Feb. 11, 1993, at C1 (reporting that IBM has reduced workforce from 407,000 in 1986 to 300,000 at end of 1992).

With or without the preservation of the owl, the fact remains that old-growth-dependent jobs will vanish as the last remaining forests are logged.⁵⁹ The problems of economic dislocation and regional transition are inevitable; we can face them now and save the owl and the old growth, or face them later, after both are extinguished.⁶⁰ The real question is which values should dictate our next step on an inevitably rocky course: the short-term, locally oriented approach that led to this ecological crisis, or a more broadly focused, longer-term view?

From an ethical or esthetic perspective, many see the forest and all that it embodies as having incommensurable worth. A small but growing number of people are inclined to reject an exclusively anthropocentric ethic that places people and their needs above other life forms.⁶¹ To those who favor biocentrism, America's relationship to its public forests is founded on a utilitarian philosophy that accords human needs and desires undue primacy.⁶² A biocentric ethic demands that we radically rethink our priorities to accord greater respect not only to the owl but to all the forest's life forms.

One need not go quite this far, however, to oppose harvesting the remaining old growth and extinguishing the owl. Americans value preventing extinction for a variety of reasons, ranging from compassion to spiritual, religious, and ethical concerns.⁶³ People

59. See Mathews, *supra* note 45; Thurm & Robinson, *supra* note 55 (American Forestry Association study concluding jobs in region would decline with or without protection of owl).

60. See Durbin & Koberstein, *supra* note 16, at 1, 24.

61. See, e.g., BILL DEVAL & GEORGE SESSIONS, *DEEP ECOLOGY* (1985); Laurence H. Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 YALE L.J. 1315 (1974).

62. The utilitarian philosophy associated with Gifford Pinchot's vision of our national forests played and continues to play a role in our relationship to public forests in particular. See generally WILKINSON & ANDERSON, *supra* note 11, for a history of American forest planning law that highlights the role and evolution of Pinchot's philosophy in national forest management.

63. An April 1991 Gallup poll revealed that 80% of those polled were worried about the loss of natural habitat for wildlife. Fifty-three percent said they were worried a great deal, and 27% worried a fair amount. See Graham Hueber, *Americans Report High Levels of Environmental Concern, Activity*, 55 THE GALLUP POLL NEWS SERVICE No. 47, at 2 (Apr. 20, 1991). More generally, a consistent majority felt that the American public is not worried enough about the environment (72% in 1990, 70% in 1991). *Id.* at 3. A sizable majority also felt that the government's level of concern was inadequate (75% in 1990, 73% in 1991); as well as industry's (85% in 1990, 83% in 1991). Only 6% felt that the American public was too concerned about the environment, 3% felt the government was too concerned, and 1% felt the same for industry. *Id.* at 3.

discussing extinction often empathize with the dwindling population of a species and find the prospect lonely and a source of sadness,⁶⁴ if only symbolically.

The Endangered Species Act⁶⁵ ("ESA") formally expresses the depth of the American public's concern with extinction.⁶⁶ However, the reasons for preventing extinction are poorly laid out in the statute. While the statute lists the esthetic, ecological, educational, historical, recreational, and scientific value of species as reasons to preserve them from extinction,⁶⁷ it fails to indicate clearly how to temper economic growth and development in order to protect species.⁶⁸ Neither the approach of the 1973 Act nor its current amended form provides a satisfactory picture of how much the public values species preservation and how this goal compares with competing short- and long-term economic objectives.

Beyond the species lies the forest. Some view the forest's value primarily in terms of the services it provides⁶⁹ or the wealth of genetic knowledge we could gain from it,⁷⁰ while others value the esthetic or spiritual quality of wild natural areas⁷¹ and the

64. William Beebe, *The Bird, Its Form and Function*, quoted in THOMAS R. DUNLAP, *SAVING AMERICA'S WILDLIFE* 142 (1988):

The beauty and genius of a work of art may be reconceived, though its first material expression be destroyed; a vanished harmony may yet again inspire the composer; but when the last individual of a race of living beings breathes no more, another heaven and another earth must pass before such a one can be again.

65. 16 U.S.C. §§ 1531–1544 (1988).

66. Charles Wilkinson describes the ethic underlying the ESA:

"[It] pulls out the best in us and . . . elevates us by its proof that our unique ability to develop technology is coupled with the capacity and will to exercise a humane restraint in the name of a high calling, like the honest respect for other species that exist with us in the same watershed."

Charles Wilkinson, *Law and the American West: The Search for an Ethic of Place*, 59 U. COLO. L. REV. 401, 409 (1988).

67. 16 U.S.C. § 1531(a)(3).

68. This omission may reflect the fact that widespread concern with extinction is relatively recent. It is likely that the nascent ethic that has generated widespread support for species preservation is evolving. The need for further evolution in both our ethic of species preservation and our broader conservation impulses is one of the important lessons I glean from the spotted owl controversy. See *infra* notes 377–384 and accompanying text.

69. See, e.g., Mann & Plummer, *supra* note 47, at 50–51.

70. Gup, *supra* note 16, at 59. This is one of the common arguments offered in support of the preservation of biodiversity. See also Mann & Plummer, *supra* note 47, at 50–51; Doremus, *supra* note 4, at 269–70; Tisdale, *supra* note 13, at 19.

71. Individuals with widely divergent views about how we should act evidence these

particular mystery of the forest.⁷² For these people, the value of the forests cannot easily be quantified or categorized. Robert Pogue Harrison writes of this more elusive value of the forest in his cultural history of forests, *Forests, The Shadow of Civilization*:

The global problem of deforestation provokes unlikely reactions of concern these days among city dwellers, not only because of the enormity of the scale but also because in the depths of cultural memory forests remain the correlate of human transcendence [U]nderlying the ecological concern is perhaps a much deeper apprehension about the disappearance of boundaries, without which the human abode loses its grounding Without such outside domains, there is no inside in which to dwell.⁷³

It is difficult but important to determine which of these competing values we wish to consider, and how we want to evaluate and prioritize them. The old-growth controversy illustrates how inadequately our statutes address and resolve these competing concerns.

III. THE OLD-GROWTH AND SPOTTED OWL CONTROVERSY: LEGAL AND POLITICAL DIMENSIONS

A. Statutory Background

The legal controversy over preservation of old-growth forests and the spotted owl has involved action under six federal statutes:

nonrational, spiritual, esthetic affinities for the forest. As one logger commented about the speed with which a 200-year-old tree was felled, "It's kind of sad. It affects you. I don't think you'd be human if it didn't." Gup, *Artist with a 20-Lb. Chainsaw*, *supra* note 32, at 61.

72. Gretel Erlich writes of nature's complexity and mystery:

Wildness has no conditions, no sure routes, no peaks or goals, no source that is not instantly becoming something more than itself, then letting go of that, always becoming. It cannot be stripped to its complexity by cat scan or telescope. Rather it is a many-pointed truth, almost a bluntness, a sudden essence like the wild strawberries strung along the ground on scarlet runners under my feet. Wildness is source and fruition at once, as if every river circled round, the mouth eating the tail—and the tail, the source.

Gretel Erlich, *River History*, in *MONTANA SPACES: ESSAYS AND PHOTOGRAPHS IN CELEBRATION OF MONTANA* 71–72 (William Kittredge ed., 1988).

73. HARRISON, *supra* note 11, at 247.

the Endangered Species Act ("ESA"),⁷⁴ the National Forest Management Act ("NFMA"),⁷⁵ the National Environmental Policy Act ("NEPA"),⁷⁶ the Oregon and California Lands Act ("OCLA"),⁷⁷ the Federal Land Policy Management Act ("FLPMA"),⁷⁸ and the Migratory Birds Treaty Act ("MBTA").⁷⁹ This plurality of relevant statutory authority is itself telling: the controversy cuts across the fragmented lines that have separated agencies' jurisdictions for arbitrary or historical reasons.⁸⁰ The statutes reveal a tension between Congress's commitment to preserving the environment by tempering economic activity and a pervasive practice of delegating important decisions to public land management agencies.

1. *The Endangered Species Act*

In 1973 Congress enacted the Endangered Species Act⁸¹ ("ESA" or "the Act") on a strong wave of congressional support for preserving species from extinction.⁸² The Act identified the causes of extinction as "economic growth and development untempered by adequate concern and conservation."⁸³ The Act declared that species of plants and animals already extinct and those threatened with extinction were of "esthetic, ecological, educational, historical, recreational, and scientific value" to the United States.⁸⁴ To abate the ongoing destruction of species, Congress enacted provisions designed to prohibit direct physical harm to members

74. 16 U.S.C. §§ 1531-1544 (1988).

75. Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified as amended in scattered sections of 16 U.S.C.).

76. 42 U.S.C. §§ 4321-4370c (1988).

77. 43 U.S.C. §§ 1181a-1181j (1988).

78. 43 U.S.C. §§ 1701-1784 (1988).

79. 16 U.S.C. §§ 703-718j (1988 & Supp. 1990).

80. The NFMA applies to lands managed by the United States Forest Service within the Department of Agriculture, notably the National Forests. *See* 16 U.S.C. § 1601. The FLPMA applies to forest lands owned and managed by the BLM within the Department of the Interior. *See* 43 U.S.C. § 1731. The OCLA governs the use and management of a group of lands originally granted by the government to the railroads, then legislatively returned to federal control following a land fraud. *See* 43 U.S.C. § 1181a.

81. 16 U.S.C. §§ 1531-1544.

82. The House Report accompanying the 1973 ESA noted that the "value of this genetic heritage is, quite literally, incalculable." H.R. REP. NO. 412, 93rd Cong., 1st Sess. 4-5 (1973), *quoted in* *Tennessee Valley Authority v. Hill* 437 U.S. 153, 178 (1978). A complete history of wildlife protections that preceded the statute is found in MICHAEL J. BEAN, *THE EVOLUTION OF NATIONAL WILDLIFE LAW* (1983).

83. 16 U.S.C. § 1531(a)(1).

84. 16 U.S.C. § 1531(a)(3).

of endangered species⁸⁵ and to protect habitat essential to their survival.⁸⁶

The legislative history of the Act includes sweeping statements that indicate a firm congressional mandate to preserve every extant species.⁸⁷ In interpreting the Act in 1978, the Supreme Court stated: "The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost."⁸⁸ The statute establishes a process for listing species, prohibits the "taking" of endangered species,⁸⁹ and provides for designation of critical habitat for listed species.⁹⁰

Because species extinctions are often the inevitable by-product of habitat destruction,⁹¹ the statute provides for the protection of critical habitat for listed species.⁹² While federal agency action that would adversely modify critical habitat and jeopardize the species is prohibited,⁹³ similar purely private activity is not.⁹⁴ Even

85. 16 U.S.C. § 1538.

86. 16 U.S.C. §§ 1533, 1536.

87. *E.g.*, H.R. REP. NO. 1625, 95th Cong. 2d Sess. 16, reprinted in 1978 U.S.C.C.A.N. 9453, 9466 ("The ultimate goal of the Endangered Species Act is the conservation of the ecosystem on which all species, whether endangered or not, depend for survival."). See also *Tennessee Valley Authority*, 437 U.S. at 176-84.

88. *Tennessee Valley Authority*, 437 U.S. at 184.

89. 16 U.S.C. § 1538(a)(1). Once listed as endangered, members of a species may not be harassed, harmed, pursued, hunted, shot, wounded, killed, trapped, captured, or collected by any person. 16 U.S.C. § 1538(a)(1)(B) (prohibiting taking); 16 U.S.C. § 1532(19) (defining "take"). The statute includes exceptions in a narrow class of situations, including "incidental" takes. See 16 U.S.C. § 1539(a)(2)(B). The Fish and Wildlife Service also has authority to promulgate regulations that afford threatened species the same degree of protection from takings that endangered species are accorded under section 9(a). 16 U.S.C. § 1533(d). This core of the statute sends a strong signal as to the significance of extinction and the high value placed on protection.

90. 16 U.S.C. § 1533(a)(3).

91. See S. REP. NO. 307, 93rd Cong., 1st Sess. 1-2 reprinted in 1973 U.S.C.C.A.N. 2989, 2990; James Salzman, *Evolution and Application of Critical Habitat Under the Endangered Species Act*, 14 HARV. ENVTL. L. REV. 311, 314-15 (1990) (discussing relevant legislative history). See also H.R. REP. NO. 1625, 95th Cong., 2d Sess. 5, reprinted in 1978 U.S.C.C.A.N. 9453, 9455; Edwin M. Smith, *The Endangered Species Act and Biological Conservation*, 57 S. CAL. L. REV. 361, 362 (1984).

92. Under the statute as initially enacted, the term "critical habitat" was not defined, leaving the Secretary of the Interior to determine its meaning and implementation. Yagerman, *supra* note 4, at 828-29 (citing 16 U.S.C. § 1536). The following discussion of the evolution of the critical habitat provisions draws extensively on Yagerman, *supra* note 4, at 828-38.

93. Section 7 requires all federal agencies to consult with the Secretary of the Interior to insure that "any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical." 16 U.S.C. § 1536(a)(2).

94. Thus, critical habitat has its greatest force when it involves federally owned lands, or lands the use of which will involve federal funding or approval. See 16 U.S.C. § 1536(a)(2). In contrast, the prohibition against taking of endangered or threatened species is applicable to all actors, federal or private. *Cf.* Salzman, *supra* note 91, 327-30 (1990)

in cases involving federal action, where the statute's potential power is greatest, the Act has rarely proven an obstacle to economic activity.⁹⁵ Moreover, the pressure and opportunity for non-scientific values to enter into the listing determination have been documented.⁹⁶

In addition, the Act explicitly protects economic interests. Amid controversy over the Tellico dam and the snail darter,⁹⁷ Congress amended the critical habitat requirements and introduced an exemption process into the Act.⁹⁸

These amendments established a cost-benefit analysis requiring that critical habitat be designated "on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat."⁹⁹ The amended statute requires the Secretary of the Interior to designate habitat "to the maximum extent prudent and determinable."¹⁰⁰ The amendments also allow the Secretary to exclude habitat from the Act's protections if the costs of designating an area outweigh its benefits.¹⁰¹ The Secretary is thus free to assess and give precedence to competing economic and other impacts, resulting in a "highly discretionary"¹⁰² process.

(suggesting emerging proscription of private activities based on adverse modification as form of taking).

95. In 1986, only 52 jeopardy opinions were issued by the FWS after nearly 11,000 consultations with federal agencies over potential impact on endangered species. Salzman, *supra* note 91, at 335. In only two of these cases were projects blocked. See also Steven Daugherty, Threatened Owls and Endangered Salmon: Implementing the Consultation Requirements of the Endangered Species Act (1992) (unpublished manuscript on file with the *Harvard Environmental Law Review*) (detailing limited impact that designation of spotted owl and critical habitat has had on Forest Service and BLM activities).

96. See U.S. GENERAL ACCOUNTING OFFICE, ENDANGERED SPECIES: SPOTTED OWL PETITION BESET BY PROBLEMS, GAO/RCED-89-79 (1989) [hereinafter SPOTTED OWL PETITION BESET BY PROBLEMS]; Salzman, *supra* note 91, at 322-23, 335-38 (describing pattern of delay and circumvention of ESA's mandates by the Reagan Administration under Secretary James Watt); Elliot Diring, *Delta Smelt's Friends Cry Foul*, SAN FRANCISCO CHRON., Sept. 28, 1991, at A1 (reporting claims that political influence rather than scientific evidence led to listing of delta smelt as threatened instead of endangered).

97. For a good history of the controversy over the snail darter and the Tellico dam, see Zygmunt J.B. Plater, *In the Wake of the Snail Darter: An Environmental Law Paradigm and its Consequences*, 19 MICH. J. L. REFORM 805, 806-18 (1986) [hereinafter Plater, *In the Wake*]. See also Zygmunt J.B. Plater, *Reflected in a River: Agency Accountability and the TVA Tellico Dam Case*, 49 TENN. L. REV. 747 (1982).

98. For a discussion of legislative debate, see Salzman, *supra* note 91, at 317-19.

99. 16 U.S.C. § 1533(b)(2).

100. 16 U.S.C. § 1533(a)(3).

101. 16 U.S.C. § 1533(b)(2). This authority to exclude is denied in cases where the Secretary determines "based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned." *Id.*

102. See Salzman, *supra* note 91, at 332 (documenting that during 1980-1988, Fish

The amended statute also authorizes exemptions where the economic benefits of a project that jeopardizes a species outweigh the economic benefits of alternatives. A new entity known as the Endangered Species Committee¹⁰³ was authorized to grant petitions for exemptions¹⁰⁴ after weighing the costs and benefits of alternatives and considering whether the action is of regional or national significance and in the public interest.¹⁰⁵

Despite the inclusion of these cost-benefit analyses, the ESA clearly remains anti-extinction.¹⁰⁶ Extinction of plant and animal species is proscribed in all cases but those in which the Committee decides that preservation impermissibly conflicts with both economic activity of regional or national significance, and the general public interest.¹⁰⁷

2. The National Forest Management Act

The National Forest Management Act¹⁰⁸ ("NFMA") is the second statute that played a major role in the old-growth controversy. The conflict in the Pacific Northwest represents one strand in the debate over the proper use of national forests that began

and Wildlife Service declined to designate habitats in 320 cases, and justified 317 of those cases on grounds that designation was not "prudent"). Only 22% of the listed species whose habitats are found in the United States have critical habitat designated. *Id.* at 332. The legislative history of the prudence limitation demonstrates that this exception was intended to be applicable "only in rare circumstances," such as in the case of cacti that are notably susceptible to depredation by collectors. *Id.* at 334.

103. This Committee is composed of the Secretaries of Agriculture, the Interior, and the Army; the Chairman of the Council of Economic Advisors; the Administrators of EPA and the National Oceanic and Atmospheric Administration; and one individual from each affected state appointed by the President. The Endangered Species Committee is commonly referred to as the "God Squad" for the power over the fate of species accorded to it by the statute. See Jared des Rosiers, Note, *The Exemption Process Under the Endangered Species Act: How the "God Squad" Works and Why*, 66 NOTRE DAME L. REV. 825, 845-46 (1991).

104. The Committee can grant exemptions in theory only after the relevant federal agency has consulted with the Secretary of the Interior "in good faith and made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action." 16 U.S.C. § 1536(g)(3)(A)(i). Critics have pointed out that this requirement was not enforced in the spotted owl controversy. See Tom Kenworthy, *Interior Secretary at Center of Storm over Handling of Owl Controversy*, WASH. POST, March 22, 1992, at A8; *infra* note 233.

105. See 16 U.S.C. § 1536(h)(1).

106. 16 U.S.C. § 1531(c).

