

STUDENT ARTICLES

THE SAGE GROUSE DEBATE: COST-BENEFIT ANALYSIS AND THE DISCOURSE OF THE ENDANGERED SPECIES ACT

AMANDA R. GARCIA *

TABLE OF CONTENTS

I. Introduction: The “Spotted Owl of the Intermountain West”?	573
II. The Science-Only Mandate in the ESA Listing Process	578
A. The Listing Process and Cost Considerations	578
B. Limits of Science-Only: What Exactly Is An “Endangered Species”?	581
C. Recent Proposals for Reform of the Listing Process	583
III. The Sage Grouse Debate	588
A. A Series of Greater Sage Grouse Listing Petitions	588
B. The Sage Grouse in Public Discourse	592
1. Environmentalists	592
2. Industry	596
IV. Cost-Benefit Analysis: The Critical Habitat Experience	599
A. Background on Critical Habitat Designation	600
B. Serious Flaws in FWS’s Approach to CBA in Critical Habitat Determinations	603
C. Effects of CBA on Critical Habitat Public Discourse	607
V. Additional Criticisms of CBA in Endangered Species Decision-making	609

* B.A., 2000, Stanford University (Comparative Literature); J.D., 2006, New York University School of Law. Colloquium Editor, 2005–2006, *New York University Environmental Law Journal*. I would like to thank Professor Katrina Wyman and the staff of the *New York University Environmental Law Journal* for helpful comments on earlier versions of this Note.

2006]	<i>THE SAGE GROUSE DEBATE</i>	573
	A. Manipulability and Bias	610
	B. Incommensurability.....	611
	C. Indeterminacy.....	612
	D. Denying Public Participation.....	613
	E. Expense	614
VI.	Toward a Rational Listing Discourse: Saving the Sage Grouse, Saving Ourselves	614

I. INTRODUCTION: THE “SPOTTED OWL OF THE INTERMOUNTAIN WEST”?

After months of heated controversy, the U.S. Fish and Wildlife Service (“FWS”) announced in January 2005 that listing the greater sage grouse under the Endangered Species Act (“ESA”) was not warranted.¹ This finding means that the largest and, according to some, the most charismatic of the North American grouse species,² will not be protected by the ESA. Listing the greater sage grouse as an endangered species formed the centerpiece of environmentalists’ strategy to protect the “sagebrush sea,”³ an arid ecosystem in the Intermountain West that has been significantly altered by human activity.⁴ Although the gradual disappearance of the sagebrush sea is attributable to a wide range of factors, the ecosystem recently gained national attention as a plentiful domestic source of natural gas. The Bush administration’s energy policy called for increased energy production on public lands,⁵ thus entangling the sage grouse’s fate with the nation’s push toward energy independence and raising the perennial specter of political influence in endangered species listing decisions.

¹ 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. 2244 (Jan. 12, 2005) (to be codified at 50 C.F.R. pt. 17).

² AM. LANDS ALLIANCE, *THE SAGEBRUSH SEA* 5 (2001), available at http://www.sagegrouse.org/pdf/SagebrushSea_SM.pdf.

³ See Mark Salvo & Andy Kerr, *Eco-political Regions: Branding the Tree-Free Landscapes of the American West*, http://www.sagegrouse.org/land_branding_sb_sea.htm (last visited Mar. 13, 2006) (explaining the need to “brand” treeless ecosystems to engage the public in their protection).

⁴ 90-day Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 69 Fed. Reg. 21,484, 21,490 (Apr. 21, 2004) (to be codified at 50 C.F.R. pt. 17).

⁵ Exec. Order No. 13,212, 66 Fed. Reg. 28,357 (May 22, 2001).

Several months after the sage grouse listing process concluded, Representatives Richard Pombo and Dennis Cardoza introduced “The Threatened and Endangered Species Recovery Act of 2005” (“H.R. 3824”) in the 109th Congress.⁶ H.R. 3824 would amend ESA Section 4 to include a procedural cost-benefit analysis (“CBA”) in the listing process, weighing the benefits of preserving a species against the costs associated with protecting it.⁷ Representative Pombo proposed a similar CBA requirement for the listing process ten years ago, in the aftermath of the spotted owl controversy.⁸ The proposed CBA could not be used to delay or influence a listing determination, and the listing determination would remain subject to the “science-only” criterion for listing as revised by the bill’s definition of “best available science.”⁹ H.R.

⁶ Threatened and Endangered Species Recovery Act of 2005, H.R. 3824, 109th Cong. (as introduced in House, Sept. 19, 2005). Senator Mike Crapo subsequently introduced a bill in the Senate that does not contain many of the proposals in the House bill. Collaboration for the Recovery of Endangered Species Act, S. 2110, 109th Cong. (2005).

⁷ Threatened and Endangered Species Recovery Act of 2005, H.R. 3824, 109th Cong. § 4 (as referred to the Senate Committee on Public Works and the Environment, Sept. 30, 2005). The bill states, in relevant part:

The Secretary shall, concurrently with making a determination . . . that the species is an endangered species or a threatened species, prepare an analysis of—(i) the economic impact and benefit of that determination; (ii) the impact and benefit on national security of that determination; (iii) any other relevant impact and benefit of that determination. . . . Nothing in this paragraph shall delay the Secretary’s decision or change the criteria used in making decisions under paragraph (1).

Id. The bill as initially introduced did not contain this impact analysis provision. *See* H.R. 3824 (Sept. 19, 2005).

⁸ Endangered Species Conservation and Management Act of 1995, H.R. 2275, 104th Cong. § 4 (1996) (“Concurrently with a determination that a species warrants listing as an endangered species or threatened species, the Secretary shall issue an analysis of the economic and social effects the listing may have.”).

⁹ H.R. 3824 § 3 (Sept. 30, 2005).

The term ‘best available scientific data’ means scientific data, regardless of source, that are available to the Secretary at the time of a decision or action for which such data are required by this Act and that the Secretary determines are the most accurate, reliable and relevant for use in that decision or action.

Id. The Secretary is required to issue regulations defining “best available scientific data” within one year of passage of the bill, and the regulations must require that data comply with OMB’s data quality standards, be empirical data or be found in peer-reviewed publications. *Id.*; *see also* Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by Federal Agencies, 67 Fed. Reg. 369 (Jan. 3, 2002).

3824 would dramatically alter the ESA in other ways as well, repealing the Section 4 critical habitat provisions¹⁰ and requiring that the federal government compensate private landowners at fair market value for conservation measures imposed on their land.¹¹ These measures are designed to prevent or offset perceived costs to industry and developers of the regulatory protections that are triggered by listing a species as endangered or threatened under the ESA.

Because the ESA operates in the politically sensitive arena of land use and property rights, the discourse surrounding the Act matters tremendously.¹² Indeed, the discourse shapes public perceptions, and thus Congressional and executive branch responses, to the difficult value choices posed by the ESA.¹³ During the sage grouse listing debate, Gale Norton, then-Secretary of the Interior, suggested that the sage grouse could become the “spotted owl of the Intermountain West”—and then dramatized the comparison stating: “But the sage grouse occupies nearly 12 times as much land as the northern spotted owl.”¹⁴ Norton’s comment was calculated to inflame industry and local opposition to federal intervention in their economic affairs, recalling the decline in logging in Northwest forests in the mid-nineties and its impact on local economies. However, the spotted owl comparison is apt for another reason: at the time of the spotted owl controversy, logging in the Pacific Northwest was occurring at both ecologically and economically unsustainable levels, a fact not widely acknowledged by the timber industry.¹⁵ Similarly, recent evidence suggests that

¹⁰ H.R. 3824 § 5 (Sept. 30, 2005).

¹¹ *Id.* § 13.

¹² Marcilynn A. Burke, *Klamath Farmers and Cappuccino Cowboys: The Rhetoric of the Endangered Species Act and Why It (Still) Matters*, 14 DUKE ENVTL. L. & POL’Y F. 441, 444–45 (2004).

¹³ See Zygmunt J.B. Plater, *Law and the Fourth Estate: Endangered Nature, the Press and the Dicey Game of Democratic Governance*, 32 ENVTL. L. 1, 12–14 (2002) (discussing the two-track strategy of litigation and public opinion and exploring why the public opinion campaign failed in the famous snail darter case); see also Burke, *supra* note 12, at 444–46 (2004) (arguing that ESA “horror stories” of environmental extremism have pushed FWS to compromise its duty to protect species); *infra* Parts II–V for discussion of impacts of spotted owl listing.

¹⁴ Gary Gerhardt, *Clash on the High Plains*, ROCKY MOUNTAIN NEWS (Denver, Colo.), Nov. 11, 2004, at A6.

¹⁵ See generally Alyson C. Fluornoy, *Beyond the “Spotted Owl Problem”: Learning from the Old Growth Controversy*, 17 HARV. ENVTL. L. REV. 261, 310–11, 316–18 (1993) (describing the failings of the regulatory system that allowed

natural gas production in the West needs a regulatory brake to prevent lasting environmental and economic damage to local communities and to the nation's natural resources.¹⁶ Norton's comment immediately conjured images of unemployed loggers and lost profits, but it also underscored the role of the ESA in calling attention to unsustainable levels of exploitation of our nation's natural resources.¹⁷ This role could be strengthened by incorporating consideration of benefits and costs into the statutory framework of listing decisions under the ESA.¹⁸

logging of old growth to occur at unsustainable levels, and arguing for ecological economics to replace the "narrow, ultimately meaningless" version of economics used in the spotted owl discourse).

¹⁶ See GOV'T ACCOUNTABILITY OFFICE, GAO 05-418, OIL AND GAS DEVELOPMENT: INCREASED PERMITTING ACTIVITY HAS LESSENED BLM'S ABILITY TO MEET ITS ENVIRONMENTAL PROTECTION RESPONSIBILITIES 5-7 (2005) (reporting that due to increased permitting activities, BLM has been unable to inspect many currently operating and idle oil and gas wells in the Intermountain West); Gary C. Bryner, *Coalbed Methane Development: The Costs and Benefits of an Emerging Energy Resource*, 43 NAT. RESOURCES J. 519, 534 (2003) (identifying impacts on water quality and quantity, land owners and preservation of roadless areas and wildlands as the most controversial issues in CBM development); N. Plains Res. Council v. BLM, 2005 Dist. LEXIS 4678, at *19-*29 (D. Mont. 2005) (finding inadequate BLM's consideration of alternatives under NEPA because of failure to consider phased development of coalbed methane); N. Plains Res. Council v. BLM, 2005 Dist. LEXIS 25238, at *7-*12 (D. Mont. 2005) (enjoining some CBM development until BLM considers phased development in EIS, but also noting that "existing CBM development has resulted in fewer environmental impacts than anticipated in the EIS"); Wyoming Outdoor Council v. U.S. Army Corps of Eng'rs, 351 F. Supp. 2d 1232, 1260 (D. Wyo. 2005) (invalidating general dredge and fill permits issued for coalbed methane operations in Wyoming and asserting the need to balance mineral development with the other values of the community); Pennaco Energy, Inc. v. U.S. Dept. of Interior, 377 F.3d 1147, 1150, 1162 (10th Cir. 2004) (finding EIS for three coalbed methane leases in Powder River Basin inadequate and upholding the Interior Board of Land Appeal's decision to withhold the leases until BLM complies with NEPA). See generally W. ORG. OF RES. COUNCILS, LAW AND ORDER IN THE GAS FIELDS (2005), available at <http://www.worc.org/pdfs/Law%20and%20Order.pdf> (describing the significant increase in oil and gas permitting in five Western states, and finding no corresponding increase in enforcement); Greg Hanscom, *Ready. . . Fire. . . Aim!*, HIGH COUNTRY NEWS (Paonia, Colo.), Mar. 7, 2005, at 7 (describing the natural gas boom in the Intermountain West and the states' belated demand for stronger regulatory checks on the permitting and compliance process).

¹⁷ Endangered Species Act of 1973 § 2(a), 16 U.S.C. § 1531(a) (2000) ("The Congress finds and declares that—1) various species of fish, wildlife and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation.").

¹⁸ See Shi-Ling Hsu & John Loomis, *A Defense of Cost-Benefit Analysis for Natural Resource Policy*, 32 ENVTL. L. REP. 10,239, 10,243 (2002) (arguing that

In this Note, I use the greater sage grouse debate as a case study to examine the public discourse that surrounds the listing process under Section 4 of the ESA, and consider the recurring proposal to require a procedural CBA in listing. I conclude that the absolutist listing mandate, which relies on “science only” to list species as endangered “whatever the cost”,¹⁹ results in a public discourse that emphasizes the costs of species and habitat protection to the exclusion of benefits and results in proposals like H.R. 3824 that reflect this perception. I then examine the Fish and Wildlife Service’s recent experiment with formal CBA in the critical habitat context. Although the policy currently applied by FWS is deeply flawed and weighted toward costs, a careful reading of the discourse engendered by the use of CBA in the critical habitat context suggests that such an analysis could provide an effective framework for determining whether to list a species. As proposed, however, H.R. 3824 would not improve the public discourse or decision-making because, unlike cost considerations in the critical habitat context, CBA could not legally be considered in the listing determination. I suggest a series of reforms to ensure adequate consideration of direct and ancillary benefits of listing within a CBA and consider how the sage grouse debate might proceed within this framework.