107. See 16 U.S.C. § 1536(h)(1)(A).

108. Pub. L. No. 94-588, 90 Stat. 2949 (codified as amended in scattered sections of 16 U.S.C.).

with the first public forests in the late 1800s.¹⁰⁹ As public awareness has fluctuated throughout the century, concern over logging in the national forests has simmered and periodically erupted.¹¹⁰

In 1976, Congress enacted the NFMA in response to public outcry about abusive logging practices, deviation from long-standing multiple-use, sustained yield principles, and the "economic irrationality" of many timber policies.¹¹¹ To remedy these problems, the NFMA and its immediate predecessor, the Forest and Rangeland Renewable Resources and Planning Act¹¹² ("RPA"), imposed planning requirements on the Forest Service and provided some guidance on acceptable management practices.¹¹³

The NFMA established several substantive standards intended to go beyond the vague "multiple-use" mandate of prior law, requiring Forest Service land management plans to consider economic and environmental factors in providing for "outdoor recreation (including wilderness), range, timber, watershed, wildlife, and fish" and maintaining the diversity of plant and animal communities.¹¹⁴

The NFMA requires the Forest Service to provide for diversity of plant and animal communities, including native tree species, "within the multiple-use objectives of a land management plan," "where appropriate," and "to the degree practicable."¹¹⁵ Although this language was enacted to reorder the agency's priorities be-

109. For a readable history, see WILKINSON & ANDERSON, *supra* note 11, at 15-90, 130-200.

110. *See id.* at 17, 27, 29-31, 33, 40-42, 69-70, 138-54.

111. Catalysts for the law included revelations about the damage caused by clear-cutting and the failure of reforestation efforts. *See id.* at 134-36, 139-40, 154. The Multiple Use-Sustained-Yield Act of 1960 ("MUSYA"), 16 U.S.C. §§ 528-531 (1988 & Supp. 1992), provided only the most general mandate to the Forest Service. It directed the agency to manage national forests for outdoor recreation, range, timber, watershed, and fish and wildlife purposes. 16 U.S.C. § 528. Because Congress declined to specify any priorities among these uses or procedures for resolving conflicts among these uses, the MUSYA was of limited impact. *See* WILKINSON & ANDERSON, *supra* note 11, at 72-73, 286-87; BEAN, *supra* note 82, at 141-43, 153.

112. Forest and Rangeland Renewable Resources Planning Act of 1974 ("RPA"), 16 U.S.C. §§ 1600-1687 (1988).

113. Under the NFMA and the RPA, the Forest Service was required to engage in a massive, tiered, long-term planning process for the entire national forest system, for each region, and for each individual forest. *See* 16 U.S.C. § 1600.

114. 16 U.S.C. § 1604(g)(3)(A)-(B). The accompanying regulations require the Forest Service to consider factors including "the landscape's visual attractiveness and the public's visual expectation." 36 C.F.R. § 219.21(f).

115. 16 U.S.C. § 1604(g)(3)(B). In response to the objections of the Forest Service chief, the Senate rejected language that would have required the Forest Service to maintain "the diversity of forest types and species found naturally in each national forest." *See* WILKINSON & ANDERSON, *supra* note 11, at 294.

tween timber harvesting and wildlife, Congress ultimately left to the Forest Service and a Committee of Scientists¹¹⁶ the task of working out the specific standards to be applied.¹¹⁷ Because the language provides only a germ of policy, leaving its fuller revelation to the agency's discretion,¹¹⁸ the statute creates no enforceable duty to preserve biological diversity.¹¹⁹ Despite the statute's broad grant of discretion, the agency's regulations provide greater detail and constraints on the agency's conduct. For example, the regulations require planners in implementing the diversity requirement to "preserve and enhance the diversity of plant and animal communities . . . so that it is at least as great as that which would be expected in a natural forest."¹²⁰ The regulations also require that "[f]ish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species" found within a planning area.¹²¹ The Forest Service must select Management Indicator Species ("MIS"),¹²² and then establish "objectives for the maintenance and improvement of habitat" for these species.¹²³

While still leaving considerable discretion, the regulations provide some clear and enforceable requirements designed to ensure that diversity is maintained and increased. The NFMA fails to answer most of the hard questions of how to resolve conflicting values, but it makes resolution of these conflicts part of the agency's mandate.

116. The Committee of Scientists was created by the NFMA to provide advice on regulations implementing the act. *See* 16 U.S.C. § 1604(h).

117. *See* WILKINSON & ANDERSON, *supra* note 11, at 170-73 (discussing history of compromise that produced diversity provision).

118. While "it is difficult to discern any concrete legal standards on the face of the provision," *id.* at 296, these provisions represented a significant departure from the traditional unfettered discretion that had characterized national forest management prior to the NFMA, *id.* at 69-74, and the statute imposed some enforceable duties on the agency for the first time.

119. *But see infra* notes 120-122 and accompanying text.

120. 36 C.F.R. § 219.27(g). Reductions in diversity of plant and animal communities and tree species are permitted, however, "where needed to meet overall multiple-use objectives." *Id.*

121. 36 C.F.R. § 219.19. The regulations define "viable populations" as requiring not only sufficient numbers of animals, but also their adequate distribution. *Id.*

122. 36 C.F.R. § 219.19(a)(1). The regulations provide for selection "where appropriate" of MIS's if they are representative of one of five categories. One such category includes ecological indicator species. Thus far, however, most planners have declined to choose MIS's from this category. WILKINSON & ANDERSON, *supra* note 11, at 301.

123. 36 C.F.R. § 219.19(a).

3. *The National Environmental Policy Act*

The National Environmental Policy Act¹²⁴ ("NEPA") sets forth a policy favoring the preservation of the natural environment¹²⁵ for future generations¹²⁶ with the least unnecessary degradation possible.¹²⁷ Although NEPA does not prescribe or require any particular level of environmental preservation, it seeks to promote rational decisionmaking by government agencies through consideration of complete information on environmental consequences.¹²⁸

To this end, NEPA requires all federal agencies to prepare an Environmental Impact Statement ("EIS") in conjunction with every major federal action that significantly affects the human environment.¹²⁹ Since NEPA requires only "consideration" of information, its mandate is procedural, not substantive.¹³⁰ Completion of an EIS, however, does not necessarily satisfy NEPA's procedural duties. When new information on environmental impact develops after completion of the EIS and the agency has not yet acted, the agency must evaluate the information to determine if the proposed federal action will affect the quality of the human environment "in a significant manner or to a significant extent not already considered."¹³¹ If the action will have such an effect, a supplemental EIS must be prepared.

4. *The Oregon and California Lands Act*

In 1937, Congress passed the Oregon and California Lands Act¹³² ("OCLA") to provide guidance to the General Land Office

124. 42 U.S.C. §§ 4331–4361.

125. 42 U.S.C. § 4331(b)(4).

126. 42 U.S.C. § 4331(b)(1).

127. See 42 U.S.C. § 4331(b)(3).

128. See 42 U.S.C. § 4332(2)(A).

129. 42 U.S.C. § 4332(2)(C). The regulations promulgated by the Council on Environmental Quality describe in detail the process for preparing an EIS. 40 C.F.R. § 1502.1–.25. After determining the proper scope for its EIS, the agency must prepare a document that considers the impacts of and alternatives to the proposed actions. 42 U.S.C. § 4332(2)(C).

130. *Strycker's Bay Neighborhood Council, Inc. v. Karlen*, 444 U.S. 223 (1980). "[O]nce an agency has made a decision subject to NEPA's procedural requirements, the only role for a court is to insure that the agency has considered the environmental consequences." *Id.* at 227–28, quoting *Kleppe v. Sierra Club*, 427 U.S. 391, 410 n.21 (1976).

131. See *Marsh v. Oregon Natural Resource Council*, 490 U.S. 360, 374 (1989). An agency's decision not to supplement its EIS following such a development will be subject to judicial review under the arbitrary and capricious standard. *Id.* at 377.

132. 43 U.S.C. §§ 1181a–1181j (1988).

on how to manage some 2.5 million acres that had been returned to federal control after a period in private hands.¹³³ Under the OCLA, the Department of the Interior manages the lands for permanent forest production under the principle of sustained yield.¹³⁴ Congress mandated that the entire annual sustained yield capacity be sold if such was possible at reasonable market prices.¹³⁵ Under the OCLA's terms, fifty percent of the gross receipts from timber sales on the lands are returned to eighteen western Oregon counties.¹³⁶ The goal of providing a permanent source of materials "for the support of dependent communities and local industries of the region" is explicit in the statute.¹³⁷

Despite the language in the OCLA regarding protection of watersheds and recreational facilities, BLM has clearly placed timber as the dominant priority, narrowly interpreting the other considerations. The BLM's interpretation has been upheld in a recent decision by the Ninth Circuit, *Headwaters, Inc. v. Bureau of Land Management*.¹³⁸ In that case, plaintiffs challenged BLM's management of its OCLA lands on the grounds that it had failed to manage for multiple uses, including wildlife conservation, and that this was inconsistent with Congress's mandate to consider "forest production."¹³⁹ The court rejected this argument and held that BLM did not err in concluding that the statute envisioned

133. The lands were part of 3.7 million acres that had initially been granted to the Oregon & California Railroad in 1887. Following a period of fraud and scandal, in 1916, Congress took back the land. Kathie Durbin, *BLM Mandate Collides with Owl in Special Report, Northwest Forests*, *supra* note 16, at 10.

134. The OCLA requires land management under sustained yield principles:

for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and industries, and providing recreational facilities [sic].

43 U.S.C. § 1181a. The statute provides a narrow exception allowing the Secretary of the Interior to reclassify lands that in his or her judgment are more suitable for agricultural use. 43 U.S.C. § 1181c.

135. 43 U.S.C. § 1181a.

136. *See* 43 U.S.C. § 1181f(a). Twenty-five percent of the receipts were initially allotted to pay taxes owed on the land for years prior to March 1, 1938. The remainder of the receipts is payable to federal agencies for administration of the Act with any unused funds going to the U.S. Treasury. 43 U.S.C. § 1181f(c).

137. *See* 43 U.S.C. § 1181a (allowing Interior to subdivide lands into sustained yield units to facilitate these purposes). Congress also provided the Secretary with authority to lease lands for grazing, as long as it did not interfere with timber production. 43 U.S.C. § 1181d.

138. 914 F.2d 1174 (9th Cir. 1990). This decision was followed by the district court in *Portland Audubon Soc'y v. Lujan*, 1991 WL 81838, at *4 (D. Or. May 8, 1991).

139. 914 F.2d at 1183.

timber production as a dominant use.¹⁴⁰ "There is no indication that Congress intended 'forest' to mean anything beyond an aggregation of timber resources."¹⁴¹ Thus, beyond the virtually unenforceable mandate of sustainable forestry and concern for watershed protection, the OCLA emphasizes production and revenue rather than environmental concerns.

5. The Federal Lands Policy Management Act

The Federal Lands Policy Management Act¹⁴² ("FLPMA") gives BLM authority to manage its one hundred and seventy million acres of primarily arid and semi-arid land.¹⁴³ In enacting the FLPMA, Congress was primarily concerned with the historic overgrazing that had degraded a substantial portion of BLM's rangeland.¹⁴⁴

Like the NFMA, the FLPMA requires extensive planning by BLM,¹⁴⁵ yet provides only general guidance concerning the contents of those plans.¹⁴⁶ The FLPMA specifically provides that the principles of multiple-use and sustained yield should govern BLM administration of public lands.¹⁴⁷ The definition of multiple-use explicitly states that BLM must manage the lands so as to avoid "permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output."¹⁴⁸

140. *Id.* at 1184.

141. *Id.* at 1183.

142. 43 U.S.C. §§ 1701-1784 (1988).

143. George C. Coggins et al., *The Law of Public Rangeland Management I: The Extent and Distribution of Federal Power*, 12 ENVTL. L. 535, 535-36 (1982).

144. For a history of BLM rangeland management and the evolution of legislative controls, see George C. Coggins, *The Law of Public Rangeland Management IV: FLPMA, PRIA, and the Multiple Use Mandate*, 14 ENVTL. L. 1 (1983) [hereinafter, Coggins, *Rangeland Management IV*]; George C. Coggins, *The Law of Public Rangeland Management III: A Survey of Creeping Regulation at the Periphery, 1934-1982*, 13 ENVTL. L. 295 (1983); George C. Coggins & Margaret Lindberg-Johnson, *The Law of Public Rangeland Management II: The Commons and the Taylor Act*, 13 ENVTL. L. 1 (1982); and Coggins et al., *supra* note 143. The FLPMA is relevant to the old-growth and spotted owl controversy because of BLM's authority over the rich forests that comprise OCLA lands.

145. 43 U.S.C. §§ 1711-1712.

146. *See* 43 U.S.C. § 1712(c)(1)-(8).

147. 43 U.S.C. §§ 1701(a)(7), 1702(c), 1702(h), 1711, 1712, 1732. *See* Coggins, *Rangeland Management IV*, *supra* note 144, at 12.

148. 42 U.S.C. § 1702(c).

Wisely or unwisely, Congress declined to dictate the precise balance to be achieved among these values in particular resource conflicts, but it clearly made protection of the quality of the environment and the preservation of some of its key elements relevant to BLM land management decisions. These environmental values are protected to some extent by the FLPMA. The only question is to what extent.

B. History of the Litigation

Through the application of these statutes in litigation, both the timber industry and environmental groups have catalyzed executive and legislative action. The fact that the old-growth controversy gave rise to litigation under these laws is not surprising, since the statutes simultaneously promote both economic activity that can deplete resources and the preservation of natural resource values.

The effort to resolve the old-growth controversy under these laws tests the statutes' effectiveness in accommodating the competing values that Congress directed the agencies to consider in managing national forestlands. This section will discuss three pieces of litigation rising from this statutory background: two significant cases challenging Forest Service and BLM timber sales and management plans for old-growth forests, and a suit under the ESA concerning the spotted owl.

1. Challenges to Forest Service and BLM Forest Management

An Oregon Endangered Species Task Force first developed species protection guidelines for the Forest Service in 1977, based on the NFMA and its species viability requirement. Evolving data on the owl's decline, however, showed that the initial guidelines were not sufficiently protective.¹⁴⁹ Citizens challenged the agency's adoption of a Spotted Owl Management Plan administratively. The Forest Service denied the citizens' appeal, but stated that it would revisit the question of spotted owl management in a forthcoming Forest Service Regional Guide.¹⁵⁰

149. See ISC REPORT, *supra* note 16, 50 app. B at 52-53.

150. Sher & Stahl, *supra* note 11, at 363-64.

The Forest Service initiated an Old Growth Wildlife Research and Development Program in cooperation with BLM in 1982. When the Forest Service revealed its final spotted owl management strategy in its 1984 Regional Guide, a number of conservation groups challenged the Guide as inadequate, citing the Forest Service's failure to produce an EIS addressing the strategy's impacts on the owl.¹⁵¹ The deputy chief of the Forest Service sustained this challenge and ordered Region 6 of the Forest Service to prepare a supplemental impact statement on the spotted owl standards and guidelines.¹⁵² Knowledge about the owl increased throughout the 1980s and various state agencies endeavored to provide additional protection with limited success.¹⁵³

Two major lawsuits initiated in the late 1980s grew out of ongoing efforts to challenge Forest Service and BLM clearcutting of the last old-growth forests in the Pacific Northwest. These two cases achieved the most significant success to date in the effort to protect the old growth. The history of this litigation highlights the statutes' role in shaping and resolving the dispute over old-growth forest preservation.

a. The Portland Audubon Society Litigation

In *Portland Audubon Society v. Hodel*,¹⁵⁴ plaintiffs sought to enjoin all BLM¹⁵⁵ timber sales of old-growth Douglas fir trees over

151. *Id.*

152. *Id.*

153. ISC REPORT, *supra* note 16, 50 app. B.

154. 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 21,210 (D. Or. Apr. 20, 1988) (granting defendant's motion to dismiss for lack of subject matter jurisdiction), *aff'd in part, rev'd in part*, 866 F.2d 302 (9th Cir. 1989), *on remand sub nom.*, *Portland Audubon Soc'y v. Lujan*, 712 F. Supp. 1456 (D. Or. 1989) (granting defendant's motion for summary judgment and vacating preliminary injunction), *aff'd in part, rev'd in part*, 884 F.2d 1233 (9th Cir. 1989) (upholding dismissal of NEPA claim but reversing as to other claims), *cert. denied*, 494 U.S. 1026 (1990), *on remand*, 21 Env'tl. L. Rep. (Env'tl. L. Inst.) 20,018 (D. Or. Dec. 21, 1989) (granting defendant's motion to dismiss on mootness grounds), *rev'd sub nom.*, *Seattle Audubon Soc'y v. Robertson*, 914 F.2d 1311 (9th Cir. 1990), *rev'd* 112 S.Ct. 1407 (1992), 1990 WL 169703 (D. Or. Oct. 30, 1990) (granting defendant's motion to dismiss for lack of subject matter jurisdiction), *vacated and remanded*, 931 F.2d 590 (9th Cir. 1991), *on remand*, 1991 WL 81838 (D. Or. May 8, 1991) (granting defendant's motion for summary judgment on claims under the OCLA and MBTA, but denying same as to claims under FLPMA), *later proceeding sub nom.*, *Portland Audubon Soc'y v. Lujan*, 784 F. Supp. 786 (D. Or. 1992) (granting plaintiffs' motion for preliminary injunction), *later proceeding*, 795 F. Supp. 1489 (D. Or. 1992) (granting plaintiffs' motion for summary judgment and denying defendant's motion to vacate preliminary injunction).

155. Although most forest land managed for timber falls under the Forest Service's jurisdiction and is governed by the NFMA, for historical reasons, BLM manages considerable tracts of old growth under two other organic statutes: the FLPMA and the OCLA.

200 years old within 2.1 miles of known spotted owl habitat, claiming the sales violated four federal laws: NEPA,¹⁵⁶ the OCLA,¹⁵⁷ the FLPMA,¹⁵⁸ and the MBTA.¹⁵⁹ The principal claims about BLM's sales were (1) the failure to prepare a supplemental EIS examining new information on the spotted owl violated NEPA,¹⁶⁰ and (2) the failure to consider the impact on the owl of BLM's Forest Resources Policy Statement favoring management of land for timber production was inconsistent with the multiple-use mandate of the FLPMA.¹⁶¹

The first claim challenged BLM's decision not to prepare a supplemental EIS examining new information about the effects of cutting old growth on the survival of the owl as a species. Although BLM acknowledged in district EIS's that cutting old growth harmed individual owls, it had never examined the cumulative impacts of all such cutting on the owl as a species. The new information on which plaintiffs relied involved precisely this is-

156. 42 U.S.C. §§ 4321-4370c.

157. Plaintiffs argued unsuccessfully that the OCLA's mandate for management of the relevant lands "for permanent forest production . . . for the purpose of providing a permanent source of timber supply, protecting watersheds, regulating stream flow, and contributing to the economic stability of local communities and providing recreational facilities," 43 U.S.C. § 1181a, required BLM to manage OCLA lands for multiple uses, including wildlife conservation. *Portland Audubon Soc'y v. Lujan*, Civ. No. 87-1160-FR, 1991 WL 81838 at *3-*4 (D. Or. May 8, 1991). They challenged BLM's Forest Resource Policy Statement, which precluded withdrawal of lands for spotted owl habitat, as inconsistent with the multiple-use obligation. *Id.* The District Court rejected this contention, relying on a Ninth Circuit decision interpreting the OCLA. *Id.* (citing *Headwaters, Inc. v. Bureau of Land Management*, 914 F.2d 1174, 1183-84 (9th Cir. 1990) (ruling Congress's mandate for sustained yield production foreclosed BLM's consideration of withdrawal of land for non-productive purposes, such as wildlife habitat)). See *supra* notes 138-141 and accompanying text.