I examine the greater sage grouse listing process because it was arguably one of the most significant actions undertaken by FWS since the northern spotted owl listing—with a strikingly different result. The subsequent proposal to add a procedural CBA to Section 4 listing determinations also mirrors Congressional reaction after the spotted owl controversy. In Part II, I describe the current absolutist mandate of the Section 4 listing process and recent Congressional and academic proposals for reform. In Part III, I describe the distortions of the greater sage grouse listing discourse, which, in my view, resulted in part from the science-only mandate. In Part IV, I analyze recent experience with CBA in the ESA, drawing on critical habitat determinations to demonstrate the shortcomings of FWS’s CBA policy and the potential for CBA to improve endangered species discourse and decision-making. In Part V, I address additional criticisms of using CBA in natural

CBA is the only way to draw attention to the legitimate economic question of whether the gain in environmental quality is greater than the additional cost to businesses, in the face of one-sided industry cost rhetoric).

¹⁹ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978).

resource decision-making. Finally, in Part VI, I propose that a CBA that accurately and honestly accounts for benefits as well as costs should be incorporated as a factor in Section 4 listing determinations, in order to reframe the discourse of endangered species and habitat protection and sharpen the values debate at its heart.

II. THE SCIENCE-ONLY MANDATE IN THE ESA LISTING PROCESS

A. *The Listing Process and Cost Considerations*

The ESA has been called the “pit bull” of environmental statutes²⁰ because of its reputation for protecting endangered species from extinction “whatever the cost.”²¹ The key protections afforded to endangered species are consultation requirements for federal projects under Section 7²² and the general prohibition on takes under Section 9.²³ Through a series of statutory amendments and agency interpretations, both Congress and FWS have softened the ESA’s original hard-line approach to species conservation with measures to make it more politically palatable.²⁴ Each of the central protections of the ESA is now subject to some consideration of economic factors.²⁵ Nevertheless, Congress has remained insistent that the initial decision of whether to list a species under the ESA be based solely on science.²⁶

In order to gain federal protection under the ESA, a species

²⁰ Amy Sinden, *The Economics of Endangered Species: Why Less is More in the Economic Analysis of Critical Habitat Designations*, 28 HARV. ENVTL. L. REV. 129, 139 (2004).

²¹ *Tenn. Valley Auth.*, 437 U.S. at 184.

²² 16 U.S.C. § 1536.

²³ *Id.* § 1538.

²⁴ See generally SHANNON PETERSEN, ACTING FOR ENDANGERED SPECIES: THE STATUTORY ARK 94–118 (2002) (describing the history of ESA reforms). Note that NOAA Fisheries in the Department of Commerce is also responsible for administering the Act for some species, see 16 U.S.C. § 1533, but I will use FWS as shorthand since it was the agency responsible for the greater sage grouse listing process.

²⁵ See generally PAMELA BALDWIN, CONG. RESEARCH SERV., THE ENDANGERED SPECIES ACT: CONSIDERATION OF ECONOMIC FACTORS (2003), available at <http://ncseonline.org/NLE/CRSreports/03May/RL30792.pdf>.

²⁶ See 16 U.S.C. § 1533(b)(1)(a) (requiring listing decisions to be made “solely on the basis of the best scientific and commercial data available”); see also BALDWIN, *supra* note 25, at 4.

must first be formally listed as endangered or threatened.²⁷ FWS may begin the listing process on its own initiative,²⁸ or a citizen may petition FWS to make a determination on whether a species warrants listing.²⁹ In recent years, FWS's priorities in making listing decisions have been dictated by court orders to enforce consideration of citizen petitions within the statutorily designated time frames. A recent D.C. District Court decision held that Congress intended citizen petitions to take priority over the agency's own candidates for listing.³⁰

When FWS receives a petition, the agency is required, "to the maximum extent practicable," to make a finding within ninety days regarding whether listing "may be warranted."³¹ If FWS makes a positive ninety-day finding, it must then determine within twelve months after receiving the petition whether listing the species as endangered or threatened is (1) warranted; (2) warranted but precluded by higher priority listings; or (3) not warranted.³² Once FWS determines that a listing action is warranted, it issues a proposed rule to list the species, followed by public comment and a final rule.³³ Critical habitat designations are generally supposed to be issued contemporaneously with final listing rules.³⁴ Critical habitat is defined as habitat that is "essential to the conservation of the species" that "may require special management considerations or protection."³⁵ FWS has not designated critical habitat for the majority of listed species.³⁶ When critical habitat has been designated for a species, it has often happened well after the listing determination has been made.³⁷

²⁷ See 16 U.S.C. § 1533(c)(1).

²⁸ See *id.* § 1533(a)(1) (authorizing the Secretary of Interior to promulgate a regulation determining that a species is endangered or threatened based on a set of explicit factors).

²⁹ See *id.* § 1533(b)(3)(A).

³⁰ *Am. Lands Alliance v. Norton*, 242 F. Supp. 2d 1, 10 (D.D.C. 2004), *appeal denied in unpublished order at* 2004 U.S. App. LEXIS 15243 (D.C. Cir.) (a separate portion of the opinion ordering promulgation of a specific twelve month finding was vacated upon reconsideration by the court).

³¹ 16 U.S.C. § 1533(b)(3)(A).

³² *Id.* § 1533(b)(3)(B).

³³ *Id.* § 1533(b)(5).

³⁴ *Id.* § 1533(b)(6)(C).

³⁵ *Id.* § 1532(5)(A).

³⁶ Sinden, *supra* note 20, at 158.

³⁷ *Id.*; see also 16 U.S.C. § 1533(b)(6)(c)(ii) (allowing a one year extension for critical habitat designations that are not "determinable" at the time of listing).

In 1982, Congress amended the ESA to require listing decisions to be made “‘solely’ on the basis of the best scientific and commercial information available.”³⁸ This mandate was tempered by the additional requirement that FWS consider the conservation measures being taken by State and foreign governments and their subsidiaries.³⁹ The legislative history makes clear that Congress felt compelled to clarify its intention to exclude economic considerations because the Reagan administration was subjecting listing determinations to Executive Order 12,291,⁴⁰ which required agencies to take account of cost-benefit balancing to the extent allowed by the applicable law.⁴¹ This requirement, coupled with the Reagan-era Department of the Interior’s evident disdain for the ESA under Secretary of the Interior James Watt, had slowed the listing process almost to a standstill.⁴² Congress sought to remove the CBA requirement as a potential source of agency delay. It also sought, perhaps somewhat misguidedly, to eliminate all non-biological reasons for listing or not listing a species.⁴³

Recent Congressional proposals have fixated on raising the standards for science used in listing determinations.⁴⁴ The recently-proposed H.R. 3824 would place restrictions on the Secretary’s discretion to identify the “best available scientific data.” Under H.R. 3824, the Secretary would be required to issue regulations that ensured that data were either (1) subject to the Office of Management and Budget’s (“OMB”) data quality

³⁸ Endangered Species Act Amendments of 1982, Pub. L. No. 97-304, 96 Stat. 1411 (1982); BALDWIN, *supra* note 25, at 3.

³⁹ 16 U.S.C. § 1533(b)(1)(A).

⁴⁰ Exec. Order No. 12,291, 3 C.F.R. 127 (1981), *reprinted in* 5 U.S.C. § 601 app. at 136–38 (Supp. V. 1981).

⁴¹ H.R. Rep. No. 97-567, pt. 1, at 20 (1982) (“The Committee strongly believes that economic considerations have no relevance to determinations regarding the status of a species.”); *see also* BALDWIN, *supra* note 25, at 3.

⁴² Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn’t Always Better Policy*, 75 WASH. U. L.Q. 1029, 1054–55 (1997); *see also* PETERSEN, *supra* note 24, at 82–95 (describing FWS during the Reagan administration).

⁴³ *See* Doremus, *supra* note 42, at 1054–55.

⁴⁴ *See, e.g.*, Threatened and Endangered Species Recovery Act of 2005, H.R. 3824, 109th Cong. (as referred to the Senate Committee on Public Works and the Environment, Sept. 30, 2005); Endangered Species Data Quality Act of 2004, H.R. 1662, 108th Cong. (2004); Endangered Species Listing and Delisting Process Reform Act of 2003, 108th Cong. § 2(a) (2003).

guidance; (2) empirical data; or (3) found in peer-reviewed publications.⁴⁵ OMB data quality guidance directs each federal agency to establish its own data quality guidelines consistent with OMB's definitions of "quality, objectivity, utility and integrity."⁴⁶ Narrowing the range of acceptable science, however, will not advance the intent of the ESA to protect the habitats and species most in need.⁴⁷ Moreover, an increased emphasis on science will do little to address the root cause of controversy in listing decisions: inevitable uncertainty of human knowledge at the limits of science⁴⁸ and the skewed political discourse that results from attempting to rely solely on science.⁴⁹

B. *Limits of Science-Only: What Exactly Is An "Endangered Species"?*

Before FWS considers whether a species is endangered, it must first decide whether a particular group of organisms is a "species" for the purposes of the ESA.⁵⁰ A species as defined by the ESA includes not only taxonomic species, but also

⁴⁵ H.R. 3824 § 3 (Sept. 30, 2005).

⁴⁶ Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by Federal Agencies, 67 Fed. Reg. 369, 376 (Jan. 3, 2002).

⁴⁷ See Endangered Species Act of 1973 § 2, 16 U.S.C. § 1531 (2000) (explaining that one purpose of the Act is "to provide a means whereby ecosystems upon which endangered species depend may be conserved . . ."); see also Doremus, *supra* note 42, at 1079–83 (explaining use of "gray literature," information not reported in peer-reviewed journals, as part of the scientific process); Holly Doremus, *Science Plays Defense: Natural Resource Management in the Bush Administration*, 32 *ECOLOGY L.Q.* 249, 262–65 (2005) (arguing that one-size-fits-all "sound science" requirements are inappropriate to regulatory decisionmaking due to varying risks associated with under- and overregulation).

⁴⁸ See Doremus, *supra* note 42, at 1035–36.

⁴⁹ See Hsu & Loomis, *supra* note 18, at 10,243 (arguing that FWS performs cost-benefit analysis implicitly when the agency makes a listing decision regardless in response to political pressures); Doremus, *supra* note 42, at 1153 (arguing that "the strictly science mandate is responsible for much of the current controversy concerning the ESA" and has stifled "a full societal debate on the purposes and importance of conserving biological resources").

⁵⁰ See J.B. Ruhl, *The Battle Over Endangered Species Act Methodology*, 34 *ENVTL. L.* 555, 573–76 (2004); Doremus, *supra* note 42, at 1087–88. See generally Kevin D. Hill, *The Endangered Species Act: What do We Mean by Species?*, 20 *B.C. ENVTL. AFF. L. REV.* 239 (1993) (describing process of determining "species" for purpose of ESA).

subpopulations and distinct population segments (“DPS”).⁵¹ This catch-all list suggests that Congress meant to reject narrow technical definitions of species.⁵² However, classifying species in lower taxonomic categories such as subspecies often involves making subjective determinations.⁵³ For example, taxonomists do not even employ the DPS category, so FWS has created its own policy for identifying a DPS.⁵⁴ Even the question of what constitutes a species, let alone a subspecies or DPS is a perennial question among biologists.⁵⁵ Because the definition of “species” in the ESA is a fluid concept, FWS’s reliance on a “science-only” mandate in this context has been criticized as too limited to capture all the values the ESA is intended to protect.⁵⁶

Another troublesome threshold question is how to define the terms “endangered” or “threatened.”⁵⁷ Although FWS is required by the ESA to make its listing decision based solely on the best available science, the terms “endangered” and “threatened” have no standardized scientific definition.⁵⁸ The ESA defines an “endangered species” as “any species which is in danger of extinction throughout all or a significant portion of its range.”⁵⁹ A “threatened species” is a species that is “likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.”⁶⁰ These

⁵¹ 16 U.S.C. § 1531(16).

⁵² See Doremus, *supra* note 42, at 1089.

⁵³ See *id.* at 1102 (describing the influence of taxonomist’s professional bias and noting that where to draw taxonomic lines between closely related groups is “unavoidably subjective”).

⁵⁴ Policy Regarding the Recognition of Distinct Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722 (Feb. 7, 1996); see Doremus, *supra* note 42, at 1105.

⁵⁵ See Fred Bosselman, *A Dozen Biodiversity Puzzles*, 12 N.Y.U. ENVTL. L.J. 364, 402 (2004).

⁵⁶ See, e.g., Doremus, *supra* note 42, at 1134 (arguing that to solve taxonomy problem, ESA should broaden focus [away from science] as basis for listing, and offer people other than scientists a role in the identification of protectable entities).

⁵⁷ See *id.* at 113–18 (arguing that neither the statutory definition nor science adequately define these terms).

⁵⁸ See Wilcove et al., *What Exactly is an Endangered Species? An Analysis of the U.S. Endangered Species List: 1985–1991*, 7 CONSERVATION BIOLOGY 87, 92 (1993) (describing various proposals for standardized definition and the limits of each).

⁵⁹ Endangered Species Act of 1973 § 2(6), 16 U.S.C. § 1531(6) (2000).

⁶⁰ *Id.* § 1531(20).

broadly-worded statutory definitions leave considerable room for agency discretion.⁶¹ The ESA further specifies that FWS is required to consider five factors in determining whether, either now or within the foreseeable future, a species is in danger of extinction: “(A) the present or threatened destruction, modification or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific or educational purposes; (C) disease or predation; (D) inadequacy of existing regulatory mechanisms; and (E) other natural or manmade factors affecting its continued existence.”⁶² Each of these factors may also be subject to considerable manipulation.⁶³ Moreover, decisions that are key to whether a species will be listed, such as the acceptable level of extinction risk and the time period over which the risk will be evaluated, must be determined using non-scientific factors.⁶⁴ Much as Congress might will it otherwise, these precursor determinations for listing are widely acknowledged to be at least in part social policy decisions.⁶⁵

C. *Recent Proposals for Reform of the Listing Process*

The illusion of a “science-only” listing structure has a significant impact on the well-being of imperiled species. As Professor Doremus indicated in her seminal article on the limitations of science in listing, insistence on the “science-only” mandate allows FWS to hide political factors that influence its decisions.⁶⁶ Perhaps more importantly, she suggests that the lack of transparent decision-making breeds public cynicism on all sides, weakening support for the ESA.⁶⁷ Because the science is uncertain and deference to agency decisions is the norm, only the most egregious instances of political influence altering listing decisions

⁶¹ Doremus, *supra* note 42, at 1116–17.

⁶² 16 U.S.C. § 1533(a)(1).

⁶³ *See, e.g.*, Doremus, *supra* note 42, at 1144–45 (noting particularly the manipulability of the “existing regulatory mechanisms” factor).

⁶⁴ *See id.* at 1117.

⁶⁵ *See id.* at 1117–18; Hsu & Loomis, *supra* note 18, at 10,243.

⁶⁶ Doremus, *supra* note 42, at 1122; *see also* Doremus, *supra* note 47, at 290 (“At the moment, the determinative points in the decision making process tend to be hidden from public view, so that the public never has the opportunity to untangle the contributions of career scientists and political appointees to the ultimate decision.”).

⁶⁷ *Id.* at 1142.

can be successfully challenged in court.⁶⁸

As discussed above, H.R. 3824 maintains the science-only listing framework and further restricts the range of science available to the Secretary for consideration. The most likely effect of more stringent science requirements will be to delay listing decisions until we are certain the species is in danger of extinction.⁶⁹ As Professor Doremus explains, relying on gray literature and living with uncertainty are both inherent in the scientific process.⁷⁰ If FWS is required to give greater weight to peer reviewed studies, it may delay protection of more imperiled, but less-studied species until such studies have been performed. Scientists (and others) are already critical of the ESA's too-little-too-late approach to preserving biodiversity.⁷¹ Ultimately, it may be both more effective and cheaper to conserve a species that is not yet teetering on the brink of extinction.⁷² If Congressional intent is still to bolster species protection, it will not be served by relying on "sound science" alone.⁷³

Political discourse surrounding ESA listing acknowledges that listing decisions are not made purely on basis of science, and usually suggests that FWS is at fault for the problem.⁷⁴ However,

⁶⁸ See, e.g., *Northern Spotted Owl v. Hodel*, 716 F. Supp. 479, 483 (W.D. Wash. 1988) (remanding FWS's determination that the Northern Spotted Owl is not threatened or endangered on the grounds that the agency failed to adequately explain its decision in terms of the best—or any—available science).

⁶⁹ See Burke, *supra* note 12, at 510–11 (citing Oliver Houck, Editorial, *How Industry Hijacked 'Sound Science'*, *TIMES-PICAYUNE* (New Orleans, La.), Jan. 29, 2004, at 7).

⁷⁰ Doremus, *supra* note 42, at 1079–83, 1075.

⁷¹ See, e.g., Wilcove et al., *supra* note 58, at 92 (performing an empirical study of the number of individuals left in a species when it is listed, and suggesting that low recovery rates may be due to the late stage at which the species receives protection).

⁷² *Id.* at 92–93.

⁷³ For a view that Congress and the Executive Branch are attempting to undermine species protection or achieve deregulation through their "sound science" initiatives, see Burke, *supra* note 12, at 506 ("Though the Service has taken these affirmative steps to ensure that it bases its decisions upon reliable and credible scientific information, the perception has arisen in Congress and the administration that the Service is using 'unsound' science to make its determinations.").

⁷⁴ See, e.g., Felicity Barringer, *U.S. Panel Recommends No Protection for Grouse*, *N.Y. TIMES*, Dec. 3, 2004, at A18 (quoting Mark Salvo, Director of the Sagebrush Sea Project, an Arizona conservation group as saying, "[t]he only science upon which the Bush administration based this decision was political science").

the ESA itself fails to acknowledge that FWS cannot determine when a species is endangered or threatened solely on the basis of science.⁷⁵ If the ESA allowed open consideration of non-scientific factors in the listing process, the public might be inclined to list species sooner rather than later based on the value (quantified or otherwise) of the species and its habitat to the public.⁷⁶ Professor Doremus proposed that we make the politics of listing explicit⁷⁷ by adding other factors listed in the “Purpose” section of the ESA to be considered as values of endangered species, including aesthetic, ecological, educational, genetic, historical, recreational, scientific or other value (consistent with purposes of the statute).⁷⁸ She has also suggested opening the listing process to public scrutiny on both scientific and non-scientific factors.⁷⁹ She rejected consideration of economic cost-benefit balancing, however, because she believed that these concerns were adequately considered in the ESA through Section 4 critical habitat designation, Section 7 exemptions, and Section 9 and 10 incidental take provisions.⁸⁰

H.R. 3824 would require CBA to be performed concurrently with the listing determination, but the bill explicitly forbids FWS from considering CBA as a factor in the listing determination.⁸¹ This proposed use of a CBA in the listing context is deeply flawed. Such a use does not provide adequate incentive to advocates of species conservation to attempt to identify and quantify (where possible) direct and ancillary⁸² benefits of species protection, because they can continue to rely on the language of the statute to accuse opponents of improperly considering economic impacts. Without explicitly recognizing that listing a species as endangered

⁷⁵ See Doremus, *supra* note 42, at 1113–18.

⁷⁶ See *id.* at 1137–38.

⁷⁷ *Id.* at 1137.

⁷⁸ *Id.*

⁷⁹ *Id.* at 1148–52.

⁸⁰ *Id.* at 1138; see also J.B. Ruhl, *Is the Endangered Species Act Eco-Pragmatic?*, 87 MINN. L. REV. 885, 920–21, 938 (2003) (suggesting that costs are adequately taken into account at the project level).

⁸¹ H.R. 3824 § 4 (Sept. 30, 2005).

⁸² “Ancillary” benefits are “favorable impacts of a rulemaking that are typically unrelated, or secondary, to the statutory purpose of the rulemaking.” Circular A-4 from the Office of Mgmt. and Budget on Regulatory Analysis to the Heads of Exec. Agencies and Establishments 26 (Sept. 17, 2003), available at http://www.whitehouse.gov/OMB/circulars/a004/a_4.pdf.

is a social policy decision, consideration of the values proposed by Professor Doremus (aesthetic, ecological, educational, etc.) in CBA, even in a non-monetized discussion, is highly unlikely. Requiring procedural CBA within the existing science-only mandate will exacerbate an already skewed emphasis on the costs of species and habitat conservation and further undermine support for the ESA.

Ten years ago, in the aftermath of the spotted owl listing and the *Sweet Home* decision upholding the FWS's broad interpretation of "harm" in the context of the Section 9 prohibition on takes of endangered species,⁸³ Representative Pombo and Representative Don Young introduced a bill similar to H.R. 3824 that would have required a cost-benefit analysis to accompany listing decisions,⁸⁴ altered the statutory definition of "take" to preclude FWS's broad reading of "harm,"⁸⁵ and required compensation of private landowners for diminution of property values due to application of the ESA.⁸⁶ The language of the cost-benefit requirement, which directed FWS to consider "lost opportunity costs," but failed to specify any requirements for consideration of benefits, seemed intended to diminish support for the ESA by demonstrating the costs associated with listing. The bill was defeated, largely due to the intervention of religious groups who supported the ESA's "Noah's ark" approach to biodiversity conservation.⁸⁷

Since the bill's defeat ten years ago, Representative Pombo,

⁸³ *Babbitt v. Sweet Home Chapter of Cmty. for a Better Ore.*, 515 U.S. 687, 708 (1995).

⁸⁴ Endangered Species Conservation and Management Act of 1995, H.R. 2275, 104th Cong. § 4 (1996) ("Concurrently with a determination that a species warrants listing as an endangered or threatened species, the Secretary shall issue an analysis of the economic and social effects the listing may have."). The elements to be considered included federal, state and local expenditures and revenues "and the costs and benefits of the listing for the private sector, including lost opportunity costs." *Id.*

⁸⁵ *Id.* § 2.

⁸⁶ *Id.* (requiring that an "analysis of economic and social effects" be published concurrently with a listing determination in the Federal Register). Interestingly, if FWS had done a formal CBA at the time of the spotted owl listing process, it would likely have found that the benefits outweighed the costs of listing. See John B. Loomis & Douglas S. White, *Economic Benefits of Rare and Endangered Species: Summary and Meta-analysis*, 18 ECOLOGICAL ECON. 197, 204 (1996).

⁸⁷ See PETERSEN, *supra* note 24, at 116-18.

now chair of the House Resources Committee, has refined his vision for the ESA, to include more collaborative work with states and private landowners, and less “bureaucratic listing” of species.⁸⁸ Immediately after the FWS announced that its biologists were recommending against listing the sage grouse (at the Western Governor’s Association summit on the subject),⁸⁹ Pombo posted a press release on the Resources website, lauding the decision and promising more “success stories” like that of the grouse in the years ahead.⁹⁰ Pombo particularly emphasized that “private conservation and recovery efforts work, the ESA does not.”⁹¹

While undermining support for habitat and species conservation may be Representative Pombo’s intent, it was not the intent of the framers of the ESA; the ESA was intended “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved.”⁹² Although cost-benefit analysis traditionally has been viewed by environmentalists as a tool of antiregulatory forces⁹³ (and remains such a tool in current practice at FWS)⁹⁴, stakeholders interested in species and habitat protection may have dismissed the application of CBA in the listing process too quickly. The discourse surrounding species protection would benefit from a methodical accounting of the costs and benefits associated with species protection, and an honest identification of sources of uncertainty.⁹⁵ Indeed, a cost-benefit analysis framework could

⁸⁸ See RICHARD POMBO, H. COMM. ON RES., THE ESA AT 30: TIME FOR CONGRESS TO UPDATE AND STRENGTHEN THE LAW (2004), <http://resourcescommittee.house.gov/issues/more/esa/whitepaper.htm>.

⁸⁹ Barringer, *supra* note 74.

⁹⁰ Press Release, House Committee on Resources, No Listing Decision for Sage-Grouse Good News for Species Recovery, Dec. 3, 2004, <http://resourcescommittee.house.gov/Press/releases/2004/1203/grouse.htm>.

⁹¹ *Id.*

⁹² Endangered Species Act of 1973 § 2(b), 16 U.S.C. § 1531(b) (2000).

⁹³ See generally FRANK ACKERMAN & LISA HEINZERLING, PRICELESS: ON KNOWING THE PRICE OF EVERYTHING AND THE VALUE OF NOTHING 41–61 (2004) (describing arguments in favor of CBA as “unicorns of deregulation”); see also Hsu & Loomis, *supra* note 18, at 10,240 (noting “lingering mistrust” based on past abuses of CBA in regulatory context).

⁹⁴ See *infra* Part VI.B (describing flaws in FWS’s CBA policy in the critical habitat context).

⁹⁵ See Shi-Ling Hsu, *Fairness Versus Efficiency in Environmental Law*, 31 *ECOLOGY L.Q.* 303, 311–12 (2004) (stating that biodiversity losses have gone unregulated due to focus on fairness-thinking rather than efficiency-thinking); see also Barton H. Thompson, Jr., *People or Prairie Chickens: In Search of*

sharpen the values debate that results from the scientific and economic uncertainty surrounding endangered species decision-making. The recent debate over listing the greater sage grouse exemplifies what is wrong with the public discourse created by the absolutist, science-only mandate of Section 4.

III. THE SAGE GROUSE DEBATE

A. *A Series of Greater Sage Grouse Listing Petitions*

The greater sage grouse (sage grouse) is a chicken-like, ground-dwelling bird with long pointed tail feathers and a particularly theatrical mating ritual.⁹⁶ The sage grouse is a “sagebrush obligate,” which means it relies heavily on various types of sagebrush for food and shelter. The bird has also historically been a popular hunting target, and it is still hunted in ten of the eleven states in which it presently dwells.⁹⁷ The species’ need for large swaths of sagebrush land makes it attractive as an ESA listing candidate to conservation groups seeking to preserve the sagebrush sea, an ecosystem in the Intermountain West that was previously converted to or impacted by agricultural uses and faces continued threats from invasive species, grazing, oil and gas development, and mining, among other activities.⁹⁸

Since 1999, conservationists have petitioned FWS to list various subpopulations and DPS’s of the sage grouse under the ESA.⁹⁹ Successful listing petitions for vertebrate species have

Optimal Biodiversity, 51 STAN. L. REV. 1127, 1156 (1999) (“Public debate over the comparative costs and benefits of preserving species can better educate the public as to the actual value of biodiversity and the need for preservation efforts.”). *But see id.* at 1157–65 (pointing out the quantification challenges of CBA in biodiversity regulation and suggesting other means, such as taxes and elimination of subsidies, to achieve biodiversity preservation).

⁹⁶ 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. 2244, 2252 (Jan. 12, 2005) (to be codified at 50 C.F.R. pt. 17). The male sage grouse performs an elaborate courtship ritual involving exposure of olive green apteria (fleshy bare patches of skin) on its breast and specialized vocalizations on raised, bare areas called “leks.” *Id.*

⁹⁷ *Id.* at 2267. The state of Washington banned hunting of the greater sage grouse in 1988. *Id.*

⁹⁸ *Id.* at 2255–67.