158. 43 U.S.C. §§ 1701-1784.

159. 16 U.S.C. §§ 703-718j (1988 & Supp. 1990). Plaintiffs in both *Portland Audubon Society* and *Seattle Audubon Society*, discussed *infra* part III.B.1.b., unsuccessfully asserted the protections of the Migratory Bird Treaty Act. They argued that the spotted owl was a migratory bird protected from "taking" under the MBTA, and that since Forest Service and BLM policies would lead to the death of many owls, they constituted takings. In a consolidated appeal on the issue, the Ninth Circuit upheld the lower courts' rulings to the contrary, finding that the definition of "taking" under the MBTA narrowly proscribed only direct acts of depredation. *Seattle Audubon Soc'y v. Evans*, 952 F.2d 297, 303 (9th Cir. 1991).

160. See *Portland Audubon Soc'y v. Lujan*, 712 F. Supp. 1456, 1485 (D. Or. 1989).

161. *Portland Audubon Soc'y v. Hodel*, 18 Envtl. L. Rep. 21,210. Plaintiffs had first requested that the agency prepare supplemental environmental impact statements ("SEISs") on spotted owl impacts. BLM prepared an environmental assessment based on which it decided not to supplement its EIS. After the Interior Board of Land Appeals failed to act, plaintiffs initiated the litigation, challenging the failure to prepare SEISs and alleging violations of the OCLA, the FLPMA, and the MBTA. *Id.* at 21,211.

sue—the cumulative risks to the owl's survival as a species from all old growth cutting, including BLM's.¹⁶² The plaintiffs ultimately prevailed on this claim, based on evidence showing significant new information about the owl's status as a species.¹⁶³ NEPA prevented BLM from taking further actions without first considering this information in a supplemental EIS, thus providing an effective tool for forcing BLM to account for information that did not support its timber sale program.¹⁶⁴

Only after some four years of litigation, six trips to the Ninth Circuit,¹⁶⁵ one decision of the U.S. Supreme Court,¹⁶⁶ and innumerable hearings, did the plaintiffs finally receive a decision in their favor on the NEPA claim and the injunctive relief they requested.¹⁶⁷ The injunction ensured that further logging of owl habitat would not occur until BLM completed an EIS that took into account the new information about the spotted owl's status. In light of the concurrent developments in the ESA litigation,¹⁶⁸ this ruling helped ensure that decisions on future sales would take account of the Fish and Wildlife Service's critical habitat designation and recovery plan and the mandates of the ESA.

162. The regulations promulgated by the Council on Environmental Quality elaborate on NEPA's mandate for a "detailed statement." They require that the statement consider the different actions involved, the environmental impacts of the actions, and alternatives to the proposed action, including the alternative of no action. See 40 C.F.R. §§ 1502.14, 1502.16 & 1508.25(a) (1992).

163. See *Portland Audubon Soc'y v. Lujan*, 1992 WL 130847 (D. Or. June 8, 1992).

164. Plaintiffs also brought claims under the FLPMA, which requires BLM to pursue a policy of multiple use and sustained yield on the lands that it manages. Ultimately, they did not pursue their FLPMA claim after obtaining injunctive relief under NEPA. Since the FLPMA grants broad discretion to BLM to consider environmental values, it seems doubtful that plaintiffs could have obtained substantive review under the FLPMA of BLM's judgment according weight to ecological values represented by the owl or by old-growth forests.

Further, the FLPMA exempts from the constraints of its multiple-use mandate lands dedicated to specific uses governed by other law. 43 U.S.C. § 1732(a). Since the lands subject to BLM control were also subject to the specific mandates of the OCLA, they might be "dedicated to specific uses" in a way that would vitiate the general mandate of the FLPMA.

165. *Seattle Audubon Soc'y v. Evans*, 952 F.2d 297 (9th Cir. 1991); *Seattle Audubon Soc'y v. Lujan*, 940 F.2d 669 (9th Cir. 1991); *Seattle Audubon Soc'y v. Robertson*, 931 F.2d 590 (9th Cir. 1991); *Seattle Audubon Soc'y v. Robertson*, 914 F.2d 1311 (9th Cir. 1990); *Portland Audubon Soc'y v. Lujan*, 884 F.2d 1233 (9th Cir. 1989); *Portland Audubon Soc'y v. Hodel*, 866 F.2d 302 (9th Cir. 1989).

166. *Robertson v. Seattle Audubon Soc'y*, 112 S.Ct. 1407 (1992).

167. *Portland Audubon Soc'y v. Lujan*, 1992 WL 130847 (D. Or., June 8, 1992).

168. See *infra* part III.B.2.

b. The Seattle Audubon Society Litigation

In 1984, the Forest Service designated the northern spotted owl as a Management Indicator Species ("MIS")¹⁶⁹ in national forests in Washington and Oregon under the NFMA. Accordingly, the Forest Service adopted guidelines pursuant to the NFMA on managing spotted owl habitat in these forests. Environmental groups challenged these early guidelines and the Forest Service promulgated an amended version in 1988.¹⁷⁰ The groups then challenged these final guidelines administratively.¹⁷¹ In February 1989, a coalition of environmental groups filed suit challenging the owl management plan and seeking injunctions to prevent timber sales in owl habitat under the NFMA, NEPA, and the MBTA.

Plaintiffs in *Seattle Audubon Society v. Evans*¹⁷² sought judicial review of the Forest Service's management guidelines for the spotted owl under the NFMA and challenged the Forest Service's failure to supplement its EIS to address significant new information about the owl. They obtained preliminary injunctive relief to halt timber sales in spotted owl habitat areas until the Forest Service complied with the NFMA by adopting standards and guidelines to assure that a viable population of the species would be maintained in the forests.¹⁷³

In its decision granting preliminary injunctive relief, the court made extensive findings on the flagrant violations of the NFMA and other law by the Forest Service.¹⁷⁴ The court concluded: "The

169. See *supra* note 122.

170. See ISC REPORT, *supra* note 16, 50 app. B at 54, 57.

171. *Id.* at 57.

172. 771 F. Supp. 1081 (W.D. Wash. 1991).

173. *Id.* at 1096.

174. The court included in its finding testimony from a variety of Forest Service officials and employees, including Dr. Eric Forsman, a wildlife biologist and leading authority on the spotted owl:

On all of those plans, I had considerable reservations for a variety of reasons. But primarily because in every instance, there was a considerable—I would emphasize considerable—amount of political pressure to create a plan which was an absolute minimum. That is, which had a very low probability of success [in maintaining a viable population of owls] and which had a minimum impact on timber harvest.

771 F. Supp. at 1089. The Associate Chief of the Forest Service, George Leonard, testified that the Secretaries of the Interior and of Agriculture deliberately ignored a congressional mandate, enacted in the wake of the plaintiffs' early successes, which directed the Forest Service to develop a revised plan for protection of the owl by September 1990. See *id.*

most recent violation of the NFMA exemplifies a deliberate and systematic refusal by the Forest Service and the FWS to comply with the laws protecting wildlife . . . [which] reflects decisions made by higher authorities in the executive branch of government.”¹⁷⁵ The court (1) barred timber sales within old-growth areas that might provide spotted owl habitat; (2) ordered the Forest Service to develop standards and guidelines to ensure the spotted owl’s viability as required by NFMA; and (3) ordered the agency to prepare an environmental impact statement on those guidelines.¹⁷⁶

The owl was considered by many to be “the cause” of the injunction, which had the potential to delay eighty percent of the timber sales in federal forests in Washington and Oregon for at least ten months.¹⁷⁷ Forest Service employees began to find owls that had been shot and nailed to signs.¹⁷⁸ The timber industry and its dependent communities led a massive outcry that continues today, challenging the ethics of a law putting tens of thousands of people out of work while saving a single species.¹⁷⁹ At the same time, the decimation of the old-growth forests gained new public attention.

c. *The Hatfield Riders*

The government and industry asserted a number of defenses in the litigation, but the only defense accepted by the courts involved a series of congressional appropriation measures that restricted judicial review of certain BLM and Forest Service deci-

Instead of making public their decision to ignore the law, the two agencies directed the Forest Service staff to halt work on the plan and appointed an “interagency team” to develop an alternative to protection of the owl. That team failed to develop any plan. *Id.* at 1090.

175. *Id.* at 1090.

176. *Id.* at 1096. See also *Seattle Audubon Soc’y v. Robertson*, 20 *Envtl. L. Rep.* (Envtl. L. Inst.) 21,167 (W.D. Wash. May 11, 1990) (granting injunction to prevent timber sale based on Forest Service’s failure to consider section 318 of FY 1990 appropriations measure requiring minimum fragmentation of ecologically significant old growth).

177. See Bill Dietrich & David Schaefer, *Owl Ruling Halts Logging in Much of Northwest*, *SEATTLE TIMES*, May 24, 1991, at A1. The injunction was expected to affect 66,000 acres of planned sales for the next sixteen months. John Lancaster, *Environmentalists Hail Freeze on Timber Sales to Guard Owl*, *WASH. POST*, May 25, 1991, at A2.

178. See *Endangered Owl Nailed to Park Sign*, *supra* note 50.

179. See, e.g., *Timber Workers Rally Against Latest Spotted Owl Safeguards*, *L.A. TIMES*, May 25, 1991, at A21.

sions. These measures are known informally as the Hatfield riders.¹⁸⁰

The Hatfield riders were part of an ongoing effort by the Pacific Northwest congressional delegation to guarantee high levels of timber sales from the national forests. The riders were also a specific response to the litigation concerning the spotted owl and old-growth forest protection.¹⁸¹ In both the FY 1988 and 1989 budget resolutions,¹⁸² these riders modified the commands of NEPA, the NFMA, and the FLPMA, by limiting or eliminating judicial review of BLM and Forest Service management plans and requiring both agencies to complete development of the resource management plans as required by the NFMA and FLPMA "as expeditiously as possible."¹⁸³ The bills declared that while "[n]othing shall limit judicial review of particular activities on these lands,"¹⁸⁴ "there shall be no challenges to any existing [Forest Service] plan on the sole basis that the plan in its entirety is outdated, or in the case of the Bureau of Land Management, solely on the basis that the plan does not incorporate information available subsequent to the completion of the existing plan."¹⁸⁵ They further provided that "any and all particular activities to be carried out under existing plans may nevertheless be challenged."¹⁸⁶

180. For a thorough discussion of these riders, named after Senator Mark Hatfield, their chief sponsor, see Victor M. Sher & Carol Sue Hunting, *Eroding the Landscape, Eroding the Laws: Congressional Exemptions from Judicial Review of Environmental Laws*, 15 HARV. ENVTL. L. REV. 435 (1991); Linda M. Bolduan, *The Hatfield Riders: Eliminating the Role of the Courts in Environmental Decision Making*, 20 ENVTL. L. 329 (1990).

181. In addition to the *Seattle Audubon* and *Portland Audubon* cases described *supra* parts III.B.1.a-b, the riders also successfully undercut the most direct and broad challenge to Forest Service old-growth policies. See *Oregon Natural Resources Council v. Mohla*, 19 Env'tl. L. Rep. (Env'tl. L. Inst.) 21,177 (D. Or. May 25, 1989), *aff'd*, 895 F.2d 627 (9th Cir.), *cert. denied*, 496 U.S. 926 (1990) (refusing to reach NEPA challenge to proposed Forest Service timber sale based on agency's failure to incorporate significant new information about old-growth forest ecosystems in environmental assessment, on grounds that 1988 continuing budget resolution withdrew jurisdiction over issue).

182. Continuing Resolution, H.J. Res. 395, Pub. L. No. 100-202, § 314, 101 Stat. 1329-214, 1329-254 (1987). The same measure was reenacted the following year. Pub. L. No. 100-446, § 314, 102 Stat. 1774, 1825-26 (1988).

183. § 314, 101 Stat. 1329-254; § 314, 102 Stat. 1825.

184. *Id.* Despite apparently allowing challenges to individual sales, this provision was interpreted in *Portland Audubon Soc'y v. Lujan*, 712 F. Supp. 1456, 1489 (D. Or. 1989), and in *Oregon Natural Resources Council v. Mohla*, 1989 WL 200886, at *5 (D. Or. May 25, 1989), to preclude even challenges to individual sales, if the nature of the challenge to the sale would require the agency to change policies set in its planning process.

185. § 314, 101 Stat. 1329-254; § 314, 102 Stat. 1825-26.

186. *Id.*

The District Court initially dismissed the complaint in the *Portland Audubon Society* litigation on defendants' motion, finding that section 314 of the Continuing Budget Resolution¹⁸⁷ withdrew the court's jurisdiction over the complaint.¹⁸⁸ On remand, following a reversal by the Ninth Circuit on the proper interpretation of section 314,¹⁸⁹ the court found BLM's decision not to prepare a supplemental EIS addressing the critical "issues of adequate population size or the effects of habitat fragmentation upon the long-range survival of the spotted owl" arbitrary and capricious.¹⁹⁰ Notwithstanding the earlier reversal by the Ninth Circuit, however, the court again found the NEPA claim barred by section 314.¹⁹¹ Thus, to the extent BLM had violated NEPA by failing to acknowledge the plight of the owl in the EIS, Congress's more recent enactment placed the violation beyond judicial reach.

Congress again responded to the ongoing litigation by adopting sections 312 and 318 of the FY 1990 Interior Appropriations Act.¹⁹² Section 312 of the 1990 Act reenacted the restrictions of section 314 of the 1988 and 1989 resolutions. Section 318 continued to insulate the Forest Service and BLM plans from judicial review, but did require the Forest Service to follow its own old-growth policy mandating "minimum fragmentation" of particular old growth.¹⁹³ The section also purported to resolve the issues raised in the litigation by setting out general guidelines involving the

187. See Continuing Resolution, *supra* note 182.

188. *Portland Audubon Soc'y v. Hodel*, 18 Env'tl. L. Rep. (Env'tl. L. Inst.) 21,210, 21,213 (D. Or. Apr. 20, 1988).

189. *Portland Audubon Soc'y v. Hodel*, 866 F.2d 302 (9th Cir. 1989) (finding no repeal of existing laws in section 314, thus requiring District Court to address factual questions whether plaintiffs relied solely on "new information" and whether they challenged "particular sales").

190. *Portland Audubon Soc'y v. Lujan*, 712 F. Supp. at 1485.

191. *Portland Audubon Soc'y v. Lujan*, 712 F.Supp. at 1489, *aff'd*, 884 F.2d 1233 (9th Cir. 1989), *cert. denied* 494 U.S. 1026 (1990). To determine the viability of plaintiffs' NEPA claim in light of section 314, the court reviewed in detail the substance of the "new information," both documentary and testimonial. 712 F. Supp. at 1462-82. The Court interpreted section 314 to preclude all challenges based on new information that was not site-specific. Since plaintiffs were challenging BLM's failure to supplement its impact statements with new information on the owl that was not site-specific, the Court found that their claim fell within the proscription of section 314. *Id.* at 1489.

192. Department of the Interior and Related Agencies Appropriations Act, §§ 312, 318, Pub. L. No. 101-121, 103 Stat. 701, 743, 745-50 (1989) [hereinafter sections 312 and 318].

193. *Id.* § 318(b)(1), (2).

number of board feet to be sold and the precautions to be taken to protect owl habitat.¹⁹⁴

The 1990 rider declared that compliance with its directives would constitute "adequate consideration for the purpose of meeting the statutory requirements that are the basis for [the Portland and Seattle litigation]."¹⁹⁵ The rider also barred judicial review of agency guidelines issued to implement its mandate¹⁹⁶ and prohibited federal courts from awarding preliminary injunctions or restraining orders in cases challenging timber sales in the thirteen national forests known to contain northern spotted owls or any grounds other than noncompliance with section 318's own guidelines.¹⁹⁷ To gain political support for the riders, proponents relied heavily on the argument that environmentalists were raising frivolous challenges.¹⁹⁸ They portrayed the riders as essential to bring closure to the already-lengthy planning process which was otherwise doomed by the evolving state of scientific knowledge and never-ending challenges based on this newly developed information.¹⁹⁹

The riders drastically curtailed public participation in the planning process during the years they were effective and virtually eliminated judicial review of the planning process.²⁰⁰ The riders seem completely inconsistent with the letter and spirit of the NFMA, a statute that created a process for planning on a "bottom up" model.²⁰¹ However, proponents of the riders emphasized that rather than broadly challenging the Forest Service's decisions, the

194. *Id.* § 318(a)(1), (b).

195. *Id.* § 318(b)(6)(A).

196. *Id.* Congress directed the Forest Service to "review and revise as appropriate" its 1988 Record of Decision, and to "consider" any new information including the ISC Report. *Id.* § 318(g)(6)(B).

197. *Id.* § 318(g)(1). Section 318(d) further provided that there should be no more than one level of administrative appeal of any Forest Service or BLM decision regarding timber sales for the fiscal year in the forests known to contain spotted owls. *Id.* § 318(d).

198. *See, e.g.*, CONG. REC. S8,797 (daily ed. July 26, 1989) (statement of Senator Slade Gorton).

199. *See* Letter from Senator Mark O. Hatfield to constituents, *excerpted in* WILD OR.: J. OR. NAT. RESOURCES COUNCIL 22 (Fall 1988), *quoted in* Bolduan, *supra* note 180, at 332, 362. Similar sentiments were expressed in oversight hearings conducted by a Senate Subcommittee in November 1991 on the effect of appeals of forest plans on timber supply. *See Forest Service Appeals: Hearing Before the Subcomm. on Public Lands, National Parks and Forests of the Senate Comm. on Energy and Natural Resources*, 102d Cong., 1st Sess. 1-7, 18, 28, 30-31, 35-36 (1991).

200. Bolduan, *supra* note 180, at 370-75, argues that such preemption of judicial review in environmental cases eliminates an essential balance in the administrative process.

201. *See* WILKINSON & ANDERSON, *supra* note 11, at 90.

legal claims in the spotted owl cases focused solely on a single species, while interfering with millions of acres of potential timber sales. This characterization played an important role in trivializing the litigation and the values at issue, allowing a small but powerful minority in Congress to sidestep the protections of the NFMA, the FLPMA, NEPA, and the ESA for several years.

The heavy-handed intervention by Congress in the pending litigation led to a separation-of-powers challenge to section 318 which prevailed in the Ninth Circuit.²⁰² Although this ruling was ultimately reversed by the Supreme Court in March 1992,²⁰³ the Ninth Circuit victory was of great importance. Until the reversal by the Supreme Court, the ruling stayed the effect of sections 312 and 318. The District Court in the Seattle litigation continued to hear challenges to individual sales and to impose injunctions pending the ruling by the Supreme Court.²⁰⁴ Despite Congress's effort to end-run both the statutes and the courts, between 1990 and 1992 the courts continued to enforce the requirements of the ESA, the NFMA, and NEPA.²⁰⁵

The Seattle and Portland cases are important for several reasons. First, plaintiffs' early success in obtaining injunctive relief provided the leverage necessary to force the federal agencies to

202. *Seattle Audubon Soc'y v. Robertson*, 914 F.2d 1311 (9th Cir. 1990).