⁹⁹ See KEVIN KRITZ, NEV. FISH AND WILDLIFE OFFICE, U.S. FISH AND WILDLIFE SERV., SUMMARY OF SAGE GROUSE PETITIONS SUBMITTED TO THE U.S. FISH AND WILDLIFE SERVICE (USFWS) (2004), <http://www.dfw.state.or.us/>

most often protected subpopulations and DPS, rather than the whole species across its entire range.¹⁰⁰ For the sage grouse, however, petitions for subspecies and DPS have been universally unsuccessful in gaining formal ESA protection.¹⁰¹ The FWS determined that the Washington population of the western sage grouse was a DPS, but declared that listing was “warranted but precluded.”¹⁰² The “warranted but precluded” category has been described as ESA “limbo” because it acknowledges a species is in danger of extinction, but declines to protect the species due to resource constraints.¹⁰³ The Ninth Circuit upheld FWS’s 2001 determination that there was insufficient basis to list the Mono Basin DPS of the greater sage grouse on an emergency basis.¹⁰⁴ Petitions to list separately the western and eastern subpopulations of the greater sage grouse were rejected because FWS determined that there was no basis for distinction between the two “subspecies.”¹⁰⁵

After these failed attempts to list subpopulations and DPS, three petitions to list the greater sage grouse “throughout its range” were filed in 2002–2003.¹⁰⁶ FWS combined consideration of these three petitions and, in January 2005, found listing the sage

agency/commission/minutes/04/apr/G_3_petitions.pdf.

¹⁰⁰ See Wilcove et al., *supra* note 58, at 91.

¹⁰¹ After the “not warranted” decision was issued for the greater sage grouse across its entire range, conservationists filed a petition to list the Mono Lake DPS as an endangered or threatened species. See SAGEBRUSH SEA CAMPAIGN ET AL., STATUS REVIEW AND PETITION TO LIST THE MONO BASIN AREA SAGE GROUSE (*CENTROCERCUS UROPHASIANUS*) AS A DISTINCT POPULATION SEGMENT OF GREATER SAGE-GROUSE AS THREATENED OR ENDANGERED UNDER THE ENDANGERED SPECIES ACT (2005), *available at* <http://www.biologicaldiversity.org/swacd/species/sagegrouse/petition.pdf>. As of April 13, 2006, no finding had been issued by FWS.

¹⁰² 12-Month Finding for a Petition to List the Washington Population of Western Sage Grouse, 66 Fed. Reg. 22984 (May 7, 2001) (to be codified at 50 C.F.R. pt. 17).

¹⁰³ See Houck, *supra* note 23, at 296.

¹⁰⁴ See *Inst. for Wildlife Prot. v. Norton*, 303 F. Supp. 2d 1175 (W.D. Wash. 2003). Environmentalists have since filed a new petition to list the Mono Basin population. See SAGEBRUSH SEA CAMPAIGN ET AL., *supra* note 101.

¹⁰⁵ See 90-day Finding for a Petition to List the Eastern Subspecies of the Greater Sage-Grouse as Endangered, 69 Fed. Reg. 933 (Jan. 7, 2004); 90-day Finding on a Petition to List the Western Sage Grouse, 68 Fed. Reg. 6500 (Feb. 7, 2003). See generally Doremus, *supra* note 42, at 1088–112, for a discussion of the shortcomings of taxonomy determinations under the Act.

¹⁰⁶ See KRITZ, *supra* note 99.

grouse “not warranted.”¹⁰⁷ Although the two earlier “entire range” petitions were submitted by a handful of individuals, twenty conservation organizations joined the most recent petition,¹⁰⁸ signifying a groundswell of support for listing. This surge of support may have been the result of ambitious Bush administration plans for natural gas drilling in the sagebrush sea.¹⁰⁹

In its twelve month finding on the three petitions, FWS determined that listing the sage grouse as endangered or threatened was not warranted,¹¹⁰ thus affording the species no legal protection under the ESA. Because there are no regulatory definitions of “foreseeable future” or “significant portion of the range,” the decision team established by consensus context-specific understandings of these terms.¹¹¹ To address uncertainty in predictions of extinction risks due to threats to the species, each decision team member assigned portions of his 100 point allotment into the endangered, threatened or not warranted categories.¹¹² The Federal Register notice explained that while several of the decision team members placed some points in the “threatened” category, not enough fell within the “reasonably foreseeable” threshold determined by the team to be becoming endangered within one hundred years.¹¹³ Although FWS determined that the sage grouse was not threatened or endangered, it acknowledged that there were significant information gaps and uncertainty surrounding its decision.¹¹⁴ These information gaps included lack of data on minimum patch size necessary to support a sage grouse population, as well as “the prospective nature of some of threats, uncertainty about how pending threats will be managed and uncertainty about how and if leks [breeding grounds] can persist in

¹⁰⁷ 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. 2244, 2244 (Jan. 12, 2005) (to be codified at 50 C.F.R. pt. 17).

¹⁰⁸ See KRITZ, *supra* note 99 (listing the organizations who joined the petition).

¹⁰⁹ See Gerhardt, *supra* note 14 (noting that surge in interest in natural gas development is seen by environmental groups as “the last straw” for the grouse).

¹¹⁰ 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. at 2244.

¹¹¹ *Id.* at 2281.

¹¹² *Id.*

¹¹³ *Id.* at 2280–81 (describing FWS’s decision-making process).

¹¹⁴ *Id.* at 2280.

the presence of disturbances.”¹¹⁵ These sources of uncertainty are intricately linked with the economic interests at work in the Intermountain West, notably the ongoing management of oil and gas development.¹¹⁶ Since the negative finding for the sage grouse, evidence has mounted that the pace of this development is exceeding state and federal regulators’ abilities to provide appropriate oversight.¹¹⁷

FWS’s decision not to list the sage grouse raised the recurring question of political influence on the listing process under the ESA.¹¹⁸ The political pressure to keep the sage grouse off the endangered and threatened species lists was intense. With a habitat range spanning eleven Western states and thousands of acres of valuable mineral and natural gas extraction fields, the unassuming grouse suddenly commanded the full attention of Western governors, the Bureau of Land Management (“BLM”), and energy and mining executives, who all worked furiously to establish protection policies in last-ditch efforts to avoid listing.¹¹⁹

¹¹⁵ *Id.* at 2282.

¹¹⁶ See *id.* at 2261–64 for a discussion of uncertainties surrounding the impact of oil and gas development on the sage grouse. FWS notes that all of the studies on the topic have reported sage-grouse population declines, though the specific causes have not been determined. *Id.* at 2263. Energy development ranked first among extinction factors for the sage grouse in Colorado, Wyoming and Montana due to “the rapidity of development and the persistent demand for petroleum products.” *Id.* at 2264.

¹¹⁷ See *supra* note 16 and accompanying text.

¹¹⁸ See, e.g., Ray Ring, *Rulings Keep the West Open for Business*, HIGH COUNTRY NEWS (Paonia, Colo.), Dec. 20, 2004, at 6; Felicity Barringer, *Interior Aide and Biologists Clashed Over Protecting Bird*, N.Y. TIMES, Dec. 5, 2004, at A38; see also UNION OF CONCERNED SCIENTISTS & PUB. EMPLOYEES FOR ENVTL. RESPONSIBILITY, U.S. FISH AND WILDLIFE SURVEY SUMMARY 1 (2005) (reporting that 44 percent of respondents agreed with the statement that they have been directed, for non-scientific reasons, to refrain from making jeopardy or other findings that are protective of species). See generally Ivan J. Lieben, Comment, *Political Influences on USFWS Listing Decisions Under the ESA: Time to Rethink Priorities*, 27 ENVTL. L. 1323 (1997).

¹¹⁹ See 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. at 2251 (explaining that FWS received twenty-seven conservation plans, including submissions from several States, the Department of Energy, BLM, U.S. Forest Service, Department of Defense, Natural Resources Conservation Service, Western Governors Association and the North American Grouse Partnership); Felicity Barringer, *U.S. Plan May Keep Sage Grouse Off Endangered List*, N.Y. TIMES, Nov. 10, 2004, at A21. See generally W. GOVERNORS’ ASSOC. & NATURAL RES. CONSERVATION SERV., USDA, CONSERVING THE GREATER SAGE GROUSE: EXAMPLES OF PARTNERSHIPS AND STRATEGIES AT WORK ACROSS THE WEST (2004), available at

Shortly after the decision was announced, a draft of federal biologists' findings marked up by a senior political appointee also made its way into the press, bolstering environmentalists' accusations that the decision was not made based on science alone.¹²⁰

B. *The Sage Grouse in Public Discourse*

The debate over whether to list the sage grouse under the ESA pitted environmentalists and the species itself against powerful oil and gas interests in rural Western economies.¹²¹ Western governors, Congress and the Bush administration land management agencies largely weighed in on behalf of the latter.¹²² As Gale Norton's "spotted owl" comment¹²³ suggested, this species-versus-economy face-off is the standard listing discourse under the ESA.¹²⁴ The environmentalists speak in broad, weak terms about preserving biodiversity for its own sake, while industry cites the staggering and precisely calculated costs of species preservation.¹²⁵ Both sides rely on the ESA's reputation as an uncompromising, at-all-costs statute to give their stories moral force.

1. *Environmentalists*

As sagebrush lands dwindled from 270 million to 150 million acres and development increased throughout the Intermountain West, environmentalists grew increasingly concerned about the resulting loss of biodiversity.¹²⁶ Huge swaths of sagebrush country were developed as agricultural lands during the late 19th and 20th

<http://www.westgov.org/wga/initiatives/grouse/sagegrouse-rpt7-04.pdf>.

¹²⁰ See Barringer, *supra* note 118; see also Doremus, *supra* note 47, at 289–90 (citing this incident and arguing that it is properly characterized as an issue of the lack of transparency of political decisionmaking within the agency, rather than as an "abuse of science").

¹²¹ See, e.g., Barringer, *supra* note 74; Gerhardt, *supra* note 14.

¹²² See Julie Cart & Kenneth R. Weiss, *Governors Seek Easing of Endangered Species Act*, L.A. TIMES, Dec. 4, 2004, at B1; Barringer, *supra* note 118.

¹²³ See *supra* notes 14–18 and accompanying text.

¹²⁴ Cf. Burke, *supra* note 12, at 480–82.

¹²⁵ See Hsu, *supra* note 95, at 333. Professor Hsu explains this difference in rhetoric as the "identifiability problem." Environmentalists can point only to unidentified victims, whereas industry can point to individuals and communities that will be adversely affected by listing the grouse. This leads to a disproportionate focus on the "polluter," or in this case, the developer.

¹²⁶ See AM. LANDS ALLIANCE, *supra* note 2, at 2.

centuries.¹²⁷ Many of the remaining sagebrush ecosystems were lands that could not even be given away during the Homestead period, characterized as the “accidental remnants of our national land disposal spree.”¹²⁸ Some of these areas were claimed as permanent federal lands to be managed by the BLM. As such, the sagebrush lands historically suffered from the problem of “protecting the ordinary,”¹²⁹ resulting in under-protection of the ecosystem. Despite this underprotection, there is still a vast amount of sagebrush country compared, for example, with Pacific old growth forests at the time of the spotted owl listing.¹³⁰ However, the mere acreage of habitat, or for that matter, the mere number of individuals left in a species, does not tell decision-makers enough about the threat of species extinction.¹³¹ For example, the sage grouse is noted for its need for large, undisrupted sagebrush terrain.¹³²

For this reason, environmentalists viewed the sage grouse as the proverbial “canary in the coal mine” for sagebrush ecosystems prevalent in the Intermountain West.¹³³ Alarmed by the rate of urban development, grazing, and oil and gas drilling occurring in these ecosystems, environmental groups considered protection of the sage grouse critical to biodiversity conservation efforts.¹³⁴ The environmentalists’ strategy to protect the remaining sagebrush from development included not only listing the sage grouse under the ESA, but also reducing off-road vehicle (“ORV”) access on public lands and supporting a buyout of permits to graze livestock

¹²⁷ See 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. 2244, 2254–55 (Jan. 12, 2005) (to be codified at 50 C.F.R. pt. 17).

¹²⁸ See Holly Doremus, *Biodiversity and the Challenge of Saving the Ordinary*, 38 IDAHO L. REV. 325, 335–36 (2002).

¹²⁹ See *id.* (describing BLM lands as falling outside our perception of “special” natural places worthy of protection).

¹³⁰ See Gerhardt, *supra* note 14.

¹³¹ See Wilcove et al., *supra* note 58, at 92 (describing proposals for endangered population numbers varying with size and type of species and difficulty of obtaining meaningful numbers).

¹³² 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. at 2256.

¹³³ Mark Salvo, Editorial, *New Rebellion Across West: Sage Grouse, Not Sagebrush*, MISSOULIAN, Aug. 29, 2004, at B4.

¹³⁴ *Id.* (describing the sage grouse as an “indicator species” for the health of the sagebrush ecosystem).

on public lands.¹³⁵ The groups attempted to brand the sagebrush rangelands as the “sagebrush sea” in order to facilitate greater public awareness and interest in preserving these long-overlooked lands.¹³⁶

The environmental groups faced an uphill battle since the economic base of rural communities in the Intermountain West was widely perceived, and often actually is, comprised of extractive industries and ranching. Nevertheless, the campaign mainly focused on the biodiversity values of the sagebrush ecosystems.¹³⁷ Biodiversity remains a fuzzy concept,¹³⁸ with little traction in the mainstream public’s mind.¹³⁹ Even in the centerpiece “Sagebrush Sea” booklet, which was intended for policymakers, environmentalists failed to articulate any reasons, aside from preserving biodiversity, for conserving sagebrush ecosystems.¹⁴⁰ Interestingly, the Sagebrush Sea campaign was devoid of any effort to connect the “canary in the coal mine” imagery back to the impact of unchecked economic development on humans;¹⁴¹ for example, there was little mention of the water and air pollution and recreational impacts of natural gas drilling.¹⁴² Relying solely on biodiversity conservation for the sake of other species likely limited the reach of the environmentalists’ message.¹⁴³

¹³⁵ See AM. LANDS ALLIANCE, *supra* note 2, at 18.

¹³⁶ See SALVO & KERR, *supra* note 3.

¹³⁷ See, e.g., Salvo, *supra* note 133 (suggesting that an important value of preserving the sage grouse is to save other species dependent on sagebrush ecosystems); see also AM. LANDS ALLIANCE, *supra* note 2, at 4–7.

¹³⁸ See Bosselman, *supra* note 55, at 366–77.

¹³⁹ See Doremus, *supra* note 128, at 342–43 (noting that the general public has not embraced the preservation of biodiversity as goal of public policy).

¹⁴⁰ See generally AM. LANDS ALLIANCE, *supra* note 2.

¹⁴¹ In one op-ed piece, Mark Salvo, the coordinator of the sage grouse campaign, mentioned economic considerations, asserting that the sagebrush rangelands were worth more intact to local communities. See Salvo, *supra* note 133. However, nowhere, even on the Sagebrush Sea campaign’s website, did he articulate a reason for this position, beyond the basic “biodiversity is good” message. See generally The Sagebrush Sea, <http://www.sagebrushsea.org/> (last visited Mar. 10, 2006).

¹⁴² The Sagebrush Sea booklet identified public lands ranching as an economically losing proposition. AM. LANDS ALLIANCE, *supra* note 2, at 12.

¹⁴³ See Hsu, *supra* note 95, at 320–36 (describing the shortcomings of fairness rhetoric in environmental protection). The biodiversity argument advanced by environmentalists focused on the fairness of habitat destruction to the species who live in the sagebrush sea. This argument is weak because it is easily

Given the traditional perception of sagebrush country as worthless (to humans), environmentalists might have spent some time outlining the utilitarian values of the ecosystem and the previously understated costs of natural gas development to local communities. Despite the environmentalists' reluctance to frame the debate in economic terms, there were several potential utilitarian arguments in favor of regulating land use practices (especially oil and gas development) in the Intermountain West: recreational impacts, watershed protection, erosion and pollution control.¹⁴⁴ None of these impacts were directly advanced by environmentalists in their campaign to list the sage grouse under the ESA. These omissions were probably in part attributable to the ESA's traditional focus on preserving the species, rather than the ecosystem that supports it.¹⁴⁵ But traditional environmentalist skepticism of economic rationales for environmental protection¹⁴⁶ and the increasing encroachment of CBA on the ESA in critical habitat determinations¹⁴⁷ were likely partially responsible for environmentalists' hesitance to make these arguments.

countered by arguments concerning the fairness of depriving local economies of much-needed revenues, and more importantly, depriving workers of much-needed employment. Hsu presents this weakness of environmentalists' arguments as the "identifiability problem," i.e. it is much easier for people to sympathize with identified people who will be harmed by regulation than with unidentified members of the species who will be harmed by lack of regulation. *See id.* at 333–34.

¹⁴⁴ *See* Bryner, *supra* note 16, at 555 (identifying potential costs of natural gas development to communities in the Intermountain West and advocating for pricing that reflects these costs); Laura Paskus, *Conscientious Objectors*, HIGH COUNTRY NEWS (Paonia, Colo.), Dec. 20, 2004, at 10, 10–16 (describing the recent controversy over pollution of groundwater by a coalbed methane extraction process called "hydraulic fracturing"); *see also* Patricia Ware, *EPA Inspector General Begins Review of Conclusions on Hydraulic Fracturing*, 36 ENVTL. REP. 592 (2005) (describing inspector general's review of EPA conclusion that hydraulic fracturing does not contaminate drinking water).

¹⁴⁵ Note, however, that the purposes section of the Endangered Species Act lists protection of ecosystems before species. *See* 16 U.S.C. § 1531(b) (2000).

¹⁴⁶ *See* Hsu, *supra* note 95, at 308 (noting "the traditional (and mistaken) typecasting of economists as enemies of the environment"); Shi-Ling Hsu, Book Review, *On the Role of Cost-Benefit Analysis in Environmental Law: A Book Review of Frank Ackerman's and Lisa Heinzerling's Priceless: On Knowing the Price of Everything and the Value of Nothing*, 35 ENVTL. LAW. 135, 137 (2005) (arguing that most detractors of cost-benefit analysis in environmental law object on deontological, or ethical, grounds).

¹⁴⁷ *See* Sinden, *supra* note 20, at 175–80 (noting increasing trend toward quantification of costs and benefits in critical habitat determinations and advocating against it); *see also infra* Part IV.

2. *Industry*

During recent decades, non-federally owned sagebrush country has become increasingly settled,¹⁴⁸ and during the past few years, many unsettled areas were leased by oil companies eager to tap into the area's rich natural gas reserves.¹⁴⁹ About half of the sage grouse's remaining habitat is located on federal BLM lands,¹⁵⁰ and thus subject to a multiple-use mandate that allows for many activities, such as grazing and energy development, that may threaten sage grouse habitat.¹⁵¹ Moreover, under President Bush's Executive Order 13,212, the BLM is required to expedite permitting for energy development on its lands.¹⁵²

The stakes for oil and gas companies were particularly high in the sage grouse debate. The increasing demand for natural gas has generated enthusiasm in the executive branch and Congress for drilling on public and other sagebrush rangelands.¹⁵³ Because the U.S. faces high foreign oil prices, the domestic demand for natural gas is expected to increase by more than one-third by 2025.¹⁵⁴ The value of natural gas extraction alone in the Intermountain West is estimated at \$1.3 trillion, although not all of the targeted lands are located in sage grouse territory.¹⁵⁵

Interior Secretary Gale Norton's "spotted owl" comments

¹⁴⁸ 90-day Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 69 Fed. Reg. 21,484, 21,487-90 (Apr. 21, 2004) (to be codified at 50 C.F.R. pt. 17).

¹⁴⁹ Gary Gerhardt, *Delicate Balance Threatened in Big-Game Country*, ROCKY MOUNTAIN NEWS (Denver, Colo.), Nov. 11, 2004, at A34.

¹⁵⁰ 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. 2244, 2272 (Jan. 12, 2005) (to be codified at 50 C.F.R. pt. 17) (relying on BLM estimate that "about 46 percent of greater sage-grouse habitat is on BLM-administered land").

¹⁵¹ See Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1712(c)(1) (2000).

¹⁵² Exec. Order No. 13,212, 66 Fed. Reg. 28,357 (May 22, 2001).

¹⁵³ See, e.g., *id.*

¹⁵⁴ Gerhardt, *supra* note 14.

¹⁵⁵ *Id.* The presence of natural gas reserves focused public attention on portions of the sagebrush rangelands that are located in sage grouse territory, including the Powder River Basin in Wyoming and the Roan Plateau in Colorado. See 12-Month Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. at 2262; Gerhardt, *supra* note 14; see also Joby Warrick & Juliet Eilperin, *Oil and Gas Hold the Reins in the Wild West*, WASH. POST, Sept. 25, 2004, at A1 (describing the tension between natural gas development, wildlife and recreation, with particular reference to the Roan Plateau).

were, in part, a call to action for industries with economic interests in the Intermountain West. Perhaps answering that call, and in response to growing demands for increased regulation in oil and gas fields, the energy industry organized the Partnership for the West, an advocacy group committed to advancing “public policies that boost economic growth, create jobs and encourage environmentally sound development in the West.”¹⁵⁶

The energy industry appealed to both state fears of diminished oil and gas receipts to fund state budgets and the national desire to be less dependent on foreign energy sources. In an article published in the Colorado newspaper *Rocky Mountain Times*, Dru Bower, Vice President of the Petroleum Association of Wyoming, suggested that people had to decide between protecting wildlife and having the natural gas to heat their homes.¹⁵⁷ The same newspaper account also touched on the local government level, pointing to the property tax base of Garfield County, Colorado, to which gas companies contribute 28 percent.¹⁵⁸ Another county stated that it received 71 percent of its property tax revenue from the oil and gas industry.¹⁵⁹ In *USA Today*, Ms. Bower suggested that listing the sage grouse would have “a dramatic impact on oil and gas activity.”¹⁶⁰ Echoing Secretary Norton, the executive director of the Partnership for the West stated that the listing would “cause economic disruption that would make the Northern Spotted Owl decision look miniscule by comparison.”¹⁶¹ The same article emphasized state dependence on extractive industry, noting that 60 percent of Wyoming’s state budget was funded by mineral receipts, including oil, natural gas and coal royalties.¹⁶²

To further tip the informal cost balancing in its favor, the

¹⁵⁶ Partnership for the West, What We Believe, <http://www.partnershipforthewest.org/about/whatwebelieve.asp> (last visited Apr. 2, 2006). Some ranching interests are also represented in the Partnership for the West. See Partnership for the West, About Us, <http://www.partnershipforthewest.org/about/default.asp> (last visited Apr. 2, 2006).

¹⁵⁷ Gerhardt, *supra* note 14.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.* But see Warrick & Eilperin, *supra* note 155 (noting the Pinedale mayor’s assistant’s observation that revenue from oil and gas operates on a “boom-bust” cycle and that the environment is irreplaceable).

¹⁶⁰ Tom Kenworthy, *Battle Brewing Over Sage Grouse Protection*, U.S.A. TODAY, July 13, 2004, at 2A.

¹⁶¹ *Id.*

¹⁶² *Id.*

Partnership for the West issued a press release after FWS's "not warranted" announcement, accusing the environmentalists of sacrificing the species' well-being in favor of an expensive and divisive petition process.¹⁶³ Jim Sims, the Executive Vice President of the Partnership, suggested further that taxpayer money spent on the petition process "could have been spent helping sage grouse and preserving their habitat."¹⁶⁴

The costs cited by industry stakeholders were dramatic, and probably overstated. Implementation of the ESA only rarely results in prohibiting economic activity.¹⁶⁵ Rather, the expenses associated with habitat and species protection force companies to make a more accurate determination of the environmental costs of a project, and therefore may result in a more reliable determination of whether the proposed project or practice is wasteful or economically beneficial. Neither the counties, the states, nor the oil companies supporting them, would have the rug pulled out from under them; instead, they might have to apply different drilling practices to protect the sage grouse habitat.¹⁶⁶ Moreover, experience has shown that there are significant hidden costs to under-regulated drilling in sagebrush country.¹⁶⁷ In addition to habitat loss (and subsequent loss of recreational hunting and fishing) caused by oil and natural gas drilling,¹⁶⁸ coalbed methane

¹⁶³ Press Release, P'ship for the W., Partnership Issues Challenge to Activist Groups on Sage-grouse (Feb. 6, 2005), <http://www.partnershipforthewest.org/news/details.asp?id=8>.

¹⁶⁴ *Id.*

¹⁶⁵ See generally Houck, *supra* note 23.

¹⁶⁶ See Gerhardt, *supra* note 14 (The executive director of Native Ecosystems, an organization petitioning to list the sage grouse, stated that "listing the grouse won't stop oil and gas production," but instead "will mandate restrictions that may require more expensive drilling techniques, and oil companies are fighting that."). See generally Houck, *supra* note 23.

¹⁶⁷ See Blaine Harden, *Gas Drilling Permits in Rockies Outstrip Ability to Tap Resource*, WASH. POST, Apr. 28, 2005, at A3 (stating that Wyoming Governor Dave Freudenthal called the BLM-owned Jonah Field "an example of what not to do in the future"); see also UPPER GREEN RIVER VALLEY COAL., LESSONS FROM JONAH: THE BIG FISH THAT SWALLOWED THE UPPER GREEN? (2004), available at http://www.uppergreen.org/library/docs/Jonah_factsheet.pdf (describing the impacts of intensive drilling and road construction in the Jonah Field and advocating for more regulation in the Pinedale Anticline gas fields).

¹⁶⁸ See, e.g., Todd Wilkinson, *Drilling Where Antelope Play*, CHRISTIAN SCI. MONITOR., Apr. 13, 2005, at 1, 4 (describing challenge of balancing preservation of "world-class" big game with "world-class" gas extraction in Pinedale, Wyoming and noting that objections to drilling are coming from hunters and anglers as well as from traditional environmentalists).

extraction can pollute groundwater, affecting surrounding communities.¹⁶⁹ Despite these significant considerations, the industry confidently argued that the economic concerns favored their cause. In the media, the environmentalists rarely answered these assertions.

The political discourse surrounding the sage grouse listing process demonstrated that since the spotted owl listing, state, local, and industry cost considerations have become even more salient in the public perception of the ESA.¹⁷⁰ The greater sage grouse debate did not deviate from the standard species-versus-economy framework. The science-only mandate of the ESA listing process exacerbates this framework by forbidding the agency to consider factors, such as economic costs and broad ecological and social benefits that necessarily inform FWS's decision given the scientific uncertainty in determining whether a species is in fact endangered. In the next section, I consider the possibility that authorizing consideration of economic and ecological benefits, expressed in a CBA, might focus the listing discourse on the many values of preserving habitat and species. I examine recent experience with CBA in the Section 4 critical habitat context as evidence of the potential for a shift in the discourse surrounding contentious endangered species decision-making.