203. *Robertson v. Seattle Audubon Soc'y*, 112 S.Ct. 1407 (1992). For a discussion of this decision, see Michael C. Blumm, *Ancient Forests and the Supreme Court: Issuing a Blank Check for Appropriation Riders*, 43 WASH. U. J. URBAN & CONTEMP. L. 35 (1993).

204. Section 312 continued to bar injunctive relief in the Portland case until February 1992. *See Portland Audubon Soc'y v. Lujan*, 768 F. Supp. 755 (D. Or. 1991) (holding that § 312 continued to bar plaintiffs' NEPA claim after expiration of relevant appropriations year), *rev'd sub nom.*, *Seattle Audubon Soc'y v. Lujan*, 952 297 (9th Cir. 1991); *Portland Audubon Soc'y v. Evans*, 784 F. Supp. 786, 792 (D. Or. 1992) (granting plaintiffs' motion for preliminary injunction).

205. Implementation of these mandates was largely achieved through the courts. A consistent theme in the rulings in the Seattle litigation is the agencies' deliberate and systematic violation of the requirements of the ESA, NEPA, and the NFMA. *See, e.g.*, *Seattle Audubon Soc'y v. Evans*, 771 F. Supp. 1081, 1089-90, 1096 (W.D. Wash. 1991). An important ruling ultimately limiting the impact of the riders was the decision by the Ninth Circuit in a consolidated appeal, *Seattle Audubon Soc'y v. Evans*, 952 F.2d 297, 303-04 (1991), holding that each appropriations rider was effective only during the fiscal year of the appropriation and did not effect a permanent change in the law.

Ultimately, in 1991, after concerted lobbying and the intensive publicity surrounding the case brought national attention to the old-growth controversy, a majority of Congress refused to support further riders. At that point, plaintiffs' NEPA claim prevailed. *See Portland Audubon Soc'y v. Lujan*, 1992 WL 130,847 (D. Or. June 8, 1992). A proposed rider to the 1993 appropriations measure, which would have authorized "salvage" sales in old-growth areas and waived the requirements of the ESA and NEPA, was defeated in the Senate by a vote of 60 to 35 in August 1992. *See Senate Defeats Proposal to Log in Spotted Owl Habitat*, L.A. TIMES, Aug. 7, 1992, at A4.

acknowledge the risks to the owl and to develop a strategy for protecting the owl. Without the injunctions, which prevented logging in old-growth forests, the Forest Service and BLM would undoubtedly have continued to downplay the risks to the owl, quite possibly until the owl was beyond saving, thereby eliminating the legal need to save any old-growth forest. Second, the injunctions and the litigation as a whole turned public and Congressional attention to the efforts to save both the owl and old-growth forests.

2. Action Under the Endangered Species Act

a. The Listing Litigation

In 1987, the Fish and Wildlife Service ("FWS") responded to a petition requesting that the owl be listed as endangered.²⁰⁶ In the administrative review that followed, the FWS determined that there was insufficient data to support a finding that the owl was endangered.²⁰⁷ By November 1988, however, the federal District Court held that this administrative decision was arbitrary and capricious.²⁰⁸ Judge Zilly's opinion stated, "the Service disregarded all the expert opinion on population viability, including that of its own expert, that the owl is facing extinction, and instead merely asserted its own expertise in support of its conclusions."²⁰⁹ The administrative record on which the FWS's decision was based showed overwhelming agreement among spotted owl and population biology experts that the owl was in danger of extinction.²¹⁰ Consequently, the court ordered the FWS to: (1) provide an analysis and explanation for its finding that the owl was not endangered, (2) explain its failure to list the owl as threatened, and (3) supplement its status review and petition finding.²¹¹ The FWS

206. See SPOTTED OWL PETITION BESET BY PROBLEMS, *supra* note 96, at 1.

207. Endangered and Threatened Wildlife and Plants; Finding on Northern Spotted Owl Petition, 52 Fed. Reg. 48,552, 48,554 (1987) (to be codified at 50 C.F.R. § 17). The agency failed to address the issue of whether the owl qualified as threatened. See *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479, 481 (W.D. Wash. 1988).

208. *Northern Spotted Owl v. Hodel*, 716 F. Supp. at 483.

209. *Id.*

210. *Id.* at 481-83.

211. *Id.* at 483.

subsequently reversed its position in April 1989, finding that the owl was threatened.²¹²

b. The Interagency Scientific Committee

Soon after the proposed listing of the owl as a threatened species, the Bush Administration established an Interagency Scientific Committee ("ISC") under the authority of an agreement among the Forest Service, BLM, FWS, and National Park Service.²¹³ The ISC was chartered to develop a "scientifically credible conservation strategy for the northern spotted owl."²¹⁴ The ISC, also known as the Thomas Committee for its chair, Jack Ward Thomas, undertook a detailed survey of all available information on the owl. It prepared a comprehensive report that explained the owl's status and provided detailed recommendations for ensuring the survival of the species.²¹⁵

In outlining its strategy, the Committee emphasized that its deliberations took into account the human impact of its proposals, and did not set out to construct a plan that demanded absolute protection for the owls.²¹⁶ It sought to engineer a compromise that gave human economic activity the benefit of every doubt, consistent with the biological needs of the owl.²¹⁷ This accommodation reflected both the political climate and the specific mandate given the Committee to minimize economic loss. The Committee's final

212. This finding resulted in a rule listing the northern spotted owl as threatened on June 26, 1990. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Northern Spotted Owl, 55 Fed. Reg. 26,114 (1990) (to be codified at 50 C.F.R. § 17).

213. See ISC REPORT, *supra* note 16, 46 app. A at 47-49.

214. *Id.* at 1.

215. See *id.* at 1.

216. The Committee wrote:

A strategy that has any chance of adoption in the short term and any chance of success in the long term must include consideration of human needs and desires. To ignore the human condition in conservation strategies is to fail. We have searched for a way to assure the continuing viability of the owl that still allows continuation of some substantial cutting of mature and old-growth forests.

Id. at 9.

217. Asked by congressional representatives if the report could be compromised, Thomas reportedly replied, "We are already dooming up to half the owls . . . this is as fine a line as we can cut—there's no more room for a deal to be made." DIETRICH, *supra* note 26, at 227-28.

report recommended that 7.7 million acres be set aside as habitat areas for the owl,²¹⁸ about 3 million of which could otherwise have been subject to logging.²¹⁹ The Committee reported its belief that this was a compromise that would allow the owl population to decline forty to fifty percent over the next century before it stabilized.²²⁰

Many have widely praised the ISC Report as a thorough and balanced study. Even those who find its recommendations unacceptable have not attacked the report's credibility, but have pointed out the shortcomings of the compromise chosen by its authors.²²¹ Some have hailed it as a "textbook" standard for scientific contributions to policymaking because of its strong scientific underpinnings and its straightforward handling of both scientific and policy questions.²²²

Nonetheless, the strategy produced by the ISC failed to comport with the Administration's objectives and the Administration attacked it for the enormous social costs it imposed simply to save the spotted owl.²²³ The Administration appointed a cabinet-level task force to propose an alternative course of action that would be less dramatic, both economically and socially.²²⁴ The task force, headed by Secretary of Commerce Clayton Yeutter, produced no meaningful alternative.²²⁵

The Administration also reportedly asked some government scientists to review the Thomas Report for the purpose of discred-

218. ISC REPORT, *supra* note 16, 314 app. Q at 343.

219. See Richard Siegel, *Will the Winner be Owls or Jobs?*, WASH. TIMES, Sept. 4, 1990, at C4. The harvest levels allowed by the ISC Report would produce 2.6 billion board feet of wood down from 3.85 billion authorized by Congress. See David Schaefer & Keith Ervin, *Owl Plan Would OK More Logging*, SEATTLE TIMES, Sept. 21, 1990, at A1.

220. See ISC REPORT, *supra* note 16, at 4-5; David Schaefer, *Owl Plan Could Cut Log Harvest by 30%—Peninsula Would Be Wracked, Says Swift*, SEATTLE TIMES, Apr. 5, 1990, at D1.

221. See David Schaefer, *Blow to NW Timber Industry—Spotted Owl Study Calls for Saving Vast Tracts of Trees*, SEATTLE TIMES, Apr. 4, 1990, at A1.

222. DIETRICH, *supra* note 26, at 225.

223. See Schaefer & Ervin, *supra* note 219 (administration proposal would allow 0.6 bbf more timber to be cut); David Schaefer, *Bush to Propose Logging Cutback, Senator Says*, SEATTLE TIMES, Sept. 15, 1990, at A10.

224. See Seattle Audubon Soc'y v. Evans, 771 F. Supp. 1081, 1090 (W.D. Wash. 1991) (quoting Dr. Thomas from preliminary injunction hearing). See also Kenworthy, *supra* note 104.

225. See Kenworthy, *supra* note 104. The task force did produce a three page press release urging Congress to mandate that 3.5 bbf of timber be cut in national forests in the Pacific Northwest and to insulate these sales from environmental laws. *Id.*

iting it.²²⁶ Reports surfaced of Administration efforts to prevent Forest Service employees from disclosing facts viewed as unfavorable to the Administration's pro-industry position.²²⁷ When the unimpeachable credibility of the Thomas Report²²⁸ defeated Administration efforts to back away from its recommendations, the Forest Service informally promised to act "not inconsistently" with the Report.²²⁹ However, the Service notably failed to take any steps that would implement this promise. It continued to rely on its 1988 management guidelines and failed to undertake the actions necessary to develop a new plan.²³⁰ BLM also agreed informally to comply with parts of the ISC strategy, although it refused to adopt them in full.²³¹

As public pressure to protect the owl and orders from the ongoing litigation forced the agencies to slow or halt their sales in potential owl habitat, the Administration continued to search for "solutions" to the controversy other than those provided by the statutes. On September 11, 1991, BLM petitioned for an exemption from the requirements of the ESA under section 7(h) of the statute to allow it to proceed with forty-four old-growth timber sales notwithstanding the owl's status.²³² Secretary Lujan convened the Endangered Species Committee despite BLM's noncompliance with NEPA and its failure to first consult with the FWS on the issue.²³³ In May 1992, Lujan announced that the Committee had

226. See DIETRICH, *supra* note 26, at 224.

227. See Bill Dietrich, *Bush Blocked Loggers' Aid, Unsoeld Says—Owl Relief Proposal Squelched*, SEATTLE TIMES, May 4, 1991, at A1.

228. In addition to the broad inclusive socio-political perspective that Thomas brought to the Committee, his lack of prior interest in or connection to the owl also buttressed his public credibility as an impartial leader. See DIETRICH, *supra* note 26, at 226-27.

229. See 55 Fed. Reg. 40,412, 40,413 (Oct. 3, 1990).

230. See, e.g., the discussion of Forest Service actions which the agency asserted were not inconsistent with the ISC strategy, in *Seattle Audubon Soc'y v. Robertson*, 1991 WL 180099, at *7-*8 (W.D. Wash. March 7, 1991) (rejecting Forest Service argument that compliance with ESA vitiates agency's duties to comply with NFMA viability requirements).

231. See *Portland Audubon Soc'y v. Lujan*, 795 F. Supp. 1489, 1494 (D. Or. 1992). In separate litigation, the district court enjoined BLM's piecemeal implementation of the ISC plan, a plan known as the "Jamison Strategy," because of BLM's failure to consult with the FWS as required by the ESA. See *Lane County Audubon Soc'y v. Jamison*, 1991 U.S. Dist. LEXIS 20050 (D. Or. Sept. 11, 1991), *aff'd in part, remanded in part*, 958 F.2d 290 (9th Cir. 1992).

232. 16 U.S.C. § 1536(h).

233. Environmental groups challenged the resulting exemption decision on several grounds, including BLM's failure to consult with FWS prior to seeking an exemption, its noncompliance with NEPA, and *ex parte* communications between the White House and

voted five-to-two in favor of exempting thirteen of the forty-four BLM sales from the statute's requirements.²³⁴

c. Critical Habitat Designation and Development of a Recovery Plan under the ESA

Meanwhile, plaintiffs' success in having the owl listed under the ESA was set back by both the FWS's final rule listing the owl as threatened instead of endangered and its finding that critical habitat was not presently determinable.²³⁵ However, plaintiffs in the listing litigation successfully moved to require the FWS to designate critical habitat for the owl.²³⁶ The court cited strong evidence in the legislative history that Congress intended designation of critical habitat to coincide with a final listing decision "absent extraordinary circumstances."²³⁷ On this basis, it ordered the FWS to prepare a plan for completing its review of critical habitat by March 15, 1991 and a proposed critical habitat designation within forty-five days thereafter.²³⁸

Under the ESA, economics as well as the needs of the species are relevant in a critical habitat determination.²³⁹ However, the FWS's designation of critical habitat for the spotted owl relied most heavily on scientific data about the owl,²⁴⁰ and minimally on

the Committee regarding the petition. In *Portland Audubon Soc'y v. Endangered Species Committee*, 984 F.2d 1534 (9th Cir. 1993), the Ninth Circuit ruled that *ex parte* communications would be unlawful and that the record for review of the Committee's decision must include all materials on which the Committee relied. The Court remanded to an administrative law judge for a hearing on the issue of alleged *ex parte* contacts. *Id.* at *2-*3.

234. Endangered Species Committee, Notice of Decision, 57 Fed. Reg. 23,405 (June 3, 1992). See Keith Schneider, *White House on Conflicting Paths as It Agrees to Protection for Owl*, N.Y. TIMES, May 15, 1992, at A1.

235. U.S. Fish and Wildlife Service, "Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Northern Spotted Owl," 55 Fed. Reg. 26,114 (June 26, 1990).

236. *Northern Spotted Owl v. Lujan*, 758 F. Supp. 621 (W.D. Wash. 1991).

237. *Id.* at 626.

238. *Id.* at 629. The court found no evidence in the proposed or final listing decisions that the FWS had even attempted to determine critical habitat. *Id.* at 627.

239. See *supra* notes 85-105 and accompanying text.

240. See Yagerman, *supra* note 4, at 853 (quoting WALTER A. ROSENBAUM, ENVIRONMENTAL POLITICS AND POLICY 83 (1985)) ("As a matter of practical politics . . . solving an issue by resort to credible scientific evidence can spare officials controversy and criticism they might otherwise endure—sometimes science alone legitimates policies.").

economic considerations.²⁴¹ The FWS designated approximately 6.9 million acres for critical habitat.²⁴² The FWS prepared a recovery plan as required under section 4(f) of the ESA.²⁴³

On May 14, 1992, the Spotted Owl Recovery Team²⁴⁴ proposed a plan to protect 7.5 million acres.²⁴⁵ However, on the same day, the Secretary of the Interior also announced an alternative termed a "preservation plan."²⁴⁶ Contradicting ESA's mandate, the plan sought to promote a further compromise between saving the owl and saving the projected 30,000 jobs that would be lost under the recovery plan. Lujan's preservation plan, dubbed "the extinction plan" by environmental interests,²⁴⁷ was a simple arithmetic reduction of the recovery plan: it would preserve half the area needed for the owl to survive, and would therefore "cost" half as many "jobs."²⁴⁸ The flaw, of course, was that there was no legal authority or ecological basis for adopting such a plan.²⁴⁹ Moreover, Secretary Lujan acknowledged that under his alternative plan the owl had a fifty percent probability of extinction in the next hundred

241. See M.L. SCHAUMBERGER ET AL., U.S. FISH AND WILDLIFE SERVICE, ECONOMIC ANALYSIS OF CRITICAL HABITAT DESIGNATION EFFECTS FOR THE NORTHERN SPOTTED OWL (Jan. 1992) [hereinafter ECONOMIC ANALYSIS]. The result of the economic analysis and the exclusion process was to exclude 3 million acres of private lands, 580,000 acres of state-owned lands, 74,000 acres of Tribal lands, all sold but unharvested timber on federal lands, and 865,000 additional acres, some of which represented land mistakenly included in the initial legal descriptions, and some of which was to reduce economic impacts. The primary reason for excluding the first three categories of land was the limited benefit to be gained from designation in light of the limited federal control. See BARRY S. MULDER ET AL., EXCLUSION PROCESS: CRITICAL HABITAT AND THE NORTHERN SPOTTED OWL 12, 24-25 erroneously printed in ECONOMIC ANALYSIS, *supra*.

242. See CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL, *supra* note 7, at 38. This designation has been challenged based on FWS's failure to prepare an EIS on the designation. *Douglas County v. Lujan*, 1992 WL 420811 (D. Or. Dec. 22, 1992).

243. 16 U.S.C. § 1533(f).

244. Secretary Lujan appointed an interdisciplinary Recovery Team to develop the Recovery Plan for the spotted owl mandated under § 4(f) of the ESA. See U.S. DEPARTMENT OF THE INTERIOR, RECOVERY PLAN FOR THE NORTHERN SPOTTED OWL—DRAFT, app. K at 639 (Apr. 1992).

245. See *id.*

246. See Terry Atlas, *Owls Lose a Habitat Battle*, CHI. TRIB., May 15, 1992, at 1.

247. Tom Kenworthy, *Logging Approved at Owl Site*, WASH. POST, May 15, 1992, A1, A14.

248. Atlas, *supra* note 246, at A8.

249. Senator Slade Gorton has introduced legislation that would mandate implementation of the "Preservation Plan" and suspend the operation of the ESA, NEPA, the FLPMA, the OCLA, the RPA, and the MBTA to the extent that the plan conflicts with their mandates. S. 2762, 102d Cong., 2d Sess. (1992). Senate Committee hearings on the bill concluded in August 1992.

years,²⁵⁰ a result completely inconsistent with the premises of the ESA.

On the same day, Lujan announced the exemption of the thirteen BLM sales.²⁵¹ The Administration and Secretary Lujan also called for Congress to amend the ESA.²⁵²

Although the controversy over the old-growth forests and the owl is still far from over, the ESA has played a central role. Plaintiffs' success under the ESA ultimately catalyzed the important work of the ISC and the Recovery Team, and required the designation of critical habitat for the owl, the most important concrete measures thus far in the ongoing struggle to preserve forests. The listing also attracted national attention to the case by narrowing the debate to a set of issues with popular appeal. The owl's listing activated the ESA provisions requiring BLM and the Forest Service to consult with the FWS, a significant practical constraint protecting the owl and its critical habitat from jeopardy or adverse modification.²⁵³ Of all the applicable statutes, the ESA was the most effective in achieving protection of the owl and the forest.

C. Some Observations on the Controversy: Law, Values, Politics, and the Spotted Owl

The spotted owl controversy provides a valuable opportunity to examine the role our laws play in resolving the social conflict between resource protection and economic activity. This Section focuses on two features of the controversy that shed light on how the laws operated in the dispute: (1) the legal battle's narrow focus on the spotted owl and its status under the ESA; and (2) the hostility and opposition to the ESA that the controversy has generated. Part IV will build on these observations in exploring what we can learn from the controversy.

250. Atlas, *supra* note 246.

251. See *supra* notes 232–234 and accompanying text.

252. Schneider, *supra* note 234, at B8.

253. See Daugherty, *supra* note 95, however, for a detailed discussion of the limited impact of the consultation process on BLM's and the Forest Service's actions.