IV. COST-BENEFIT ANALYSIS: THE CRITICAL HABITAT EXPERIENCE

During the past five years, FWS increasingly has relied on CBA in its critical habitat designations.¹⁷¹ Because of peculiarities of both the critical habitat regulations and FWS's CBA

¹⁶⁹ See Paskus, *supra* note 144, at 10–12 (describing hydraulic fracturing, a process used in natural gas drilling, that can pollute drinking water supplies). For a useful discussion of the environmental impacts associated with oil and gas production at all phases of development, see ENVTL. WORKING GROUP, WHO OWNS THE WEST? OIL AND GAS LEASES (2004), http://www.ewg.org/oil_and_gas.

¹⁷⁰ See generally Plater, *supra* note 13 (discussing role of media and public perception in shaping political responses to ESA regulation).

¹⁷¹ See Sinden, *supra* note 20, at 168; see also U.S. FISH AND WILDLIFE SERV., ECONOMIC EFFECTS OF CRITICAL HABITAT DESIGNATION FOR THE RED-LEGGED FROG IN 23 CALIFORNIA COUNTIES (2005), available at <http://www.fws.gov/sacramento/ea/Documents/Red-Legged%20Frog%20DEA%2010-19-05.pdf> [hereinafter, RED-LEGGED FROG]; U.S. FISH AND WILDLIFE SERV., DRAFT ECONOMIC ANALYSIS OF CRITICAL HABITAT DESIGNATION FOR THREE POPULATIONS OF BULL TROUT (2005), available at <http://www.fws.gov/pacific/bulltrout> [hereinafter BULL TROUT].

implementation policies, FWS's experiments with CBA in the critical habitat context have resulted in a dramatic reduction of critical habitat designation.¹⁷² However, the use of CBA in the critical habitat designation process has also begun to turn the debate over species preservation toward one of the problems that Congress initially identified in the 1973 Act: excessive development and destruction of habitat, to the detriment of the local communities and the nation.¹⁷³

A. *Background on Critical Habitat Designation*

Unlike the listing provision of the ESA, the critical habitat provision explicitly requires consideration of costs in determining whether to designate an area as critical habitat. The Secretary designates critical habitat based upon scientific considerations, after taking into account the economic and other impacts of including an area within the designation.¹⁷⁴ The Secretary may not, however, exclude an area for economic reasons if the exclusion will result in extinction of the species.¹⁷⁵ Until recently, FWS performed very perfunctory cost analyses to accompany critical habitat designations.¹⁷⁶

Section 7 of the ESA requires government agencies to consult with the FWS before undertaking federal actions that might jeopardize the continued existence of an endangered species or result in destruction or adverse modification of its critical habitat.¹⁷⁷ In its implementing regulations, the FWS interpreted "jeopardize" to mean "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species."¹⁷⁸ The FWS defined "adverse modification" as "a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed

¹⁷² See, e.g., Mike Ferullo, *Fish and Wildlife Service Slashes Habitat for California Toad Species, Citing Costs*, 36 ENVTL. REP. 828 (2005).

¹⁷³ Endangered Species Act of 1973 § 2(a)(1), 16 U.S.C. § 1531(a)(1) (2000).

¹⁷⁴ *Id.* § 1533(b)(2).

¹⁷⁵ *Id.*

¹⁷⁶ Sinden, *supra* note 20, at 159–60.

¹⁷⁷ 16 U.S.C. § 1536(a)(2).

¹⁷⁸ 50 C.F.R. § 402.02 (2000).

species.”¹⁷⁹ Each of these definitions requires a finding that the survival of an endangered species be affected by the agency action. Critical habitat, however, is defined in the statute as the habitat necessary to the “conservation” of the species; conservation, in turn, is geared toward delisting, not mere survival.¹⁸⁰

Because FWS defined the terms “no jeopardy” and “adverse modification” by similar survival-based standards for purposes of Section 7 review of federal actions, the agency took the position that designating critical habitat did not create any costs beyond those already imposed merely by listing the species as threatened and endangered. Under FWS’s interpretation of the statute, any listed species would trigger Section 7 review under the “no jeopardy” standard; the “adverse modification” standard for federal actions proposed in critical habitat for the same species did not offer any additional protection.¹⁸¹

Two appellate courts have rejected FWS’s definition of “adverse modification” as contrary to the ESA.¹⁸² In *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, the Ninth Circuit invalidated the FWS’s regulation, finding that “the regulatory definition reads the ‘recovery’ goal out of the adverse modification inquiry.”¹⁸³ In *Sierra Club v. U.S. Fish and Wildlife Service*, the Fifth Circuit held that the FWS’s definition “set the

¹⁷⁹ *Id.*

¹⁸⁰ See 16 U.S.C. § 1531(3) (defining “conservation” as “the use of all methods and procedures which are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary”); *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004) (“The agency’s controlling regulation on critical habitat thus offends the ESA because the ESA was enacted not merely to forestall the extinction of species (i.e., promote a species survival), but to allow a species to recover to the point where it may be delisted.”).

¹⁸¹ Notice of Intent to Clarify the Role of Habitat in Endangered Species Conservation, 64 Fed. Reg. 31,871, 31,872 (June 14, 1999) (“According to our interpretation of the regulations, by definition, the adverse modification of critical habitat consultation standard is nearly identical to the jeopardy consultation standard . . . the designation of ‘official’ critical habitat is of little additional value for most listed species.”); see also Daniel J. Rohlf, *Jeopardy Under the Endangered Species Act: Playing a Game Protected Species Can’t Win*, 41 WASHBURN L.J. 114, 118–20 (2001) (“In other words, FWS and NMFS currently interpret section 7’s prohibition on destroying or adversely modifying critical habitat to be simply another version of section 7’s jeopardy standard.”).

¹⁸² *Gifford Pinchot Task Force*, 378 F.3d at 1070; *Sierra Club v. U.S. Fish and Wildlife Serv.*, 245 F.3d 434, 441–42 (5th Cir. 2001).

¹⁸³ *Gifford Pinchot Task Force*, 378 F.3d at 1069.

bar too high” for finding an adverse modification.¹⁸⁴ Despite multiple judicial invalidations of the “adverse modification” standard during the past five years,¹⁸⁵ FWS has not yet promulgated a new definition.¹⁸⁶

In the meantime, FWS has begun to perform formal CBAs to accompany critical habitat designations. In a recent article, Professor Sinden traced this increased use of quantified costs and benefits to the Tenth Circuit’s *Cattle Growers* decision,¹⁸⁷ which invalidated FWS’s “baseline” approach to economic analysis of critical habitat designation.¹⁸⁸ Under the baseline approach, FWS, consistent with both OMB guidelines and the ban on the use of economic factors in listing, considered only the additional costs and benefits of critical habitat designation, not the economic impacts of listing itself.¹⁸⁹ Because FWS interpreted critical habitat designation as a largely redundant protective mechanism for species, it consistently found that the additional economic impacts of designating critical habitat were negligible.¹⁹⁰ The vast majority of the costs of protecting the species were functions of listing, not critical habitat designation. In response to a challenge to this approach, the *Cattle Growers* decision held that FWS must consider “all of the economic impacts of a critical habitat designation, regardless of whether those impacts are attributable co-extensively to other causes.”¹⁹¹ Although the *Cattle Growers* decision has not been followed by other circuits,¹⁹² FWS

¹⁸⁴ *Sierra Club*, 245 F.3d at 441–42.

¹⁸⁵ See *Gifford Pinchot Task Force*, 378 F.3d at 1070; *Sierra Club*, 245 F.3d at 443; *Cape Hatteras Access Pres. Alliance v. U.S. Dept. of the Interior*, 344 F. Supp. 2d 108, 128–30 (D.D.C. 2004).

¹⁸⁶ See Memorandum from the Dir., Fish and Wildlife Serv. to Reg’l Dir’s, Regions 1–7 and Manager, Cal.-Nev. Operations Office, Application of the “Destruction or Adverse Modification” Standard Under Section 7(a)(2) of the Endangered Species Act (Dec. 9, 2004), available at http://training.fws.gov/EC/Resources/HCP/Guidance_and_Directors_Memo/Director's_Adverse_Mod_Guidance_12-9-04.pdf [hereinafter *Destruction or Adverse Modification Standard Memorandum*].

¹⁸⁷ *New Mexico Cattle Growers Ass’n v. U.S. Fish & Wildlife Serv.*, 248 F.3d 1277 (10th Cir. 2001).

¹⁸⁸ Sinden, *supra* note 20, at 168.

¹⁸⁹ *Id.* at 161.

¹⁹⁰ *Id.*

¹⁹¹ *New Mexico Cattle Growers Ass’n*, 284 F.3d at 1285.

¹⁹² Other courts have preferred to hold that FWS’s twin definitions of “no jeopardy” and “adverse modification” are the root of the problem because they make the critical habitat designation redundant. See *Gifford Pinchot Task Force*

voluntarily began implementing a double-baseline approach to economic analysis in response to the decision.¹⁹³

Under the double-baseline approach, FWS considers two cost estimates, the first reflecting the additional costs of critical habitat designation, and the second reflecting “all of the economic impacts,” including those attributable to listing.¹⁹⁴ These two cost estimates are supposed to form the lower and upper bounds, respectively, of the potential costs of critical habitat designation, but Professor Sinden notes that FWS continues to ignore the full cost of listing in making its final critical habitat determinations.¹⁹⁵ Aside from observing that FWS’s double-baseline approach makes the critical habitat designation process needlessly complicated, Professor Sinden argues that FWS’s increasingly quantified benefit and cost estimates signal an unwelcome trend toward the agency applying more formal cost-benefit analysis in ESA decision-making.¹⁹⁶

B. *Serious Flaws in FWS’s Approach to CBA in Critical Habitat Determinations*

At first glance, the results of applying CBA in the critical habitat context have been extremely discouraging for advocates of habitat protection. For example, FWS used its formal CBA process to justify reducing the arroyo toad’s critical habitat designation by 97 percent, reducing the bull trout’s critical habitat by more than 75 percent, and to propose reducing the red-legged frog’s critical habitat by 82 percent.¹⁹⁷

v. U.S. Fish & Wildlife Serv., 378 F.3d 1059, 1070 (9th Cir. 2004); *Sierra Club v. U.S. Fish and Wildlife Serv.*, 245 F.3d 434, 443 (5th Cir. 2001); *Cape Hatteras Access Pres. Alliance v. U.S. Dept. of the Interior*, 344 F. Supp. 2d 108, 128–30 (D.D.C. 2004) (insisting that the “adverse modification” standard in Section 7 requires a higher level of protection than the “no jeopardy” standard and that FWS’s current regulations fly in the face of statutory interpretation).

¹⁹³ See Sinden, *supra* note 20, at 169 (describing FWS’s insertion of a preface at the beginning of its critical habitat economic analyses declaring the agency’s intention of complying with the Tenth Circuit decision, even outside of the Tenth Circuit).

¹⁹⁴ *Id.* at 171.

¹⁹⁵ *Id.* at 171–73.

¹⁹⁶ *Id.* at 168. Indeed, FWS has reduced the amount of critical habitat designated for some species based on cost considerations. See, e.g., Ferullo, *supra* note 172 (reporting that FWS eliminated 125,000 acres of critical habitat for the southwestern arroyo toad in California based on an economic analysis).

¹⁹⁷ Janet Wilson, *Habitats May Shrink By Leaps and Bounds*, L.A. TIMES

Early attempts by FWS to perform CBAs for critical habitat indicated some interest in identifying and quantifying benefits as well as costs. In particular, the proposed critical habitat designation for the cactus ferruginous pygmy-owl solicited public comment on “[w]hether economic and other values associated with designating habitat for the pygmy-owl such as those derived from non-consumptive uses (e.g., hiking, camping, birdwatching, enhanced watershed protection, improved air quality, increased soil retention, ‘existence values,’ and reductions in administrative costs) were included appropriately.”¹⁹⁸ Because FWS never promulgated a final rule for the pygmy-owl, it is unclear whether any of the public comments addressed this question.¹⁹⁹ In its request for comment on the economic analysis of habitat designation for the arroyo toad, however, FWS dropped any reference to valuation of potential benefits.²⁰⁰ Instead, the request for public comments on the arroyo toad designation focused on whether the agency had accurately estimated the costs of designation; the resulting comments in the final rule focused exclusively on the costs of designation that would be borne by developers, water management agencies and the mining industry.²⁰¹ Rather than referencing benefits directly in the arroyo toad, bull trout and red-legged frog proposed rules, FWS asked “[w]hether our approach to designating critical habitat could be improved or modified in any way to provide for greater public participation [and/or] understanding, or to assist us in

Nov. 4, 2005, at A1. FWS has attributed at least some of these reductions to improved species mapping and voluntary conservation measures on public and private lands. *Id.*

¹⁹⁸ Designation of Critical Habitat for the Arizona Distinct Population Segment of the Cactus Ferruginous Pygmy-Owl, 67 Fed. Reg. 71,032, 71,047 (proposed Nov. 27, 2002) (to be codified at 50 C.F.R. pt. 17).

¹⁹⁹ Proposed Rule to Remove the Arizona Distinct Population Segment of the Cactus Ferruginous Pygmy-Owl from the Federal List of Endangered and Threatened Wildlife; Proposal to Withdraw the Proposed Rule to Designate Critical Habitat, 70 Fed. Reg. 44,547 (Aug. 3, 2005) (to be codified at 50 C.F.R. pt. 17) (proposing to delist the pygmy-owl after a Ninth Circuit ruling found its application of DPS arbitrary and capricious).

²⁰⁰ Compare Proposed Designation of Critical Habitat for the Arroyo Toad, 70 Fed. Reg. 7459, 7459–60 (Feb. 14, 2005) (to be codified at 50 C.F.R. pt. 17), with Designation of Critical Habitat for the Arizona Distinct Population Segment of the Cactus Ferruginous Pygmy-Owl, 67 Fed. Reg. 71,032 (proposed Nov. 27, 2002) (to be codified at 50 C.F.R. pt. 17).

²⁰¹ Final Designation of Critical Habitat for the Arroyo Toad, 70 Fed. Reg. 19,562, 19,572–76 (Apr. 13, 2005) (to be codified at 50 C.F.R. pt. 17).

accommodating public concerns and comments.”²⁰²

Recent economic analyses for critical habitat have rejected any attempt to consider quantified direct benefits, and have been vague about inclusion of ancillary benefits.²⁰³ Instead of identifying particular unquantified benefits, in each case the FWS inserted nearly identical language describing the difficulty of identifying and quantifying benefits.²⁰⁴ FWS views the direct benefit of designating critical habitat as “the potential to enhance conservation of the species,” and it measures this benefit in biological, rather than economic terms.²⁰⁵ Given FWS’s stated position that critical habitat provides no additional protection for threatened and endangered species, nearly any costs imposed on regulated interests would outweigh the direct benefit of designating critical habitat, since the species would be adequately protected by the “no jeopardy” standard without regard to critical habitat.²⁰⁶

FWS includes in the economic analyses its policy for inclusion of ancillary benefits within the economic analysis, stating that: “It is often difficult to evaluate the ancillary benefits of [critical habitat designation]. To the extent that the ancillary benefits of the rulemaking may be recaptured by the market through an identifiable shift in resource allocation, they are factored into the overall impact assessment of this report.”²⁰⁷ FWS gives the example of decreased ORV usage leading to greater

²⁰² Proposed Designation of Critical Habitat for the California Red-Legged Frog, 70 Fed. Reg. 66,906, 66,907 (Nov. 3, 2005) (to be codified at 50 C.F.R. pt. 17); *see also* Proposed Designation of Critical Habitat for the Jarbidge River, Coastal-Puget Sound, and Saint Mary-Belly River Populations of for Bull Trout, 70 Fed. Reg. 22,835, 22,836 (May 3, 2005) (to be codified at 50 C.F.R. pt. 17); Proposed Designation of Critical Habitat for the Arroyo Toad, 70 Fed. Reg. at 7460.

²⁰³ RED-LEGGED FROG, *supra* note 171, at 10; BULL TROUT, *supra* note 171, at 10.

²⁰⁴ Compare RED-LEGGED FROG, *supra* note 171, at 10 with BULL TROUT, *supra* note 203, at 9.

²⁰⁵ *See, e.g.*, BULL TROUT, *supra* note 203, at 9–10.

²⁰⁶ FWS has issued an interim policy that uses “conservation” as the benchmark for Section 7 evaluations. *See* Destruction or Adverse Modification Standard Memorandum, *supra* note 186. Nevertheless, agency foot-dragging in promulgation of new regulations concerning the contentious critical habitat designation standards may indicate continuing belief that designation of critical habitat is ineffectual.

²⁰⁷ RED-LEGGED FROG, *supra* note 171, at 10; BULL TROUT, *supra* note 203, at 10.

opportunity for wildlife viewing or hiking (as expressed through measurable impacts on the local economy), and states that where data are available on such ancillary benefits, FWS incorporates them into a net economic statement.²⁰⁸ It is unlikely that such data is readily available for many ancillary benefits; where they are not, it appears that FWS will not even consider them qualitatively within the economic analysis framework. Because the policy requires evidence of an identifiable shift of resources in the market, it excludes any consideration of ecosystem services and existence value valuations, for which there are few if any market-based indicators. Moreover, the economic analyses fail to identify, let alone “evaluate,” specific ancillary benefits. In order to fully inform the public and the decision-maker, even unquantified and unquantifiable ancillary benefits should be specifically identified in the economic analyses.²⁰⁹ Boilerplate language does not provide the public enough information about the specific economic and ecological benefits of protecting habitat.

In the final rule designating critical habitat for the bull trout, FWS addressed a comment that its economic analysis did not account for the economic benefits of critical habitat designation.²¹⁰ After repeating that it is difficult to evaluate ancillary benefits, FWS further expounded on its reluctance to evaluate benefits in monetary terms explaining that:

While Section 4(b)(2) of the Act gives the Secretary discretion to exclude certain areas from the final designation, she is authorized to do so only if an exclusion does not result in the extinction of the species. Thus, we believe that explicit consideration of broader social values for the species and its habitat, beyond economic impacts, is evidenced by the designation itself that protects areas for conservation despite costs associated with that designation. In other words, the

²⁰⁸ RED-LEGGED FROG, *supra* note 171, at 10; BULL TROUT, *supra* note 203, at 10.

²⁰⁹ The preamble to the Revised Proposed Designation of Critical Habitat for the California for the Red-Legged Frog identified educational and informational benefits of critical habitat designation, but FWS uniformly argued that actual designation would not provide any marginal educational or informational gains because existing Habitat Conservation Plans and public land management programs already served these functions. Revised Proposed Designation of Critical Habitat for the California Red-Legged Frog, 70 Fed. Reg. 66,906, 66,927–35 (Nov. 3, 2005).

²¹⁰ Designation of Critical Habitat for the Bull Trout, 70 Fed. Reg. 56,212, 56,220–21 (Sept. 26, 2005) (to be codified at 50 C.F.R. pt. 17).

Secretary begins a designation based on an assumption that the benefit of designation outweighs the benefit of exclusion”²¹¹

An extinction-based limitation as expressed in FWS’s response does not take into account enhanced watershed protection and anticipated improvements in public health occurring as a result of species protection. Although the Secretary is authorized to exclude critical habitat from designation if it does not result in extinction of the species, this limitation should not be interpreted to mean that any benefits beyond preservation of the species are irrelevant to the economic analysis. It is impossible to determine whether the costs of an action outweigh the benefits without attempting to evaluate all of the benefits, including ancillary benefits.

Thus FWS’s policy against identifying and quantifying benefits considers only the direct benefit of enhanced potential for habitat conservation, which FWS itself has stated it believes is worthless from the point of view of protecting the species. The policy of interpreting “adverse modification” and “no jeopardy” as the same standard, coupled with FWS’s refusal to even identify, let alone quantify, benefits of designation, has unsurprisingly resulted in dramatically reduced levels of habitat designation.

C. *Effects of CBA on Critical Habitat Public Discourse*

In spite of the distorted substantive analyses and results of FWS’s experiment with CBA in the critical habitat designation process, early hints of a shift in public discourse can be found as a result of the use of CBA. Public comment addressed in the final rules for the arroyo toad and the bull trout critical habitat designations was devoid of comments regarding FWS’s failure to specifically identify ancillary benefits of critical habitat designation, aside from the bull trout comment described above.²¹² It is unclear whether this dearth of comments stemmed from FWS’s failure to ask for comments addressing benefits, lack of public participation, or FWS’s stated policy not to consider most ancillary benefits.

²¹¹ *Id.*

²¹² See Designation of Critical Habitat for the Bull Trout, 70 Fed. Reg. 56,212, 56,220–21 (Sept. 26, 2005); Final Designation of Critical Habitat for the Arroyo Toad, 70 Fed. Reg. 19,562, 19,572–76 (Apr. 13, 2005).

Despite FWS's refusal to identify and address most of the benefits of habitat preservation, public discourse in the media focused on under-valued and missing benefits calculations. For example, an article published in the *Los Angeles Times* after the draft economic analysis for the red-legged frog critical habitat designation was released quoted an attorney for Earthjustice who argued that the economic analysis was "skewed" and "inaccurate" because of its failure to account for the premium homeowners will pay to locate near open space.²¹³ The article also reported that the benefits calculated to flow from designation of bull trout critical habitat, including sport fishing tourism and cleaner drinking water, ranged from \$200–215 million; while costs of designation ranged from \$200–300 million.²¹⁴ Despite the potential for the costs and benefits of designation to cancel each other out, FWS excised any mention of specific numerical estimates of benefits from its draft analysis for the bull trout.²¹⁵ In an article published after FWS released its final designation of critical habitat for the arroyo toad, an environmentalist argued that the economic analysis upon which FWS's decision to reduce the designation by nearly 68,000 acres solely relied, failed to analyze the economic benefits of the designation, including protection of water quality and subsequent improvements in public health.²¹⁶

These statements differed remarkably from the discourse surrounding the sage grouse listing process described in Part III. In rebutting FWS's justifications for reducing critical habitat, environmentalists took pains to connect species and habitat protection to human health and well-being, challenging the false dichotomy constructed by FWS's CBA policy, and to some degree, by the ESA itself. This dichotomy, expressed as species-versus-economy, fails to link habitat preservation to human well-being. CBA as a factor in critical habitat designation provided a new framework for public discourse, one more likely to accurately identify and address the benefits of habitat and species protection and their connection to human needs and values. It is this singular capacity of CBA to methodically catalogue benefits as well as costs of habitat and species protection that could lead to an

²¹³ Wilson, *supra* note 197 (quoting Michael Sherwood).

²¹⁴ *Id.*

²¹⁵ *See id.*

²¹⁶ *See* Ferullo, *supra* note 172, at 829.

improved public discourse in endangered species decision-making. In order to accomplish this shift, however, both regulators and environmentally-minded participants must be willing to engage in the process whole-heartedly. Such whole-hearted engagement was lacking on both sides in recent critical habitat designations.

V. ADDITIONAL CRITICISMS OF CBA IN ENDANGERED SPECIES DECISION-MAKING

The use of CBA has gained increasing acceptance among academics and regulators in the environmental field.²¹⁷ As detailed above, economic concerns have gained ground in the ESA as well.²¹⁸ Application of CBA in critical habitat designations was thus not a surprising development.²¹⁹ Objections to the use of CBA in listing ultimately derive from Reagan-era implementation, which had a profoundly anti-regulatory bias.²²⁰ This bias is recurring in the critical habitat economic analyses described in Part IV; however, the bias can be addressed through greater public participation and openness on the part of FWS. Abuse of CBA in the listing context led Congress to abolish consideration of costs in listing in the 1982 amendments;²²¹ instead of accomplishing greater protection of species, however, the science-only mandate has skewed public discourse further toward the costs of protection. Aside from the specific shortcomings of FWS's approach to and implementation of CBA in critical habitat determinations, CBA presents several potential dangers in the context of endangered species decision-making. In this section, I address general concerns about the use of CBA.

²¹⁷ See Sinden, *supra* note 20, at 135–39.

²¹⁸ See *supra* Part II. See generally BALDWIN, *supra* note 25.

²¹⁹ See Sinden, *supra* note 20, at 174–75.

²²⁰ See Doremus, *supra* note 42, at 1054.

²²¹ See Doremus, *supra* note 42 at 1054–55 (describing the 1982 amendments as Congress's attempt "to prevent economic analysts at the Office of Management and Budget, the administration's cost-benefit enforcers, from interfering"); see also H.R. Rep. No. 97-567, pt. 1, at 20 (1982) ("The Committee strongly believes that economic considerations have no relevance to determinations regarding the status of a species . . .").

Critics of increased use of CBA emphasize that the problems associated with CBA in the pollution control context, such as manipulability are exacerbated in the ESA context due to uncertainties regarding ecology, habitat needs and predicting future land uses.²²² The opponents of CBA generally break down these uncertainties into two criticisms: incommensurability and indeterminacy. Opponents further allege that CBA is undemocratic and just too expensive.

A. *Manipulability and Bias*

Although it is no longer true that CBA *ipso facto* favors regulated industries at the expense of environmental concerns,²²³ environmental advocates' concerns about the inherent bias of cost-benefit analysis have considerable merit, as demonstrated by the critical habitat experience.²²⁴ In most environmental health-and-safety regulation, this bias manifests itself as a willingness to consider ancillary costs, but not ancillary benefits, in risk tradeoff analyses.²²⁵

The framework of the ESA can be interpreted as a type of risk-tradeoff analysis: in the sage grouse debate, for example, FWS had to determine the appropriate tradeoff between the risk of species extinction and the risk of economic dislocation and energy shortages. In the endangered species context, ancillary benefits are the indirect benefits of preserving a species, and in most listing decisions, these ancillary benefits will be the primary source of value that offsets costs associated with lost options to develop a species' habitat.²²⁶ Although the species itself may provide existence value²²⁷ and arguably some type of traditional use value

²²² See Sinden, *supra* note 20, at 199–207.

²²³ See Hsu, *supra* note 95, at 342 (pointing to a number of cost-benefit analyses of the Clean Air Act, which demonstrated benefits far in excess of its costs).

²²⁴ See Samuel J. Rascoff & Richard L. Revesz, *The Biases of Risk Tradeoff Analysis: Toward Parity in Environmental Health-and-Safety Regulation*, 69 U. CHI. L. REV. 1763, 1793–94 (2002) (linking risk tradeoff analysis and cost-benefit analysis with two profoundly anti-regulatory moments and describing the lasting impact of this initial bias in the methodological approach of risk-tradeoff analysis).