1. *Why the Owl? The Role of the Endangered Species Act*

Perhaps the most striking fact that emerges from the old-growth controversy is the degree to which the spotted owl has dominated the dispute. This is partly due to the attraction of a single symbol to simplify complex issues. Yet the focus on the owl is more than mere convenience. The statutes and policies that have framed the dispute demand the owl's prominence. American resource protection law ensured that the most effective, if not the only, strategy for challenging the management of old-growth forest on publicly-owned lands was to rely on a species as a surrogate for a broader range of values.²⁵⁴ The resultant transformation of a broad, polycentric controversy into a fight pitting a single species against entrenched economic and other human interests inevitably produced narrow decisions failing to address important root causes of the controversy.

The broad discretion forest management statutes afford the Forest Service and BLM also helps explain the public indifference to the old-growth controversy until the discovery of the spotted owl. While a vast improvement over prior law,²⁵⁵ reflecting a shift in American values toward preservation of natural resources and their non-economic value,²⁵⁶ the NFMA creates a deliberative public planning process for the national forests without imposing specific enforceable standards. The regulations implementing the NFMA follow this pattern. Ecological integrity,²⁵⁷ native ecosystems,²⁵⁸ and the benefits of old-growth forests²⁵⁹ are among the

254. See *supra* note 39. In many cases, plaintiffs have openly acknowledged that the species is a surrogate for larger natural resource values that are not afforded direct protection elsewhere under our laws. See, e.g., Plater, *In the Wake*, *supra* note 97 (citizens' reliance on snail darter and ESA was part of larger effort to stop Tellico dam project in order to preserve Little Tennessee River); see also Ike Sugg, *God Squad to the Rescue: Cutting Through Fraud*, WASH. TIMES, May 22, 1992, at F1 (reporting comment of Oregon Natural Resources Council's Andy Stahl on use of owl to protect forest).

255. See WILKINSON & ANDERSON, *supra* notes 11, at 371-73.

256. "The American people have spoken out, and the message is loud and clear—fish, wildlife, wilderness, recreation . . . are important." Forest Service Associate Chief George M. Leonard, testifying before the House Agriculture Committee, reported in David S. Cloud, *Special Report: In Battle Over Forest Land, Ecologists Gaining Ground*, CONG. Q. 171, 172 (Jan. 20, 1990).

257. See 36 C.F.R. § 219.1(b) (mandating that forest planning be based on series of principles).

258. See, e.g., 36 C.F.R. § 219.27(g) (setting forth minimum management requirement for Forest Service plans).

259. See 16 U.S.C. § 1604(g)(3)(A) (1988) (requiring guidelines that will protect forest resources for wilderness, timber, watershed, wildlife and fish); 36 C.F.R. § 219.27(a),(d),

values articulated under the statute and regulations, but with almost no enforceable standards. The vast majority of the duties in the regulations regarding protection of natural resources are limited or qualified by phrases such as "to the degree consistent with multiple-use objectives."²⁶⁰

The regulation under which the plaintiffs in *Seattle Audubon Society* successfully asserted a claim, the viability regulation, is one of the strongest standards of ecological protection under the NFMA.²⁶¹ However, the viability regulation is a narrow command, applying only at the species level and focusing on vertebrate populations.²⁶² Like the ESA, it becomes enforceable only when a species approaches an extreme ecological threshold; until a threat to a species' viability is scientifically established, its mandate is of no force.

The limitations of the FLPMA mirror those of the NFMA. Like the NFMA, the FLPMA mandates a multiple use and sustained yield policy,²⁶³ but fails to impose any ecological or economic constraints on the BLM. If the agency engages in rational and thorough consideration of the needs of the American public and concludes that old-growth forest is needed principally as timber, any challenge to the agency's decision would be an uphill battle.²⁶⁴

The institutional histories of the Forest Service and BLM also help explain the failure of the NFMA and FLPMA standards to provide a basis for protecting the old-growth ecosystem. The post-

& (e) (setting out general statements of minimum management requirements regarding, *inter alia*, conservation of soil and water resources).

260. *E.g.*, 36 C.F.R. § 219.26 ("planning shall provide for diversity of plant and animal communities and tree species *consistent with the overall multiple-use objectives of the planning area*" (emphasis added)); Keiter, *supra* note 4, at 1000 (describing discretionary management authority as two-edged sword that has not been used effectively to date to integrate principles of ecosystem management into public land governance); *see also* 36 C.F.R. § 219.27(a)(3),(5),(6), & (7).

261. *See supra* notes 121-123 and accompanying text.

262. *See* 36 C.F.R. § 219.19(a)(1).

263. 43 U.S.C. § 1702(c).

264. The plaintiff in such a case bears the burden of proving that a BLM decision was arbitrary or capricious because, for example, non-economic values or interests of future generations were impermissibly undervalued. Meeting such a burden is a difficult task. *See supra* note 164 and accompanying text. *Cf. Oregon Natural Resources Council v. Mohla*, 19 Env'tl. L. Rep. (Env'tl. L. Inst.) 21,117 (D. Or. May 25, 1989), *aff'd*, 895 F.2d 627 (9th Cir. 1990), *cert. denied*, 496 U.S. 926 (1990), discussed *supra* note 181. This may explain why the plaintiffs' FLPMA claim in the Portland litigation was so narrowly tailored. Plaintiffs focused on BLM's failure in its Forest Resource Policy Statement to provide for withdrawal from logging of lands that might be suitable for owl habitat. *See* 1991 WL 81838 at *4.

World War II history of timber primacy and the Forest Service's continued belief in its mission to produce timber have been well documented.²⁶⁵ By giving the Forest Service the discretion to resolve conflicting interests, Congress virtually assured that environmental interests would be shortchanged,²⁶⁶ even with the Forest Service acting in good faith. Since courts afford agency decisions considerable deference²⁶⁷ and do not take into account the fact that the agency's priorities have historically veered towards timber to a degree inconsistent with existing law,²⁶⁸ challenges aimed merely at the balance struck by the agency between conflicting values or the inadequate degree of environmental value protection rarely succeed.²⁶⁹

265. See, e.g., DAVID A. CLARY, *TIMBER AND THE FOREST SERVICE* 41 (1986); WILKINSON & ANDERSON, *supra* note 11, at 372; Wilkinson, *supra* note 27, at 15-20; Michael C. Blumm, *Ancient Forests, Spotted Owls, and Modern Public Land Law*, 18 B.C. ENVTL. AFF. L. REV. 605, 620 (1991).

Signs of an evolution in Forest Service values have emerged. See Holmes Rolston III & James Coufal, *A Forest Ethic and Multivalue Forest Management*, J. FORESTRY 35, 37 (Apr. 1991) (noting need for amendment to Society of American Foresters' Code of Ethics and several signs of such change, including rapid growth of Association of Forest Service Employees for Environmental Ethics and statement by Forest Service Chief Robertson announcing new national policy recognizing "the many significant values associated with old-growth forests"). See also Tom Kenworthy, *Forest Service Chief Orders "Ecological Approach" to Managing U.S. Woodlands*, WASH. POST., June 4, 1992, at A11 (announcing new program of ecosystem management and reduction in clearcutting).

266. See Keiter, *supra* note 4, at 997, who notes the Forest Service's tendency not to make resource allocation decisions in the forest plans in order to preserve greater managerial flexibility. While acknowledging the value of discretion, Keiter notes that "flexibility can—as it has in the past—become a guise for politically expedient, rather than principled, ecologically sound decisions." *Id.* Keiter describes attempts of forest administrators seeking to retain discretion on significant issues even when this inhibits ongoing efforts to coordinate with other agencies for better ecosystem management. *Id.* at 994-95.

267. See *Resources Ltd., Inc. v. Robertson*, 789 F. Supp. 1529 (D. Mont. 1991).

268. Forest Service discretion is not the only factor. Also important is Congress's role in pushing the Forest Service to higher harvest levels than the agency recommended in recent years. The fragmented manner in which Congress considers timber issues—in appropriations, agency policy, and public land management—has created considerable problems. See Cloud, *supra* note 256, at 172.

269. See, e.g., *Citizens for Env'tl. Quality v. United States*, 731 F. Supp. 970, 983 (D. Colo. 1989); see also Keiter, *supra* note 4, at 964-65; F. Kaid Benfield, *The Administrative Record and the Range of Alternatives in National Forest Planning: Applicable Standards and Inconsistent Approaches*, 17 ENVTL. L. 371 (1987); Paul J. Culhane, *NEPA's Effect on Agency Decision Making*, 20 ENVTL. L. 681, 695-702 (noting similarity between NEPA and the NFMA in emphasis placed on rationalist analysis rather than strong substantive standards to guide agency decisions on highly political issues).

The recent proposed rule aimed at restricting the public's opportunity to appeal Forest Service decisions seeks to shift the balance further in favor of agency discretion. It characterizes many appeals as "rooted in differing views about the priorities and values assigned to the agency's many wide-ranging and legislatively-mandated multiple-use management objectives." U.S. Dept. of Agriculture, Review of and Comment on National Forest Plans and Project Decisions, 57 Fed. Reg. 10,444, 10,445 (Mar. 26, 1992). In the Forest Service's view, any priorities that differ from the agency's should only be offered

NEPA, too, has been of limited value in framing and addressing the old-growth controversy. NEPA does not provide standards against which to measure the substantive policies pursued by BLM or the impact of these policies on the biodiversity and health of old-growth ecosystems. Rather, it simply requires BLM formally to document its awareness of new information about the owl.²⁷⁰

The net result of this array of legal constraints is that the species viability mandates of the ESA and the NFMA regulations provided the first effective check on a pattern of economic activity which entailed known long-term, detrimental environmental and economic consequences. Of course, enforcement of these laws with respect to old growth was profoundly shaped by Congress's ongoing oversight of public forest management and the use of annual appropriation riders to set harvest levels and restrict the application of forest management laws. Thus, criticism of the operation of the laws in the old-growth controversy is directed not only at the weakness of the policies embodied in current laws, but at Congress's widely criticized use of the appropriation riders to distort extant political and judicial processes.²⁷¹

Public choice theory in its starkest form offers a plausible if over-simplified explanation for this history of congressional action and Congress's support for the riders in the case of old-growth forests and the owl.²⁷² Historically, legislation affecting particular geographic areas has been dominated by the views of legislators representing the area. Thus, one could expect that relatively well-organized and concentrated economic interests supporting high timber harvest levels in the Pacific Northwest would influence key legislators, such as Senators Hatfield and Packwood, to support high harvest levels. One can explain both the absence of meaning-

by the public *before* the agency's decision; appeal of resulting decisions should not be allowed. *Id.* at 10,446.

270. I do not mean to dismiss the importance of the obligation recognized by the *Stryker's Bay* decision, 444 U.S. 223 (1980), discussed *supra* note 130 and accompanying text. The court upheld NEPA's goal that federal actors engage in reasoned consideration of environmental consequences before acting. But because NEPA does not require selection of any particular course of action, nor even conformity to any set of priorities, it does not provide an effective vehicle for challenging substantive policies. See Michael C. Blumm, *The National Environmental Policy Act at Twenty: A Preface*, 20 ENVTL. L. 447 (1990); Nicholas C. Yost, *NEPA's Promise—Partially Fulfilled*, 20 ENVTL. L. 533 (1990).

271. See generally Blumm, *supra* note 203; Sher & Hunting, *supra* note 180; Bolduan, *supra* note 180.

272. See generally Daniel A. Farber & Philip P. Frickey, *The Jurisprudence of Public Choice*, 65 TEX. L. REV. 873 (1987) for an overview of the theory and its application to law. I am indebted to Michael Blumm for pointing out the importance of the local-national dynamic in public land law and its consistency with public choice theory.

ful constraints in the organic forest management statutes, and the riders setting unsustainable annual harvest levels, as favoring these local private interests over the more diffuse national public interest.²⁷³ Only when environmental groups were able to capture national public attention through media coverage about the owl was the lobbying pressure created by these "local" economic interests neutralized.²⁷⁴

Professors Farber and Frickey offer a weaker version of the economic theory of legislation acknowledging the role of reelection—and hence of constituent and contributor interests—in determining legislative action, and recognizing that small easily-organized interest groups have a disproportionate influence.²⁷⁵ This weaker theory may explain Congress's actions in the old-growth controversy equally well. When Congress views the issues as only regionally significant, all those involved can best advance their own reelection prospects by a general rule of deference to the representatives from a region on issues of great regional importance. Such deference to legislators from the Northwest could explain the statutory backdrop underlying this controversy.²⁷⁶

The national prominence that the case achieved due to the injunctions and the popular interest in the owl may have changed the legislative balance significantly.²⁷⁷ Once the debate took into account the consequences for the entire country of the annual timber harvest levels and the appropriation riders, Congress ended its deference to Senator Hatfield in his efforts to obtain a new rider in 1991.²⁷⁸ This refusal reflected the diluted impact of the

273. See Blumm, *supra* note 203, at 51–55.

274. As public awareness spread from the affected communities to a national audience, the focus of attention widened from the owl to the forest as well. The debate has expanded to include old-growth forests, ecosystem preservation, public land management, timber harvesting practices, export of raw logs, automation and relocation of the logging, pulp and paper industries, and the economy of the Pacific Northwest. See *infra* notes 366–367. See also Farber & Frickey, *supra* note 272, at 887 (noting that interest group pressure is likely to be strongest when group's goals are narrow and address low-visibility issues).

275. *Id.* at 900.

276. Under this system of deference, the regional representatives could then advance the interests of the powerful, concentrated, and organized Pacific Northwest constituents, both human and corporate. As a result, human constituents would reward the local delegation with votes and institutions would contribute endorsements and financial support. These representatives would then reward other legislators with comparable deference on issues of importance to their respective constituencies.

277. When representatives from outside the region thus became accountable to their own constituents for their positions on old growth and the spotted owl, they were more likely to address the merits of the old-growth debate in order to advance their possibilities for reelection instead of simply deferring to the Northwestern congressional delegates.

278. See *supra* note 205.

regionally-powerful timber-aligned interests once the debate became significant to voters nationwide.²⁷⁹

2. *The Spotted Owl and the Future of the ESA*

The record of the litigation reveals that the statutes have been themselves targets of strong political forces during the controversy. While the statutes and their standards played a principal role in shaping the conflict, the dispute also has led to important changes in and deviations from the norms and standards embodied in the laws.

The pattern of responses to the spotted owl litigation demonstrates a serious dissatisfaction with our current laws, at least among some groups, and reveals the existence of an ongoing assault on important environmental protections.²⁸⁰ A study of the pervasive efforts to end-run the protections of the ESA and other laws in the case of the owl and the similarity of the owl debate to the history of the Tellico dam controversy suggest that this assault should not be taken lightly.

Against a proven backdrop of agency resistance to and non-compliance with the mandates of the statutes, between 1988 and 1990, Congress adopted several riders to appropriation measures which undermined the modest protections afforded by the planning processes mandated by the NFMA, the FLPMA, and NEPA.²⁸¹ In restricting judicial review of BLM and Forest Service management plans, Congress sought to dismiss legitimate challenges to planning, which were misperceived as illegitimate or frivolous when compared with the serious impact of delays on timber sales.²⁸² The riders embodied substantive law in violation of House and Senate Rules, and their adoption represented a subversion of the deliberative legislative process by a few powerful members of Congress.²⁸³

279. Accepting these economic theories as one explanation for Congressional action is not inconsistent with a recognition that the appropriation riders represented a failure of the deliberative legislative process.

280. See *Economic Issues to Be 'Prevailing Factor' in Battle over [ESA] Reauthorization*, Hatfield Says, Current Developments, 23 Env't Rep. (BNA) No. 34, at 2080 (Dec. 18, 1992).

281. See *supra* notes 180–205 and accompanying text.

282. See *supra* notes 198–199 and accompanying text.

283. See Blumm, *supra* note 203, at 52–56.

The Administration initially sought to avoid enforcement of the ESA by convening the ISC, but when the Administration found the ISC report unsatisfactory, it sought to discredit the report.²⁸⁴ Although BLM and the Forest Service publicly agreed to comply informally with its terms, they failed to implement its requirements and sought unsuccessfully to use the Thomas Report in the ongoing litigation as a shield from other statutory requirements.²⁸⁵ When these efforts to avoid the application of the ESA failed, BLM sought an exemption under section 7 of the ESA in order to proceed with 44 timber sales without ESA compliance. Throughout, the Administration and the timber industry called for amendment of the ESA. Additionally, as part of the Quayle Council's initiatives,²⁸⁶ the Department of Agriculture subsequently proposed rules that would restrict appeals of national forest management decisions.²⁸⁷

Although some may dismiss this history as representing temporary dissatisfaction with the outcome of the litigation, the Tellico dam controversy serves as a reminder that such efforts may seriously threaten the viability of the ESA.²⁸⁸ The Tellico dam was a Tennessee Valley Authority project seen as a means of revitalizing a flagging agency,²⁸⁹ and as a tool for local politicians to enhance power and profit.²⁹⁰ Many citizens opposed the dam project for a number of different reasons,²⁹¹ but were unable to halt the project in a meaningful way until the ESA was passed in 1973.²⁹²

284. See *supra* notes 226–231 and accompanying text.

285. See *Seattle Audubon Soc'y v. Robertson*, 1991 WL 180099 at *5–*7 (W.D. Wash. Mar. 7, 1991), *aff'd in part*, 952 F.2d 297 (9th Cir. 1991) (rejecting Forest Service's arguments that its promise to act not inconsistently with ISC Report constituted compliance with ESA and relieved it of duty to comply with NEPA and the NFMA); see also *supra* note 231.

286. The White House Council on Competitiveness, commonly known as the Quayle Council for Vice President Quayle's role as its chair, became well-known for initiatives to reduce regulation of industry. See Jim Sibbison, *Industry's Backdoor Boy*, THE NATION 141 (July 29/Aug. 5, 1991).

287. See *supra* note 269.

288. For a full discussion of the history of the Tellico dam controversy, see Plater, *In the Wake*, *supra* note 97.

289. See *id.* at 856.

290. See *id.* at 856 n.42.

291. *Id.* at 809–10. Some of these reasons included flooding of farms, loss of recreational flowing rivers, invasion of a sacred Cherokee site, and economic waste already known to be involved in the project.

292. The citizens used NEPA to obtain an injunction that halted construction for two years. But the project resumed once the TVA prepared an impact statement. See *id.* at 810–11.

After the ESA's passage and the discovery of the snail darter in the portion of the Little Tennessee that would be flooded by the dam,²⁹³ citizens seized the ESA's protection and carried forward their challenge in the name of the snail darter.²⁹⁴ They obtained an injunction from the Sixth Circuit to halt the dam, and thereby sparked new pressure in opposition to the ESA.²⁹⁵ As in the spotted owl dispute, opponents of the ESA emphasized the apparent disproportionality of blocking a multi-million-dollar dam project for a two-and-a-half-inch fish.²⁹⁶ Those supporting the dam finally managed to end-run the ESA by amending the statute and pursuing an exemption for the dam.²⁹⁷

The histories of the snail darter and owl controversies and the pattern of end-runs in the two cases are surprisingly similar.²⁹⁸ In both cases, statutes authorizing the dam and the old-growth harvesting, respectively, contained no enforceable mandates for protection of public environmental values, leaving the ESA and a single species' extinction as the only operative constraints. Each controversy shows a clear pattern of efforts to temporarily disable and permanently weaken laws, including the ESA. The sense that plaintiffs were motivated by other than the nominal species also fueled the opposition in each case, leading to assertions that those championing the owl's or snail darter's cause were using the ESA as a surrogate to accomplish a hidden, vaguely subversive agenda.²⁹⁹

A broader perspective on the old-growth controversy demonstrates that the efforts to weaken environmental statutes are

293. *See id.* at 811.

294. After a year's effort culminated in an endangered listing for the snail darter, *see* 40 Fed. Reg. 47,505 (1975), the citizens challenged the dam construction under section 7 of the ESA. *See Hill v. TVA*, 419 F. Supp. 753 (E.D. Tenn. 1976), *rev'd*, 549 F.2d 1064 (6th Cir. 1977), *aff'd*, 437 U.S. 153 (1978).

295. *See Hill v. Tennessee Valley Authority*, 549 F.2d 1064 (6th Cir. 1977), *aff'd* 437 U.S. 153 (1978).

296. *See Plater, In the Wake*, *supra* note 97, at 849 and n.169. Plater notes that the commonly cited \$150 million figure associated with the dam was incorrect. *Id.*

297. *See supra* notes 97-105 and accompanying text. Ironically, the dam failed utterly to pass the economic threshold required for exemption. This led to the second and final end-run: Senator Baker fashioned an appropriations rider authorizing completion of the dam notwithstanding the ESA. *See Plater, In the Wake*, *supra* note 97, at n.32. Apparently most of the Congress which passed the appropriations bill had no knowledge of the dam rider. *See id.*; *see also Sher & Hunting*, *supra* note 180, at 442-44.

298. *See Jay Heinrichs, The Winged Snail Darter*, 81 J. FORESTRY 212 (1983).

299. *See Sugg, supra* note 254. *See also Plater, In the Wake*, *supra* note 97, at 850; Salzman, *supra* note 91, at 319.

misguided. Only if the spotted owl and the ESA are the root causes of our problems would their removal solve our difficulties and prevent similar conflicts in the future.

IV. LEARNING FROM THE OLD-GROWTH CONTROVERSY

How well the legal system has served the public interest in the old-growth controversy has been the subject of considerable debate in recent months.³⁰⁰ Blunt commands have halted economic activity; communities and a regional economy are changing irrevocably. Those affected have often felt, however erroneously, that their interests are not even considered, much less given appropriate weight under the current laws.

This Part will explore the lessons to be learned from the old-growth controversy. Section A looks critically at the lesson that many, including former-President Bush, have drawn from the controversy: that the ESA and the owl are problems interfering with necessary and beneficial economic activity. The Section then explores the weaknesses of arguments offered in support of measures to eliminate these “problems.” Section B presents an alternative set of lessons from the controversy, based on a broader view of the underlying problem, and emphasizes the ways in which our laws and recent actions by Congress contributed to the creation of the phenomenon that has been misnamed the “spotted owl problem.”

A. The Spotted Owl Fallacy

All across the country we have a spotted owl problem. And yes, we want to see that little furry-feathery guy protected and all of that.

—President George Bush³⁰¹

300. President Bush, for instance, took campaign positions on legal changes needed in the wake of the litigation. See Michael Wines, *Bush, In Far West, Sides With Loggers*, N.Y. TIMES, Sept. 15, 1992, at A25. President Clinton convened and attended a “timber summit” focused in part on these issues. See *supra* note 5.

301. Excerpted Remarks with Community Leaders in Portsmouth, N.H., 28 WEEKLY COMP. PRES. DOC. 92, 96 (Jan. 15, 1992).

How we respond to the old-growth controversy will depend on our perception of the "problem." Some view the spotted owl as merely the messenger of bad news. To others, however, the lesson is that we have a "spotted owl problem" and the facile "solution" is to weaken environmental protection laws and reduce public participation in land management decisions. In fact, these political efforts to eliminate the "spotted owl problem" may be a cynical attempt to use the dissatisfaction that the controversy has produced to eviscerate the ESA.

The source of the perception that we have a "spotted owl problem" is not hard to identify. The most publicized basis for preserving old growth and for sustaining plaintiffs' challenges to federally subsidized economic activity has been the survival of the owl, only one of many species known to exist there.³⁰² Proponents of logging have used that publicity to argue that the short-term costs associated with protecting the old growth are *caused* by the species and concern for its survival.³⁰³ Yet close examination of these arguments reveals the distorted view of the old-growth conflict and the environmental laws on which the arguments rest.

In the wake of the owl controversy, many have argued that the ESA is excessively costly.³⁰⁴ Those who claim protecting the owl is "uneconomical" may add up the jobs lost on one side and the owls saved on the other. But this calculus ignores the inevitable loss of old growth-dependent timber jobs when the last old growth is cut,³⁰⁵ the broader economic issues surrounding logging on public lands,³⁰⁶ and the impacts of automation and the export of raw logs.³⁰⁷ This view also underestimates the values advanced by preservation of the old-growth ecosystem, ranging from watershed and wildlife protection to enhanced recreation, hunting, fishing, and other non-economic values of the forests.³⁰⁸ Further, this view assumes the absolute substitutability of resources, an assumption

302. The reasons for the owl's prominence are discussed *supra* part III.C.1.

303. See Bolduan, *supra* note 180, at 362-65 (documenting Congress's explicit justification for riders as necessary response to short-term harm that communities might suffer from enforcement of laws).

304. See, e.g., Wines, *supra* note 300 (quoting President Bush as saying that "the balance has been lost" between economics and environmental needs).

305. See *supra* notes 55-60 and accompanying text.

306. See *supra* notes 17-33 and accompanying text.

307. See *supra* note 56 and accompanying text.

308. See *supra* notes 13-15, 61-73 and accompanying text.

that not only may be wrong,³⁰⁹ but may undervalue the interests of future generations in finite natural resources. In a word, it requires that we define "economics" in a narrow, ultimately meaningless fashion.³¹⁰

The ethical argument that we need to value people over owls³¹¹ suffers from the same fatal constriction of focus, ignoring the far broader implications of preserving the owl. Any debate about the long-term human values³¹² embodied in the ESA must also include the values that motivate species preservation.

Another criticism of the ESA that surfaced in the owl controversy is the asserted "extremism" of the statute.³¹³ This increasingly common characterization of the ESA is simply inaccurate. The ESA is far from absolute.³¹⁴ The Act imposes no serious constraints on purely private action.³¹⁵ Section 7(h) gives the Administration, through the Endangered Species Committee, explicit authority to allow economic activity to continue in cases of re-

309. See PAUL R. ERLICH & JONATHAN ROUGHGARDEN, *THE SCIENCE OF ECOLOGY* 606-07 (1987); Dold, *supra* note 15 (reporting study demonstrating reduction in biological diversity in old-growth areas that had regenerated after clearcutting).

310. See *infra* part IV.B.4.

311. See Wines, *supra* note 300, (quoting President Bush in a campaign speech, saying "It's time to put people ahead of owls").

312. See *supra* notes 13-15, 61-73 and accompanying text.

313. See, e.g., *An Issue That Begg the Wisdom of Owls*, CHI. TRIB., May 20, 1992, at 16, ("[T]he act's flaw is that it deals largely in absolutes and makes little allowance for human needs."); Charles C. Mann & Mark L. Plummer, *Dialogue: Showdown on Endangered Species: The Noah Principle*, N.Y. TIMES, May 11, 1992, at A15 ("The battle over the number of jobs threatened by the owl is irrelevant because the law doesn't care. One job, 100,000 jobs—it doesn't matter. Any one owl still comes ahead of all human interests.")

314. See *supra* notes 95-105 and accompanying text. The Act's limited effectiveness in preventing extinction reveals how far from absolute it is. See, e.g., Michael E. Soulé, *Conservation: Tactics for a Constant Crisis*, 253 SCIENCE 744 (1991) (noting that the ESA "has not significantly slowed the deterioration of the nation's biological estate"). As of 1987, 80 candidates for protection under the Act had been dropped because they had become extinct. See Salzman, *supra* note 91, at 341 (citing *ESA Reauthorization Hearings Before House Subcomm. on Fisheries and Wildlife Conservation of Merchant Marine and Fisheries Comm.*, 100th Cong., 1st Sess. 219 (1987)). The rate of extinctions in the United States may now exceed the rate of listing of species under the ESA. David Blockstein, *Toward a Federal Plan for Biological Diversity*, ISSUES IN SCI. & TECH. 63, 64 (Summer 1989).

315. Even the prohibition on takings by private actors is not absolute. The Act provides exceptions for incidental takings with a permit and in cases of undue economic hardship. 16 U.S.C. § 1539(a), (b). Under FWS regulations, the agency may impose binding conditions on incidental takings requiring "reasonable and prudent measures" by the actor. 50 C.F.R. § 402.14(g). However, consultation is purely voluntary, and the FWS lacks authority under the ESA to take action to rectify another agency's wrongful refusal to consult. For a thorough discussion of the limitations of the consultation process, see generally Daugherty, *supra* note 95. But cf. Salzman, *supra* note 91, at 327-30 (suggesting that ESA decisions establish basis for finding taking based on adverse modification).

gional significance, if the benefits of such action outweigh the benefits of preservation and the activity is in the public interest. Moreover, even when these short-term economic concerns do not overtly prevail, the protections of the Act are relatively modest. Designation of critical habitat, while a tremendous boost to a species' chances for survival,³¹⁶ is not a talisman that prevents extinction.³¹⁷ As currently interpreted and applied, the threshold that economic activity must cross in order to be halted in critical habitat may be high indeed.³¹⁸ Moreover, the process for designating critical habitat includes a cost-benefit analysis, making ESA's protections far from absolute.³¹⁹

Critics of the ESA also argue that focusing scientific and legal attention on a species as a surrogate for broader environmental values is illegitimate.³²⁰ This argument presumes that the ESA serves a valid purpose only when it is enforced by those who care solely about individual species. This argument fails in two ways: (1) it is premised on a view of the ESA that is inconsistent with the statute's premises and is ecologically unsound, and (2) it has no basis in the American legal tradition.

The explicit purpose of the ESA is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved."³²¹ It makes no sense to say that trying to effectuate one of the ESA's central purposes represents an illegitimate use of the Act. The fundamental point of the science of ecology is that species, habitat, and the ecosystem are an interconnected whole; protecting the part is only

316. As Professor Blumm has pointed out, without a critical habitat designation, biological uncertainty makes determining the impact of particular timber sales on owl survival especially difficult. Blumm, *supra* note 265, at 617; *see generally* Salzman, *supra* note 91. The lack of designations for four-fifths of the listed species appears to be the greatest limitation on the effectiveness of section 7. *See id.* at 330, 332-33.

317. *See* Yagerman, *supra* note 4, at 840-45.

318. Salzman, *supra* note 91, at 324-27, discusses the conflation of the "jeopardy" and "adverse modification" standards in cases applying the ESA. While critical habitat may simplify the required proof, the interpretation given to the term "adverse modification" is critical. To the extent that courts revisit the biological question of the impact of modification on the species' ultimate fate (i.e., the jeopardy issue) in assessing whether modification of habitat is "adverse" within the meaning of section 7, critical habitat designation becomes less and less meaningful. *See also* Eric Erdheim, *The Wake of the Snail Darter: Insuring the Effectiveness of Section 7 of the Endangered Species Act*, 9 *ECOLOGY. L.Q.* 629, 656-59 (1981) (describing issues involved in determination of adverse modification).

319. *See supra* notes 99-102.

320. *See supra* note 299 and accompanying text.

321. 16 U.S.C. § 1531(b).

meaningful as one step in a plan to preserve the whole. Disqualifying those who also wish to preserve the ecosystem on which a threatened species depends from championing that species' cause would thus frustrate fundamental purposes of the ESA.³²²

Even if ecosystem protection were not a stated goal of the ESA, the argument that motive should disqualify citizens from enforcing laws to achieve their broader goals radically departs from the American legal tradition. We do not examine the underlying motives of otherwise legitimate plaintiffs to make sure those motives are precisely coextensive with those of a statute before allowing an action to proceed.³²³

The true complaint of those viewing the owl and the ESA as the problem is not that enforcement of the ESA is illegitimate, unethical or uneconomical, or that the ESA is "absolutist", but that the ESA sometimes operates effectively as a constraint on certain types of economic activity. The simple basis for these parties' opposition to the implementation, continued vitality, and improvement of these laws is far from unique to the spotted owl case: it is the desire to allow short-term profits from economic activity to prevail over other values, whatever they may be.³²⁴ Not surprisingly, the strongest opposition to enforcing the laws in this case came from those in the region who would be injured in the short-term.

An alternative criticism of the ESA is a straightforward disagreement with its purposes. One can fairly argue against the anti-extinction policy of the ESA or the viability requirement of the NFMA on their own terms by simply disagreeing with the values

322. Such a policy would also presumably require us to abandon the goal of protecting ecosystems on which endangered species depend, making the effort to preserve species more difficult, costly, and even futile.

323. For example, we do not explore the motives of a trade association challenging environmental regulations to see if their opposition is "illegitimately" driven by a desire for higher profits rather than a concern for the technical soundness of the rule. A policy demanding coextensive motives would restrict access to courtrooms far beyond the already formidable limitations imposed by the doctrine of standing and Article III of the Constitution.

324. See Salzman, *supra* note 91, at 322 n.52 (quoting *Endangered Species Act: Hearings Before the Subcomm. on Fisheries and Wildlife Conservation and the Environment of the House Comm. on Merchant Marine and Fisheries*, 97th Cong., 2d Sess. 159 (1982) (statement of Michael J. Bean) (noting that only species listed during first two years of Reagan administration was invertebrate that lived solely in one meter of a spring on the grounds of the National Zoo, "the listing of which will have little or no impact upon any economic or commercial interest"))).

the statutes embody.³²⁵ Yet this disagreement with the statutes' values does not explain the unique attack on protection of the spotted owl. All economic activity that ignores ultimate ecological constraints will sooner or later encounter some sort of "spotted owl problem"; one of the only peculiarities in the old-growth case was the large number of people affected.³²⁶

Blaming the ESA, public participation in planning, and the owl for the old-growth conflict is a short-sighted response to a subtle and enduring dilemma. The old-growth controversy was not "caused" by concern for environmental values any more than it was "caused" by the loggers cutting trees. The lesson of the spotted owl conflict is not that the ESA is excessively painful and should be abandoned. Rather, it is that the lack of a sound overall approach will lead to future conflicts.

B. Beyond the "Spotted Owl Problem": The Search for Root Causes

Although they fall short of providing a comprehensive environmental policy,³²⁷ the NFMA, the FLPMA, the ESA, and NEPA represent a serious commitment to natural resource values.³²⁸ National forest and BLM planners devote considerable resources each year toward fashioning harvesting constraints while accommodating historically excluded ecological, esthetic, and ethical

325. Public opinion polls suggest that most Americans do not disagree with those statutory values. *See supra* note 63. Recent polls consistently show that the public is concerned with environmental protection and believes that the environment needs greater protection, even at the cost of economic growth. *See, e.g.,* ROPER ORGANIZATION, *THE ENVIRONMENT: PUBLIC ATTITUDES AND INDIVIDUAL BEHAVIOR* (July 1990) (69% of those polled said we have not gone far enough in enacting laws and regulations to protect the environment; 17% thought we have struck about the right balance; only 4% said we have gone too far; 10% did not know). When asked about local industry being hurt by laws protecting a rare bird, fish, plant or animal, 61% of those polled said their sympathies lay with protecting the wildlife, 26% with protecting businesses or jobs, and 13% were not sure. JOHN MARTILLA & TOM KILEY, *MARKET STRATEGIES, SURVEY OF AMERICAN VOTERS: ATTITUDES TOWARDS THE ENVIRONMENT* (1990).

326. Also peculiar to the old-growth controversy was the industry's awareness that its activity would soon confront environmental constraints, namely depletion of Pacific Northwest old-growth forests. The only surprise was that obstacles arose before all of the trees that could be profitably logged were cut down. The pattern of harvesting old growth was never intended to be "sustainable."

327. *See* Arnold W. Reitze, Jr., *Environmental Policy—It's Time for a New Beginning*, 14 COLUM. J. ENVTL. L. 111, 116 (1989); David Schoenbrod, *Environmental Law and Growing Up*, 6 YALE J. ON REG. 357 (1989).

328. *See supra* part III.A.

values. But as long as environmental preservation remains a public value, painful conflicts between economic activity and environmental preservation will continue to exist.³²⁹

Dissatisfaction with the process for resolving the old-growth controversy is inevitable. The debate arises in an area of law and politics characterized by conflicting and deeply held values. Legal process and administration can help remove the sting and messiness of such conflicts;³³⁰ however, in the spotted owl controversy, the administrative framework enhanced rather than lessened strife.

This Section discusses inadequacies in the legal framework that contributed to the costs of the old-growth controversy: (1) the inability of the legal system to produce an effective response before the impending extinction of a species reveals the inadequacy of planning; (2) the exclusion of important values from consideration by the legal process; (3) the disproportionate focus placed on a single species, which needlessly jeopardized the owl's survival as well as the forest's; (4) the limited integration of cost-benefit analysis and the failure to anticipate and respond to short-term economic dislocation; and (5) the extensive use of appropriation riders instead of the normal deliberative process purportedly required to amend existing law.

1. The Costs of Crisis Management

The ESA and the NFMA viability regulation are enforceable only as measures of last resort. The ESA affords a species protection when it faces extinction throughout all or a significant portion of its range. Instead of requiring sound planning to prevent species decline, the ESA halts activities only once a species is on the verge of extinction. The Act thus is no substitute for effective first-order preventive measures.

Theoretically, the NFMA viability regulation is a somewhat more sophisticated planning tool than the ESA. Unfortunately, the use of "viability" as a threshold and the limitations of scientific knowledge diminish the efficacy of this planning process.³³¹ Thus,

329. See, e.g. Wilkinson, *supra* note 66, at 409.

330. See *id.*

331. The failure of the viability standard to protect the owl before it was listed as threatened supports this conclusion. *But see* WILKINSON & ANDERSON, *supra* note 11, at 298-99 (suggesting that requirement that distribution of vertebrate species be maintained provides strong mandate and early warning signal that should prevent species isolation and consequent decline).

like the ESA, the viability regulation operates as a tool of last resort.

It makes little sense to make complex, long-range value choices through a crisis management structure.³³² At the threshold of extinction, the measures required to preserve a species are drastic.³³³ Effective intervention may require the interruption of ongoing economic activity; in the case of the spotted owl, dramatic logging cuts resulted. Advance planning for the impending economic transition would have greatly eased the difficult times many individual loggers experienced.³³⁴

Years of inadequate planning combined with an ecological fail-safe have produced a policy that allows headlong pursuit of short-term, profit-oriented economic activity while running afoul of long-term economic and environmental values. The spotted owl case provides an important example, not of the excesses of our resource protection laws, but rather of their inability to assure even minimal environmental protection efficiently in the public forests.