²²⁵ See *id.* at 1792.

²²⁶ See Thompson, *supra* note 95, at 1174–77 (advocating quantification of endangered species values).

²²⁷ See David A. Dana, *Existence Value and Federal Preservation Regulation*,

(such as hunting or research value), these values will not generally be sufficient to overcome the costs borne by developers. However, ancillary benefits, such as water filtration, erosion protection and pollution control, may often add sufficient value to make the balancing question a much closer call.²²⁸ This is particularly true if advocates are able to demonstrate the costs of subsidization of harmful activities, such as agricultural and mineral production.²²⁹ The anti-benefit bias can also be remedied by incorporating an ecological perspective of ancillary benefits, largely through environmentalist stakeholder participation, into the CBA and the subsequent public critique.²³⁰

B. *Incommensurability*

Incommensurability may be viewed as the absence of a scale or metric.²³¹ One of the principle objections to CBA in regulatory decisionmaking generally is the incommensurability problem: the notion that some values cannot be adequately expressed in monetary terms.²³² That monetary value cannot adequately capture some values is undoubtedly true. Just as it is inadvisable to rely solely on science in endangered species listing decisions, it is also inadvisable to rely solely on CBA. Rather than being used as a decision rule, CBA should be viewed as a rigorous approach to a

28 HARV. ENVTL. L. REV. 343, 345 (2004) (describing existence value as losing “some sense of well-being simply by virtue of the loss of the existence of wetlands, waterways, and other natural resources in states where [a person does] not live”). For the purposes of CBA, existence value can be quantified through contingent valuation, a methodology that assigns monetary value to goods that do not necessarily have a market value. *See id.* at 367–72.

²²⁸ *See, e.g., supra* note 197 and accompanying text.

²²⁹ *See* Thompson, *supra* note 95, at 1166–69 (noting that the ESA can bring attention to harmful subsidies, but also recognizing the political difficulty of acting to eliminate subsidies). Although it would be politically difficult to eliminate subsidies, a CBA could at least lay bare the costs.

²³⁰ Both the manipulability of CBA and CBA’s ability to transform the rhetoric of endangered species decision-making were illustrated in the recent critical habitat designation for the southwestern arroyo toad. *See* Ferullo, *supra* note 172, at 828–29 (noting that after FWS reduced critical habitat designation by 68,000 based “solely on economic considerations,” environmentalists argued that FWS failed to analyze ancillary economic benefits of protecting water quality and thus public health downstream).

²³¹ Matthew Adler, *Incommensurability and Cost-Benefit Analysis*, 146 U. PA. L. REV. 1371, 1383–86 (1998).

²³² Sinden, *supra* note 19, at 197–98; *see also* HEINZERLING & ACKERMAN, *supra* note 93, at 161–63 (arguing that “a whale watch is not a whale”).

complicated, value-laden problem, an approach that sharpens the values debate that remains after identifying the potential costs and benefits of a decision to protect a species.

Critics respond that even when used as a procedural tool, CBA expresses values in numbers, and numbers are likely to wield undue influence on both decision-makers and the public.²³³ Proponents of CBA recast this problem as asymmetry of information: in the absence of CBA, costs will nevertheless be expressed in terms of profits and jobs lost, while benefits will remain unquantified and thus less easy to understand.²³⁴ When recast in this manner, the argument that the public's general tendency to focus on numbers will give a CBA disproportionate weight proves too much. It simply demonstrates the disadvantage faced by advocates of listing in the absence of a CBA that at least attempts to quantify some of the benefits of habitat and species protection.²³⁵

C. Indeterminacy

Critics also argue that CBA is useless because it often produces indeterminate results, which occur because the margin for error, particularly on the benefits side, is so large.²³⁶ This argument essentially suggests that because CBA is uncertain, it is at best useless, and at worst, a source of distorted information about the costs and benefits of an action. Like science, CBA cannot predict with complete accuracy. But would critics of CBA have us dispense with science as a decisionmaking criterion as well? What critics fail to understand is the usefulness of CBA in reframing public discourse, even when its results are indeterminate. A CBA can be presented in a way that highlights the uncertainties, and allows the public to help decide what to do with them. The public can criticize the methodology employed, or contribute by asserting that a set of under-monetized values tips the scale decidedly in favor or against protection. Moreover, indeterminacy in a CBA at the listing stage is as telling as a clear

²³³ See, e.g., Sinden, *supra* note 20, at 199–207.

²³⁴ See, e.g., Hsu & Loomis, *supra* note 18, at 10240 (noting the asymmetry of information presented to regulatory agencies and arguing that this does not necessarily lead to better decision-making).

²³⁵ See Hsu, *supra* note 95, at 341 (asserting that the monetary expression of costs is only half of the CBA inquiry).

²³⁶ See, e.g., Sinden, *supra* note 20, at 200–07.

statement: by specifically identifying uncertainties, it forces the decisionmaker and the public to confront the conflicting values of development and habitat protection and make an honest decision.

D. Denying Public Participation

Opponents of CBA also argue that it denies the opportunity for public participation by incorporating a highly technical component into environmental decision-making.²³⁷ The suggestion that CBA “corrupts the democratic process,”²³⁸ seems particularly ill-suited for the ESA listing process, which already suffers from an anti-democratic “science-only” mandate.²³⁹ The “science-only” mandate nearly completely excludes input from the general public, and, as discussed in Part II, also severely limits opportunity for public review of agency listing decisions, apart from identification of procedural error. Professor Doremus’s proposal, also discussed in Part II, would broaden the listing criteria to include non-scientific factors, such as historical and aesthetic values.²⁴⁰ However, without economic value as a factor, even Professor Doremus’s proposal will not meaningfully alter the listing discourse, principally because of the asymmetry of information presented by development and environmental interests. Indeed, many of the values embodied in the ESA would be at least partially expressed through existence value and ancillary benefits analysis. The systematic rigor of CBA would allow interested parties to identify places where the CBA has fallen short or failed to identify important values.²⁴¹ In other words, it could actually increase the transparency of the decision-making process.²⁴²

²³⁷ See Sinden, *supra* note 20, at 207 (arguing that CBA gives decision-making the “false patina of scientific accuracy”).

²³⁸ *Id.*

²³⁹ See *supra* Part II.

²⁴⁰ Doremus, *supra* note 42, at 1137–38.

²⁴¹ See Hsu, *supra* note 95, at 353 (“[T]he fact that Heinzerling was able to make her critiques is precisely the point of utilizing cost-benefit analysis and other efficiency-oriented criteria.”).

²⁴² *Id.*

E. *Expense*

Finally, critics also offer a meta-critique of CBA in the ESA: the cost of implementing it outweighs the benefits of doing so. CBAs performed for listing determinations are most likely to be highly scrutinized when large economic interests are at stake, such as the development industry in Southern California or the oil and gas industry in the Intermountain West. Of course, these determinations are also likely to have large ecological stakes (such as water quality). In such cases, the cost of performing a CBA that considered the benefits of improved water quality and other ancillary benefits would often result in more efficient allocation of scarce environmental resources, for humans, frogs, or sage grouse. FWS already engages in CBA for critical habitat determinations, and increasing regulatory experience with CBA in natural resource decision-making will reduce the costs of implementation over time, as economists develop benefits transfer mechanisms and other procedural short-cuts.²⁴³ While the cost argument is compelling, environmental advocates would be better served by advancing the development of benefits transfer mechanisms and valuation methods for nonmonetized values to reduce these costs and further preservation interests.

VI. TOWARD A RATIONAL LISTING DISCOURSE: SAVING THE SAGE GROUSE, SAVING OURSELVES

Although the ultimate decision to list the spotted owl under the ESA is one of the great triumphs of post-1970s environmentalism, FWS's handling of the listing process and the battle surrounding it had some unfortunate legacies.²⁴⁴ One such legacy is the entrenchment of species-versus-economy discourse surrounding contentious listing decisions.²⁴⁵ Scholars in both law and economics have made valiant efforts to demonstrate that the species-versus-economy story is a gross simplification,²⁴⁶ and that

²⁴³ The shortcomings of these short-cuts in a particular case can be addressed in public comments and debate.

²⁴⁴ See PETERSEN, *supra* note 24, at 94–118 (describing some of the political and popular backlash against the ESA in the aftermath of the spotted owl listing).

²⁴⁵ Cf. Burke, *supra* note 12, at 480–82.

²⁴⁶ See, e.g., *id.* at 458–62 (debunking some of the ESA “horror stories” told by property rights advocates). See generally THOMAS MICHAEL POWER, *LOST LANDSCAPES AND FAILED ECONOMIES* (1996).

the benefits of listing and protecting species often outweigh the costs of doing so.²⁴⁷ Nevertheless, as the sage grouse listing demonstrated, these efforts have failed to make much of an impact on the political and popular discourse surrounding the ESA.²⁴⁸ This Note suggests that one source of this failure is Congress's perhaps admirable but naïve intent to keep consideration of costs and benefits out of the listing process. The ban on cost-benefit analysis has led both environmentalists and industries to develop entrenched, often inaccurate positions regarding both the benefits and costs of species protection.²⁴⁹ In turn, these misrepresentations influence public opinion, often mobilizing the public against species protection, even when the benefits might outweigh the costs.²⁵⁰

To advance the national interest in species and habitat protection, I propose that Congress should incorporate CBA as one of the factors for determining whether a species should be listed under the Act, along with a broader set of potentially unquantifiable values such as those suggested by Professor Doremus: aesthetic, ecological, educational, genetic, historical, recreational, scientific or other values.²⁵¹ As suggested by the recent critical habitat experience with CBA, Congress should also

²⁴⁷ Loomis & White, *supra* note 86, at 206 (noting that the costs per household for even the most expensive species protection, the spotted owl, fell well below the benefits per household in contingent valuation studies); *see also* Jeffrey J. Rachlinski, *Noah by the Numbers: An Empirical Evaluation of the Endangered Species Act*, 82 CORNELL L. REV. 356, 358–61 (1997) (suggesting that the ESA generally only restricts wasteful activities).

²⁴⁸ Burke, *supra* note 12, at 520–21 (concluding that the current rhetorical trends in ESA decision making are “eroding the efficacy” of the ESA, and arguing that the absolutist moral rhetoric should actually be stronger); *see also* Plater, *supra* note 13, at 24–33 (describing the difficulty of presenting the complex economic story of endangered species preservation to the Press and identifying the related problems of “perceptual frames” and “infotainment” as hurdles that environmental advocates must overcome).

²⁴⁹ *See* Thompson, *supra* note 95, at 1156 (suggesting that lack of open debate over costs of ESA leads to agency delay or inaction.); *see also* Hsu & Loomis, *supra* note 18, at 10,243 (arguing that industry skews cost-benefit analysis by emphasizing local jobs).

²⁵⁰ *See* Plater, *supra* note 13, at 21–22 (asserting that the public's misperception of the costs and benefits of the Tellico Dam in the snail darter case was the primary reason that activists were unable to stop the dam from being built); *see also* Hsu, *supra* note 95, at 333–34 (describing the “identifiability problem” and how it can skew public opinion in favor of economically wasteful activities).

²⁵¹ Doremus, *supra* note 42, at 1137–38.

mandate that ancillary benefits be specifically identified, and, where possible, quantified, in the economic analysis that accompanies a proposed listing. In implementing Congress's mandate, FWS should not categorically reject the valuation of species existence and ecosystem services in its analyses. Environmentalists should contribute to FWS's ability to measure these important values by collecting data and improving benefit transfer mechanisms.

It is entirely possible that CBA would indicate that the costs to the nation that would result from inhibiting natural gas drilling and other development in the Intermountain West would exceed any direct and indirect benefits derived from protecting the sage grouse. But the role of CBA in the listing process should be to place the sage grouse in context, so that the debate starts to look less like bird-versus-economy and more like a debate about an interconnected system that includes people, rather than one that pits human interests against those of the sage grouse.

As the sage grouse debate demonstrates, under the current listing regime, the strongest arguments for species and habitat protection are not being made in public discourse. The ESA would be a much more powerful tool for habitat protection if the public and decision-makers openly considered the ancillary benefits of species protection in the listing process. The sage grouse debate illustrates that the ban on any consideration of quantified costs and benefits in the listing process encourages environmentalists to avoid making these arguments, in favor of the more romantic, and ultimately less convincing, biodiversity message. The ESA has the potential to help maximize long-term human welfare by placing reasonable checks on development to minimize pollution and environmental destruction. Endangered species often serve as "canaries in the coal mine" for our own species' health and well-being as well as for the biodiversity of an ecosystem.

The ESA has been, and could become more powerfully, a tool for exposing some of the weaknesses of our economy and our political process.²⁵² CBA provides an empirical tool for connecting our own well-being with the well-being of our fellow species. Unfortunately, current practices at FWS undermine, rather than enhance, the capacity of CBA to serve this decision-

²⁵² See Plater, *supra* note 13, at 11 (noting that without the snail darter, the economic excesses of the Tellico Dam would never have come to light).

making function. H.R. 3824's proposal to include a CBA with the listing determination, without broadening the scope of factors from the "science-only" mandate, will exacerbate the incentives of both environmentalists and industry to distort the values at stake in the listing determination. Any CBA requirement imposed on the ESA should mandate identification and, where possible, quantification of benefits. A properly designed CBA could enhance the ESA's role as a check on wasteful development practices, and might ultimately lead to greater respect for and preservation of natural resources, including threatened and endangered species.