2. *Exclusion of Relevant Factors of Decisions*

A second problem with relying upon the ESA and the owl to resolve the old-growth conflict is the limited range of analysis under the Act. It provides no guarantee of effective preservation of environmental values other than species protection.³³⁵ Addressing the needs of the spotted owl, an indicator species for the old-growth ecosystem, under the ESA produces very different out-

332. See Alston Chase, *The Frontier Hits Its Limit*, SAN FRANCISCO CHRON., Nov. 10, 1991, at 3 (ESA is effective in raising public consciousness but is poor tool for economic and ecological planning). Even the efficacy of the ESA is open to question because of the inadequate funding provided by Congress. Current efforts succeed in protecting only a fraction of the number of species that are endangered. See generally U.S. GENERAL ACCOUNTING OFFICE, *ENDANGERED SPECIES ACT: TYPES AND NUMBERS OF IMPLEMENTING ACTIONS* GAO/RCED-92-131BR (May 1992).

333. The cost of the measures that must be taken directly for a species are generally significantly greater at the threshold of extinction than if intervention occurs earlier. See Suzanne Winckler, *Stopgap Measures*, ATL. MONTHLY, Jan. 1992, at 74; Doremus, *supra* note 4, at 316-17. A recent study also explains that 11th-hour intervention under the ESA is frequently too late for successful recovery. See Jon R. Luoma, *Listing of Endangered Species Said to Come Too Late to Help*, N.Y. TIMES, Mar. 16, 1993, at C4.

334. Cf. Lohr, *Job Cuts by IBM May Rise*, *supra* note 58 (noting IBM's longstanding policy not to lay off workers, but to reduce workforce through yearly programs of early-retirement packages).

335. Doremus, *supra* note 4, at 304-17, discusses the argument that the ESA does not protect biodiversity or ecosystems because of its structure. But see *supra* note 322.

comes than would a policy directly addressing the sum of the old-growth issues.³³⁶ In designating critical habitat under the ESA, consideration of the needs of the owl necessarily comes first,³³⁷ to the exclusion of the many other values that may be advanced by preservation of old-growth forest.³³⁸

A look at the issues addressed in the NFMA and the ESA litigation leads to the same conclusion. In the spotted owl cases, most of the issues that were debated were quite narrow, and many could be characterized as minor when considered in light of the controversy as a whole.³³⁹

336. One outcome of emerging public concern for old-growth forests is pending legislation that would provide protection for old growth independent of, and in addition to, the protection afforded under ESA, *see infra* notes 373–376, recognizing the different concerns that motivate forest protection and protection of the northern spotted owl.

The owl filled an important need for a concrete focus both for scientific study and for legal attention, since studying the survival of a single species is a much simpler task than trying to assess the health of an ecosystem.

337. *See* 16 U.S.C. § 1532(5)(A) (defining critical habitat in part as “the specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features . . . essential to the conservation of the species”); CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL, *supra* note 7, at 27–35 (describing criteria for identifying critical habitat).

338. Ecosystem values did enter into the FWS’s economic analysis in a limited way under section 4(b)(2) of the ESA. In its economic analysis of the costs and benefits of excluding an area from critical habitat, the FWS considered recreational, esthetic, biodiversity, and aquatic benefits provided by old-growth forests as part of the positive impacts of designation. Determination of Critical Habitat for the Northern Spotted Owl, 57 Fed. Reg. 1796, 1819–20 (1992) (to be codified at 50 C.F.R. § 17); *see also* ECONOMIC ANALYSIS, *supra* note 241, at 68–81. In its full report on the critical habitat designation process for the northern spotted owl, the FWS included a section entitled “Biodiversity and Ecosystem Protection,” CRITICAL HABITAT FOR THE NORTHERN SPOTTED OWL, *supra* note 7, Part IV, exploring the benefits of protecting old-growth ecosystems separately from its discussion of benefits to the owl. FWS discussed in detail the ecological reasons for preserving old growth, noting that protection of owl habitat only incidentally and imperfectly achieved this larger goal. *Id.* at 70. The section emphasized the need for more systematic consideration of ecosystem and biodiversity protection to lessen the need for costly emergency protection of individual species. *Id.* at 69–70.

339. For example, in *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479 (W.D. Wash. 1988), the issues centered on whether or not the FWS was required to list and designate critical habitat for the owl. *See supra* notes 206–212, 235–238 and accompanying text. In the cases challenging timber sales, the courts ruled largely on issues of procedure or statutory interpretation, *see supra* notes 154–179 and accompanying text, which failed to address broader policy questions raised by the dispute. In contrast to these rulings of narrow, more technical issues relating to the owl, legal procedure, and statutory interpretation, the hearings held to determine whether to award injunctive relief to the plaintiffs in the cases resulted in findings on a set of broader issues. In *Seattle Audubon Society*, Judge Dwyer heard extensive evidence about the biological impact of logging on the owl and on old-growth forests, the economic and social conditions for logging companies and mills and their employees, and the agencies’ past and recent actions under the relevant statutes raised by plaintiffs. *See* 771 F. Supp. at 1088–95.

Perhaps in part because this hearing, held under the court’s broad equitable authority, was the only judicial or administrative forum in which these issues were fully aired during

The narrow focus of the statutes also had an impact on public perception of the laws and public confidence in them.³⁴⁰ Loggers whose jobs were at stake and others affected by protection of the owl repeatedly voiced outrage that their interests seemed to be excluded from the legal process and that their well-being was sacrificed for a mere owl. While not entirely true,³⁴¹ their perception that the ESA sets up a very narrow equation that fails to account for the full array of interests involved is accurate. Neither did the NFMA, the FLPMA, or NEPA adequately address this broader picture.³⁴²

Moreover, the need to rely on endangered species as surrogates delays development or correction of policies and laws. Agency action could only be halted in the old-growth controversy when a sufficiently studied species was proven to be threatened or endangered. Widespread awareness of the need for change in Forest Service and BLM policies governing old-growth forests significantly predated the point at which the owl's extinction became likely. But effective intervention to correct agency abuses had to wait for the imminent extinction of the owl.

3. *The Owl's Burden*

The obligatory reliance upon the owl as the impetus for preserving old-growth forests placed a heavy burden on the threatened species. Throughout the litigation and political debate, advocates suggested that broad protective measures needed to be justified by the value of the species, even though many other values had public support and existing government policy favored old-growth preservation.

The acreage needed for the spotted owl's habitat was unusually large.³⁴³ Asking for preservation of millions of acres of

the early stages of the dispute, Judge Dwyer's order generated great hostility to the role of the courts.

340. For an interesting cross-cultural comparison, see J. F. Holleman, *Disparities and Uncertainties in African Law and Judicial Authority: A Rhodesian Case Study*, 17 AFR. L. STUD. 1, 6-9 (1979) (describing dissatisfaction of Rhodesians with European-imposed appellate process for reviewing tribal court decisions because overly narrow field of inquiry created public perception that justice was not being done.)

341. As discussed above, economic considerations entered into the critical habitat determination as well as the exemption process. See *supra* notes 98-105 and accompanying text.

342. See *supra* part III.C.1.

343. See *supra* note 37.

forest for one species of bird tested the limits of public support for species protection. On the other hand, preservation of the owl was one of the easiest cases to make before the national public, due to the species' "cute furry creature" appeal.³⁴⁴ Lower order creatures that may be as, or far more, ecologically significant, but which lack this appeal, would face an even more tenuous and difficult battle.³⁴⁵ Forcing the loss of 30,000 timber industry jobs to be justified in terms of the owl's protection is unnecessary, since protections for old growth are being sought for many more reasons than the owl's survival. Focusing on the species caused all involved literally to lose sight of the forest for the trees.

Critics of species preservation ask how much it will "cost" to save a particular species,³⁴⁶ forgetting what else is "bought" with much of this money. Typically, vast tracts of land will be set aside for habitat, thereby preserving them in a relatively undisturbed state. A pronounced single-species focus marginalizes such broader benefits that are derived from the preservation of a species and its habitat.

4. *Balancing Economic and Environmental Values*

A fourth cause of the problems associated with the old-growth controversy is the statutes' effort to balance economic and environmental values. The various forms of cost-benefit analysis used under the statute remain problematic.³⁴⁷

The resolution of conflict between economic activity and natural resource protection involves a complex equation with many components and possible solutions.³⁴⁸ The ESA, like many envi-

344. This may have been an essential factor in the successful nationalization of the controversy. See *supra* notes 272-279 and accompanying text (discussing public choice theory).

345. See, e.g., Mann & Plummer, *supra* note 47, at 49-51.

346. See Bill Dietrich, *Study: To Save Owl Would Cost Billions*, SEATTLE TIMES, Feb. 12, 1993, at C4 (estimate by University of Washington economist that home range of 3000 acres for each nesting pair of owls was worth \$45 million). Roughly \$800,000 was spent in 1989 and 1990 to "save" the Higgins' eye pearly mussel. Suzanne Winckler, *Stopgap Measures*, ATL. MONTHLY, Jan. 1992, at 77. \$2.6 million was spent on land for the dusky seaside sparrow, \$9.2 million has been spent for the Bell's vireo, and \$5.9 million for the grizzly bear. Mann & Plummer, *supra* note 47, at 56, 59.

347. On the role of cost-benefit analysis under the NFMA, see generally Dennis E. Teeguarden, *Benefit-Cost Analysis in National Forest System Planning: Policy, Uses and Limitations*, 17 ENVTL. L. 393 (1987).

348. On the dangers of cost-benefit analysis, see William H. Rodgers, *Benefits, Costs, and Risks: Oversight of Health and Environmental Decisionmaking*, 4 HARV. ENVTL. L. REV. 191, 198 (1980).

ronmental statutes, requires the weighing of relevant economic costs against the environmental benefits of protection, to determine the proper level of protection to provide.³⁴⁹ However, the statute's broad language leaves difficult, unguided value choices to the FWS.³⁵⁰

For example, the agency must decide whether to exclude area from critical habitat because "the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat."³⁵¹ The statute does not define the types of "benefits" that are relevant, nor does it suggest how heavily short-term economic benefits should weigh against the advantages to a species of additional habitat.³⁵²

Similarly, the exemption provision, under which the Endangered Species Committee can overrule the anti-extinction provisions, states that exemptions are to be granted only where the benefits of the proposed action "clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat."³⁵³ The scale on which the benefits are to be measured is one of competing values. Economists cannot tell us, though, what constitutes a benefit or which benefits are more significant, except to the degree that they are a function of market demand.³⁵⁴

The ESA purports to place a value on species preservation, but it does not address the difficult question of when and why economic activity that will lead to a species' extinction would ever be preferable to, or "outweigh," restraint and preservation of the species.³⁵⁵ Moreover, it does not suggest any standards for deter-

349. See *infra* notes 351–359 and accompanying text.

350. See Stevens, *supra* note 54, at C8.

351. 16 U.S.C. § 1533(b)(2).

352. Cf. Teeguarden, *supra* note 347, at 415–18 (discussing issues surrounding selection of discount rate for forest management planning under NFMA). The statutes do not purport to resolve these questions or to adopt any particular approach, markedly increasing agency discretion.

353. 16 U.S.C. § 1536(h)(1)(A)(ii).

354. See W. Michael Hanemann, *Economics and the Preservation of Biodiversity*, in BIODIVERSITY, *supra* note 4, at 193–98, on the shortcomings of an economic basis for valuing biodiversity. See also David Ehrenfeld, *Why Put a Value on Biodiversity*, in BIODIVERSITY, *supra* note 4, at 212–16.

355. For discussion of the similar problems resulting from the broad delegations by Congress in the Clean Air Act, see Schoenbrod, *supra* note 327, at 361–67.

One of the pending bills to amend the ESA would exacerbate the uncertainty that characterizes the current ESA. See Environment and Economic Stability Act of 1992, H.R. 5105, 102d Cong., 2d Sess. (1992). The bill requires that a broad analysis of all direct and indirect costs and benefits of listing be done before listing a species under the ESA. It provides little guidance on how the agency should resolve the problems that render such

mining why the preservation of some species might be more important than that of others.³⁵⁶ Yet, in some undefined class of cases, it allows competing values to prevail over species protection.³⁵⁷ Leaving such difficult value choices to the agency's unguided discretion assures that implementation of the law will be contentious.³⁵⁸ If cost-benefit analysis is to play an important role in our resource protection laws, then resource protection laws must provide a mechanism for coherently balancing the full range of long-term economic and environmental values against the immediate costs involved.³⁵⁹

Others have criticized the integration of economics into the NFMA.³⁶⁰ Although not explicitly at issue in the old-growth litigation, NFMA economics were at the heart of the larger debate.³⁶¹ No challenges were or could have been brought to the economic analyses that supported old-growth harvesting because the complexity of the relevant decisions and the broad discretion given the agency effectively insulates these decisions from review.³⁶²

an analysis both malleable and difficult. The analysis seems intended to influence only critical habitat determinations and exemption and listing decisions. *Id.*

356. Of course, choices among species must be made even outside of the exemption process in the routine implementation of the Act, given the very limited funding available and the costly task of rescuing species on the brink. *See* Mann & Plummer, *supra* note 47, at 55-56 (describing FWS's efforts to develop system of priorities and its perverse effects upon the attempt to save dusky seaside sparrow). The inevitability of value choices highlights the importance of the challenge to better define the ethical basis for our resource protection laws. *See infra* notes 376-384 and accompanying text.

357. Many commentators take comfort in the fact that thus far, the exemption process has been used only three times. *See, e.g.,* des Rosiers, *supra* note 103, *passim* (arguing that current exemption process is rigorous and effective without weakening the ESA). But there is no certainty that its use will not become more common with time.

358. *See supra* note 330.

359. *See* Hanemann, *supra* note 354, for a discussion of some of the economic issues that need to be resolved before a sound cost-benefit analysis for natural resource depletion can be developed.

360. *See* WILKINSON & ANDERSON, *supra* note 11, at 125-28; Wilkinson, *supra* note 27, at n.101 and accompanying text; O'TOOLE, *supra* note 27.

361. *See supra* notes 16-31 and accompanying text.

362. *See supra* notes 114-117 and accompanying text. O'TOOLE, *supra* note 27, analyzes in detail and criticizes many of the assumptions supporting Forest Service economic analyses, revealing their complexity. *But see* F. Kaid Benfield, *The Administrative Record and the Range of Alternatives in National Forest Planning: Applicable Standards and Inconsistent Approaches*, 17 ENVTL. L. 371, 377, 383-84 (1987) (noting vulnerability of Forest Service economic analysis relying on unsupported assumption that recreational value of forest would increase with increased logging due to greater access provided by logging roads).

The following letter, sent to the Siskiyou National Forest supervisor and the Oregon congressional delegation in January 1988 by a state resident, highlights the flaws in the vision of economics that supported the pattern of old-growth harvesting.

Forest planners must increasingly face long-range economic considerations in environmental protection decisions as finite nat-

Enclosed please find a shaving of Port Orford cedar I cut with a block plane. In my work as a musical instrument maker and builder of timber-frame structures, white cedar has come to be my favorite wood.

I have studied with Italian and Japanese master woodworkers and appreciate their traditions of excellence. So I cannot begrudge the Japanese for stockpiling Port Orford cedar because they probably make very good use of most of it. They certainly have no incentive to harvest their own white cedar trees when they can buy ours for a pittance. We are now charging about \$3000/mbf for clear old-growth logs which are worth approximately \$60,000/mbf in Japan. They are scoffing at us. Due to its workability, rot-resistance and stability, this wood has an inherent value which far exceeds administrative costs for its sale and transportation out of the forest and into the holds of ships. Yet for me, the best quality logs are almost unobtainable; I have to choose from "export rejects."

To close, I respectfully request that you set aside some significant percentage of our Port Orford cedar, yew, and spruce forest . . . and fir . . . to be selectively harvested for sustained yield of old-growth wood so that American craftsmen and our descendants will have the opportunity to create noble, useful objects for the general good of the people with this gift that nature has bestowed on us.

Sincerely yours,
Rob Chambers

Letter from Rob Chambers, Oregon resident, to Bob Packwood, U.S. Senate (Jan. 20, 1988).

Several members of the Pacific Northwest congressional delegation sent the following responses to Mr. Chambers's letter:

Dear Mr. Chambers:

Thank you for your correspondence regarding the Forest Plan for the Siskiyou National Forest as it affects resource values. I appreciate having the benefit of your comments.

As you know, the Forest Service has released a series of alternative management proposals for the forest and asked the public to comment on these alternatives. It is important that local users of the forest with a firsthand knowledge of the resources become involved in these planning efforts.

* * *

Sincerely,
Bob Packwood
[U.S. Senator]

Letter from Bob Packwood, U.S. Senate, to Rob Chambers, Oregon resident (Feb. 10, 1988).

Dear Mr. Chambers:

Thank you for providing me with your comments on the Siskiyou National Forest Plan.

Your participation in the planning process will help decide the fate of the national forests, the economy, and the quality of life in Oregon. The National Forest Management Act of 1976, which created this planning process,

ural reserves begin to be depleted. The spotted owl controversy is the first highly visible case in which the continuation of regionally important economic activity threatens rapid depletion of multi-valued natural resources. Clarification of the structure for resolving such conflicts may enable us to reach better and more widely accepted decisions in the future.³⁶³

Another problem that arises from the integration of economics into resource protection laws is that the current laws set up a false dichotomy between certain types of economic activity and environmental protection. Because of this structure, the legal system fails to provide an adequate response to the short-term economic dislocation environmental protection creates.

Under the provisions of the NFMA and the ESA, economics are relevant only to qualify or vitiate the protections afforded by the statute.³⁶⁴ Congress has provided no significant authority to mitigate the short-term human and economic costs of environmental protection.³⁶⁵ The only way to obtain relief under the statutes

has at its center an excellent opportunity for local people to decide the uses and management practices of individual forests.

* * *

Sincerely,
Les AuCoin
Member of Congress

Letter from Les AuCoin, U.S. House of Representatives, to Rob Chambers, Oregon resident (Feb. 5, 1988).

It is ironic that these legislators urged participation in the planning process during the very year they adopted the FY 1988 rider, which dramatically narrowed the opportunities for meaningful challenges to Forest Service decisions and would likely have precluded Mr. Chambers' challenge. See *supra* note 182-186 and accompanying text.

363. See Teeguarden, *supra* note 347, at 404-07, 411-15 (noting problems of inadequate empirical evidence on benefits of some forest outputs and unspecified weight to be given economic efficiency under NFMA).

364. For example, even though section 7 of the ESA directs that all efforts be made to resolve the conflicting values, see 16 U.S.C. § 1536(h)(1)(A)(i) (requiring Committee to find that "there are no reasonable and prudent alternatives to the agency action"), the agency has little positive authority to do more than two things: favor protection of the species (and thereby restrain economic activity) or decline to protect the species completely (and allow economic activity to override protection). But see 16 U.S.C. § 1536(h)(1)(B) (requiring Committee to establish "reasonable mitigation and enhancement measures . . . as are necessary and appropriate to minimize the adverse effects of the agency action").

365. Wilkinson, *supra* note 27, at 405, describes the need for an ethic that "manifest[s] itself in a dogged determination of the society-at-large to treat the environment and its people as equals, to recognize both as sacred, and to insure that all members of the community not only search for, but insist upon, solutions that fulfill the ethic." The current structure for integrating economic and environmental considerations seems to prevent such a pursuit, presenting instead a bipolar choice.

is if the agency decides to minimize environmental protection in order to avoid the short-term hardship. Worker retraining, relocation assistance, incentives for alternative economic development, and other temporary regional aid are examples of positive measures that should be at least promoted, if not prescribed, when mandated resource protection would unfairly impose heavy short-term costs on a segment of the population.³⁶⁶

In the spotted owl controversy, Congress has responded in an *ad hoc* manner to job losses, worker retraining needs, and regional economic problems.³⁶⁷ What is needed is systematic planning, under a policy that affords well-defined resource protection, promotes economic adaptation, and provides assistance in cases of economic dislocation. The spotted owl controversy highlights the degree to which our laws force an artificial confrontation between two choices when, in reality, all parties ultimately must face both the environmental and economic consequences of the chosen resolution.

5. Distortion of the Political and Judicial Process

The foregoing discussion of inadequacies in our laws assumes full enforcement of NEPA, the NFMA and the FLPMA. When Congress intervenes to limit the opportunity for challenges to agency discretion, as it did from 1988 through 1990, an even more predictable disaster results. Riders short-cut the policymaking process and substitute horse-trading for reasoned evaluation of natural

366. For examples of Congress's past use of such provisions, see Title XI of the Clean Air Amendments of 1990, P.L. 101-549, 104 Stat. 2399 (codified at 42 U.S.C. § 7407) (providing short-term economic assistance to workers displaced as a result of the sulfur dioxide emission reduction provisions); Title II of the Redwood National Park Expansion Act of 1978, P.L. 95-250, 92 Stat. 172, 201-13 (providing laid-off timber workers up to six years of compensation and retraining).

367. See Endangered Species Employment Transition Assistance Act, S. 2491, 102d Cong., 2d Sess. (1992) (authorizing grants for training dislocated workers, training adjustment assistance, and employment services); Forest and Community Survival Act, H.R. 2807, 102d Cong., 1st Sess. (1991); Northwest Forest Protection and Community Stability Act, H.R. 3263, 102d Cong., 1st Sess. (1991); Pacific Northwest Forest Community Recovery and Ecosystem Conservation Act, H.R. 3432 and S. 1536, 102d Cong., 1st Sess. (1991); Timber Resource Employment and Enhancement Act, H.R. 3931, 102d Cong., 1st Sess. (1991) (creating program to "restore and enhance federal forest lands, giving preference to contractors from local rural communities and those who employ persons in rural communities in implementing program").

resource conflicts.³⁶⁸ In the case of the owl, the riders increased the bias in agency decisionmaking processes towards timber production,³⁶⁹ ostensibly to protect timber-dependent communities. However, the higher harvest levels only assured that the restrictions needed to protect the owl would be more extensive and thus more "costly."

The riders have increased the pressure on the ESA by weakening other protective laws. More generally, resort to the riders facilitated a hasty reaction to one facet of a complex controversy. Such legislation is the antithesis of reasoned integration of economic and ecological values. Moreover, if one accepts the explanation of the riders afforded by public choice theory,³⁷⁰ use of the riders as a vehicle for policy and law development is especially troubling, given the apparent divergence between concentrated regional economic interest and the broader national interest on public land and ecological issues.³⁷¹

V. THE CHALLENGES AHEAD

A number of problems inhere in the structure of the laws employed in the old-growth controversy. Assuming the correctness of this characterization,³⁷² several responses suggest themselves.

One clear answer is to enact better laws. There have been many recent calls for statutory protection of biodiversity and ecosystems³⁷³ as well as legislative proposals aimed at preservation of forests,³⁷⁴ ecosystems,³⁷⁵ ecosystem diversity, and biodiver-

368. See *supra* notes 180–205; Sher & Hunting, *supra* note 180, at 476–85 (suggesting need for heightened judicial scrutiny of riders); Bolduan, *supra* note 180, at 375–80 (discussing shortcomings of riders as policymaking vehicle).

369. See Bolduan, *supra* note 180, at 377.

370. See *supra* notes 272–279 and accompanying text.

371. The characterization of these interests as divergent seems to be confirmed by the history of Congress's subsequent repudiation of the riders. See *supra* note 205.

372. See *supra* part IV.

373. Smith, *supra* note 91; Reed F. Noss, *A Native Ecosystems Act*, 1 WILD EARTH 24 (Spring 1991).

374. See H.R. 4899, 102d Cong., 2d Sess. (1992); H.R. 1590, 102d Cong., 1st Sess. (1991) (creating old-growth forest reserve system and requiring designation of about 6 million acres as part of system); Ancient Forest Protection Act, H.R. 842, 102d Cong., 1st Sess. (1991); Forest Community Survival Act, H.R. 2807, 102d Cong., 1st Sess. (1991) (developing old-growth reserve system).

375. See Forest Biodiversity and Clearcutting Prohibition Act, H.R. 1969, 102d Cong., 1st Sess. (1991) & S. 3228, 102d Cong., 2d Sess. (1992); H.R. 4045, 102d Cong., 2d Sess. (1992) (reauthorizing ESA and giving priority to integrated multispecies recovery plans).

sity.³⁷⁶ However, the inadequacies of our current laws may reflect an obstacle more basic than a failure to recognize the problem or a lack of political will. The relatively few statutes with enforceable commands may reflect the human tendency to avoid confronting the difficult questions raised by situations such as the old-growth controversy.

There has been little meaningful public debate about how to resolve these conflicts.³⁷⁷ Before addressing the hard question of how to protect more of the environment, it is necessary to consider the more difficult and essential question of *why* we should protect the environment.³⁷⁸ Legislators have only glibly and incompletely addressed this question and scholars have only recently seriously studied it.³⁷⁹ Many statutes are premised on goals or ethics that have been repudiated in practice or dismissed as naive.³⁸⁰ Unfor-

376. National Biological Diversity Conservation and Environmental Research Act, H.R. 585, 102d Cong., 1st Sess. (1991). *See also* William M. Flevaris, *Protecting Biological Diversity at Home and Abroad*, 65 S. CAL. L. REV. 2039, 2052-64 (1992) (analyzing provisions of this bill).

377. *See* SAMUEL P. HAYS, *BEAUTY, HEALTH AND PERMANENCE: ENVIRONMENTAL POLITICS IN THE UNITED STATES, 1955-1985* 10 (1987) ("Environmental affairs have provoked much action but little focused reflection."). This lack of reflection is not surprising given the rapidity with which knowledge and concern about environmental protection have developed in America. Virtually all of our strong environmental laws have been developed since 1970.

378. Reitze, *supra* note 327, at 119-21, notes the lack of any "overall environmental plan or goal" and suggests that we need to develop a long range consideration of priorities, costs, and benefits.

379. Within philosophy departments, specialists in environmental ethics have struggled for recognition and respectability. Journals such as *Environmental Ethics*, devoted exclusively to the topic, are now well established. Recent works in the field include: J. BAIRD CALLICOTT, *IN DEFENSE OF THE LAND ETHIC: ESSAYS IN ENVIRONMENTAL PHILOSOPHY* (1989); EUGENE C. HARGROVE, *FOUNDATIONS OF ENVIRONMENTAL ETHICS* (1989); HOLMES ROLSTON III, *PHILOSOPHY GONE WILD: ESSAYS IN ENVIRONMENTAL ETHICS* (1986); PAUL W. TAYLOR, *RESPECT FOR NATURE: A THEORY OF ENVIRONMENTAL ETHICS* (1986). Until quite recently, Christopher Stone and Edith Brown Weiss were among the few scholars of environmental law to discuss environmental ethics outside of an occasional mention of Aldo Leopold and a land ethic. *See* CHRISTOPHER D. STONE, *EARTH AND OTHER ETHICS: THE CASE FOR MORAL PLURALISM* (1987); Christopher D. Stone, *Should Trees Have Standing?—Towards Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972); Edith B. Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 *ECOLOGY L.Q.* 495 (1984); more recently, see Richard Delgado, *Our Better Natures: A Revisionist View of Joseph Sax's Public Trust Theory of Environmental Protection, and Some Dark Thoughts on the Possibility of Law Reform*, 44 *VAND. L. REV.* 1209 (1991); Meyers, *supra* note 13; Wilkinson, *supra* note 27.

380. For example, the stated goal of the Clean Water Act remains that "the discharge of pollutants into the navigable waters be eliminated by 1985." 33 U.S.C. § 1251(a)(1) (1988). NEPA professes that it is the policy of the government "to use all practicable means . . . to create and maintain conditions under which man and nature can exist in productive harmony" and recognizes "that each person should enjoy a healthful environment." 42 U.S.C. 101(a) & (c). Although the ESA states that conservation of species is its goal, 16

tunately, the rhetoric of public debates over environmental issues has not moved beyond these unexamined premises.³⁸¹

There has been little open debate about how to resolve imminent and existing conflicts between short-term economic interests and long-term ecological preservation. The debate that has occurred about harnessing economic incentives or market forces to achieve environmental protection has focused more on techniques for implementing environmental policies than on the underlying question of what values those policies represent.³⁸²

The claim that economics and environmental protection are consistent depends upon the definitions of "economics" and "environmental protection."³⁸³ To the extent that we rely on market economics in determining levels of protection, severe problems of valuation remain. Articulating public values in this field represents a difficult challenge.³⁸⁴ However, the task must be faced before the natural resources that embody these values are irretrievably altered. With this caveat in mind, the following are some general strategies for legislative change that would address the statutory shortcomings described in Part IV of this Article.

A. *Eliminating Surrogacy: Ecosystem and Biodiversity Protection*

One strategy for reforming laws to avoid reliance on species as surrogates for a more comprehensive set of environmental values is to identify those larger values and afford them protection analogous to that provided species by the ESA. Many conservation biologists, including Michael Soulé, have supported this strat-

U.S.C. 1531(b), its inadequate funding has assured that species become extinct notwithstanding its provisions. See John P. Dwyer, *The Pathology of Symbolic Legislation*, 17 *ECOLOGY L.Q.* 233 (1990), for one perspective on this phenomenon.

381. See *Mr. Bush's Political Environment*, N.Y. TIMES, May 19, 1992, at A22.

382. See Michael C. Blumm, *The Fallacies of Free Market Environmentalism*, 15 *HARV. J.L. & PUB. POL'Y* 371, 389 (1992).

383. See Mathews, *supra* note 45.

384. See Holmes Rolston III, *Property Rights and Endangered Species*, 61 *U. COLO. L. REV.* 283 (1990) (noting deeper thinking about the ESA's ethic may advance our understanding of relationship between law and ethics in this area).

egy.³⁸⁵ Legislators have recently introduced a number of proposals to provide ecosystem protection or to protect biodiversity comprehensively, reflecting a growing awareness of the inadequacy of a strategy that focuses largely on individual species.³⁸⁶ Secretary of the Interior Bruce Babbitt has announced plans to follow an ecosystem approach to species protection.³⁸⁷

Preservation of ecosystems or biodiversity would eliminate the damaging effects associated with species surrogacy, would promote policies that rationally achieve the goal of protecting natural areas and systems, and could enhance public awareness of the interdependence of resources in a positive and productive way.³⁸⁸ Such legislation may also avoid the problem of crisis management approaches. One difficulty will be agreeing upon the appropriate definition of an ecosystem or upon what sort of biodiversity merits protection. However, the existence of this challenge does not warrant abandoning efforts to develop such laws.

385. Soulé notes:

Progress in conservation is hampered by the lack of a clearly articulated public policy on biodiversity. The United States and many other countries lack a coherent conservation strategy In addition, a high level review of federal agencies is necessary so that either the authority for the protection of biodiversity is vested in a new agency with clear directives, or the organic acts (if any) of the agencies should be restructured, making conservation a prime directive of the U.S. Forest Service, the Bureau of Land Management, and the National Wildlife Reserve System.

Soulé, *supra* note 314, at 749. *See also* Blockstein, *supra* note 314, at 64. *See generally* BIODIVERSITY, *supra* note 4. Others have called for more radical measures in order to preserve biodiversity. *See* Paul R. Ehrlich & Edward O. Wilson, *Biodiversity Studies: Science and Policy*, 253 *SCIENCE* 758, 761 (1991) (calling for halt to development of relatively undisturbed land).

386. *See supra* notes 374–375. For an early suggestion of such an approach to environmental protection, see Smith, *supra* note 96, at 395, 402. If we develop a policy of biodiversity protection in some broader form, complex scientific issues and value choices remain to be resolved. For example, phylogenetics and biogeography question the merits of focusing on preserving endemic species, which occur in only one location, as opposed to preservation of organisms that have demonstrated radiation, or the ability to evolve into a more broad and widespread lineage through time. *See* Terry L. Erwin, *An Evolutionary Basis for Conservation Strategies*, 253 *SCIENCE* 750, 751–52 (1991). Choosing between types of species will require both scientific analysis and judgement on the values sought by conservation. *See id.* at 751.

387. William K. Stevens, *Interior Secretary Is Pushing a New Way to Save Species*, *N.Y. TIMES*, Feb. 17, 1993, at A1. To support this effort, Secretary Babbitt plans to conduct a national biological survey that will allow better planning in advance of “collisions” like the old-growth controversy. William K. Stevens, *Babbitt to Map Ecosystems Under New Policy to Save Them*, *N.Y. TIMES*, Mar. 14, 1993, at A29.

388. For a summary of the arguments for preservation of biodiversity and a look at the question of how much we ought to preserve, see Doremus, *supra* note 4, at 269–86.

B. Protection of Keystone and Indicator Species

A narrower endeavor would accord indicator or keystone species special protection under the ESA.³⁸⁹ This approach would recognize the ecological significance of certain species like the owl, and would accord these species higher priority or earlier protection. A statutory mandate recognizing and valuing the role of these species *as surrogates*, would alleviate the focus on these species as the only value at stake when ecosystem protection is also at risk. If protection were triggered at some point before the threshold of endangerment, conflicts might not suffer from the problems of crisis management described in Part IV.A.1. However, identification of that earlier threshold will pose a difficult and contentious scientific and political challenge, especially since knowledge of keystone and indicator species and the roles they play is incomplete, though evolving. Scientists currently may not be able to identify keystone or indicator species until the species are threatened.

C. Fulfilling NEPA'S Promise

Another possible direction to follow is to infuse NEPA with a substantive mandate reflecting values inadequately protected under our current laws and policies, such as ecosystem or biodiversity protection. Many have unsuccessfully advocated giving NEPA teeth,³⁹⁰ but perhaps the owl controversy can provide a new and persuasive reason to consider this possibility.³⁹¹

D. Comprehensive Review and Reform

Most ambitious and difficult of all, we could undertake systematic revision of all our existing laws governing management of

389. See e.g., Smith, *supra* note 91, at 403–05 (suggesting prioritizing species based on ecological functions or indicator status).

390. See, e.g., Philip M. Ferester, *Revitalizing the National Environmental Policy Act: Substantive Law Adaptations from NEPA's Progeny*, 16 HARV. ENVTL. L. REV. 207, 225–69 (1992).

391. A related strategy currently being pursued by NEPA's author, Lynton Caldwell, along with others, is the development of a constitutional environmental provision to bolster existing statutes. See Lynton Caldwell, *An Environmental Amendment to the Constitution*, ENVTL. AMENDMENT CIRCULAR NO. 4, June 1991, at 12–16.

public lands. Such revision should account for values currently lacking statutory protection.³⁹² Based on some clearer understanding of existing environmental policies, one could identify through the history of their implementation statutes that lack a sufficiently clear or sufficiently broad mandate.

E. Defining and Integrating Economics

All of the foregoing proposals address the inadequacy of current statutes in incorporating environmental values into natural resource planning. In addition to this weakness, the uncertain role of economics in statutes and the dichotomy that characterizes many legal standards pose fundamental problems. Achieving greater clarity about what is meant by economic and environmental values³⁹³ would help those seeking to resolve disputes and would eliminate avoidable misinterpretation and distortion. But most importantly, statutes must integrate economic problem-solving into environmental protection, rather than posing a bipolar choice between preserving the economy and protecting natural resources.

As finite resources are depleted, the United States will require better and more systematic ways to respond to economic transition. Economics should be integrated by providing authority to respond effectively to unavoidable hardships associated with necessary environmental protection.

F. Developing Comprehensive Environmental Policy

Finally, in the search for root causes, one must look deeper than the laws, policies, and markets that lead to conflicts among competing values. Population is a root cause of many conflicts

392. Interagency initiatives designed to identify and correct deficiencies in existing protections could help identify these unprotected values. See Blockstein, *supra* note 314, at 65–66. See also Meyers, *supra* note 13, at 660–61 (suggesting need for integrated review of existing environmental laws).

393. Initiatives such as the Society of Ecological Economics may represent a beginning of efforts to address these problems. See Harold J. Morowitz, *Balancing Species Preservation and Economic Considerations*, 253 SCIENCE 752, 754 (1991) (suggesting that a National Institutes for the Environment would provide forum for inter-disciplinary discussion that will be needed to address these issues).

between resource use and resource protection.³⁹⁴ Enhanced energy efficiency promises to play a part in the overall solutions of many resource conflicts. It would be wise to consider and respond to the connections between fundamental issues like population and resource preservation sooner rather than later.

G. Preserving the Democratic Process

The history of the extensive use of riders to set harvest levels in the national forests and to amend existing environmental laws suggests a disturbing pattern of subversion of the deliberative process. Although the Supreme Court upheld the 1990 rider against a separation of powers challenge, such riders may still violate congressional rules³⁹⁵ and may ill serve the public. Especially in light of the intense local economic interest in management of public lands, required congressional process in the management of these lands takes on particular importance and should be observed.³⁹⁶

VI. CONCLUSION

The controversy over the spotted owl showed the current statutory structures to be an inefficient and risky avenue for resolving the question of a single species' fate. The ESA procedures, while an important tool for preserving endangered species, proved unsatisfactory for resolving larger questions such as those involved in public management of old-growth forests. As a result, some have blamed the ESA itself for all the costs associated with resolving the old-growth controversy.

The ESA is not the problem its detractors claim it to be. On the contrary, promotion of economic activities inconsistent with popular ecological values in the absence of effective laws addressing conservation of land and natural resources represents the real problem. The challenge at hand is to adapt the law and economic policy to the reality of the ecological constraints that we recognize

394. See Reitze, *supra* note 327, at 116–17; Soulé *supra* note 314, at 745–46 (listing population as one of the seven sources of biotic degradation). See also Daniel E. Koshland, *Preserving Biodiversity*, 253 SCIENCE 717 (1991); Morowitz, *supra* note 393, at 753.

395. See Blumm, *supra* note 203, at 52–53.

396. See Sher & Hunting, *supra* note 180 (suggesting need for heightened judicial scrutiny of riders).

as important. To ignore the lessons taught by the repeated extinction of species and the costs of last-minute efforts to prevent extinction is to forego a crucial opportunity to amend laws and economics that currently promise an unending series of "spotted owl problems" throughout the country.

More and better laws alone cannot resolve this problem, however, since these gaps in protection partly reflect a struggle to find an agreeable environmental ethic on which to build policy. Only with a clearer ethical vision of appropriate preservation goals can better laws be shaped. Our habit of mistaking the effects of the environmental crisis for its causes is no longer legally, politically, or ethically tenable.