

Judicial Oversight in the Comparative Context: Biodiversity Protection in the United States, Australia, and Canada

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Summary

How effective are courts as policymaking institutions? Generally speaking, courts play a far larger role in American biodiversity law than they do in comparable Australian and Canadian statutory programs. As a result, studying endangered species protection offers a useful way to identify and isolate the policy impacts of judicial intervention. In the two cases I examine, the American system functioned at least as well as, and sometimes better than, the biodiversity programs in Australia and Canada. Contrary to most scholarship on the topic, lawsuits did not appear to slow the American policymaking process significantly; rather, litigation helped enforce important legal provisions and forced government officials to address critical shortcomings in their regulatory actions. At least in these cases, then, litigation acted as a productive and useful part of the policymaking process.

Over the last several decades, most scholarship on the American legal system has been decidedly pessimistic. To many authors, the U.S. courts provide a powerful and responsive source of policy change, but they also impose an array of additional costs onto the political process. Robert Kagan's *Adversarial Legalism* provides a prominent example of this sort of work. According to Kagan, U.S. courts are remarkably accessible, but also adhere to a decisionmaking process that "tends to be particularly complex, protracted, and costly."¹ Many environmental statutes, which rely on "citizen suits" for their enforcement, have been common targets of this kind of criticism. As argued by Jonathan Adler, citizen suits may "exacerbate the environmental failings of the current regulatory regime," creating suboptimal policy outcomes and ossifying the policymaking process.²

In this Article, however, I argue that the American legal system actually functions remarkably well as a part of the policymaking apparatus. Through a comparative analysis of endangered species policy in the United States, Australia, and Canada, I conclude that the U.S. judiciary can perform important oversight functions sometimes lacking in other nations. In addition, judicial intervention does not seem to slow the policymaking process to an unacceptable pace, nor does it appear to impact the substantive quality of the American biodiversity protection system. Courts, then, can contribute usefully and efficiently to the policymaking process.

The remainder of this Article is divided into four main parts. First, I provide an overview of the literature on the American legal system, focusing on administrative lawsuits and the Administrative Procedure Act (APA). I also examine some specific criticisms of the Endangered Species Act (ESA),³ paying special attention to the role of citizen suits in the biodiversity policymaking process. Next, I describe my methodology and goals in this Article, explaining the metrics I use to assess the laws I examine. Afterwards, I summarize and compare the biodiversity protection statutes in

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1. ROBERT A. KAGAN, *ADVERSARIAL LEGALISM: THE AMERICAN WAY OF LAW* 9 (2001).
2. Jonathan H. Adler, *Stand or Deliver: Citizen Suits, Standing, and Environmental Protection*, 12 *DUKE ENVTL. L. & POL'Y F.* 39, 41, 57-69 (2001).
3. 16 U.S.C. §§1531-1544, *ELR STAT. ESA* §§2-18.

my three countries of interest. Finally, I examine the conservation experiences of two case species—polar bears, and loggerhead sea turtles—in the United States and Canada, and the United States and Australia, respectively. Throughout this process, I differentiate between the *procedural* and the *substantive* effectiveness of these three systems, assessing each nation along both criteria and using these metrics to draw conclusions about citizen suit efficacy.

I. Judicial Oversight and American Environmental Law

A. Policymaking in the American Legal System

Throughout the political science and legal literature, scholars have often commented on the judiciary's role in the American policymaking process. In Kagan's widely cited *Adversarial Legalism*, he argues that the adversarial processes used in American courts have helped produce "the world's most responsive legal system [. . .] [but] not necessarily the world's most reliable legal system or the world's most responsive system of government."⁴ Compared with other countries, Kagan claims, the American judiciary has produced a policymaking process marked by a more complex set of rules, more costly forms of decisionmaking, more fragmented and uncertain policy structures, and a higher degree of political controversy.⁵ By this logic, though American judges can improve policy, the "price" adversarial legalism extracts appears unacceptably high.

Judicial review of agency decisions provides a good example of this trade off. According to the APA, "a person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof."⁶ Among other requirements,⁷ the APA obliges reviewing courts to set aside decisions that are "arbitrary, capricious, [or] an abuse of discretion."⁸ Generally, the U.S. Supreme Court has interpreted this standard as a mandate forcing agencies to provide an adequate rationale for their actions,⁹ addressing outside criticisms and incorporating expert evidence and support.¹⁰ Often referred to as the "hard look" doctrine,¹¹ these requirements theoretically allow courts to

improve agency policy, empowering judges to modify or reject standard agency rules and adjudications.

In practice, though, arbitrariness review has proven hugely controversial, generating an array of scholarship examining its impact on the broader policymaking process. For starters, a wide variety of studies¹² show that ideology has a significant impact on judicial voting behavior. Arbitrariness cases are no exception; as Thomas Miles and Cass Sunstein demonstrate, appellate judges ruling in arbitrariness suits are much more likely to uphold agency decisions that match their own political preferences.¹³ Based partly on this evidence, Frank Cross and Thomas McGarity argue that courts are ill-equipped to review administrative rulings. To these authors, judges' personal biases, combined with their lack of policy expertise, leaves courts ill-equipped to pass judgment on these kinds of cases.¹⁴ Moreover, these authors continue, judicial review forces agencies to focus on legalistic procedural requirements, shifting government attention away from the substantive implementation of the law.¹⁵ Finally, they claim, court involvement "ossifies" the policymaking process, lengthening the decisionmaking time frame¹⁶ and discouraging

entail case from the D.C. Circuit, see *Ethyl Corp. v EPA*, 541 F.2d 1, 35, 6 ELR 20267 (D.C. Cir. 1976).

4. See KAGAN, *supra* note 1, at 16.

5. *Id.* at 7.

6. 5 U.S.C. §702.

7. For a full description of the APA's judicial review provisions, see 5 U.S.C. §706(1)-(2).

8. 5 U.S.C. §706(2)(A), (E).

9. RICHARD J. PIERCE JR., *ADMINISTRATIVE LAW* 84-85 (2008).

10. See *Motor Vehicle Mfrs. Ass'n v. State Farm Ins.*, 463 U.S. 29, 13 ELR 20672 (1983). Among other holdings, the Court in *State Farm* required agencies to "justify [their decisions] in neutral, expertise-laden terms to the fullest extent possible." Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2381 (2001).

11. Originally formulated by the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit in the 1960s and 1970s, and embraced by the Supreme Court in *State Farm*. For further discussion of the formulation of the "hard look" doctrine, see Scott A. Keller, *Depoliticizing Judicial Review of Agency Rulemaking*, 84 WASH. L. REV. 419, 427-52 (2009); for an influ-

12. This brand of scholarship is sometimes referred to as the "New Legal Realism" movement. For examples of these sorts of studies, see, e.g., JEFFREY A. SEGAL, *THE SUPREME COURT AND THE ATTITUDINAL MODEL* (1993); Frank B. Cross & Emerson H. Tiller, *Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Court of Appeals*, 107 YALE L.J. 2155 (1998) (both examining the impact of ideology on voting patterns in *Chevron* jurisprudence, and both finding that ideology has a larger impact on all Democratic or all Republican panels); Thomas J. Miles & Cass R. Sunstein, *Do Judges Make Regulatory Policy? An Empirical Investigation of Chevron*, 73 U. CHI. L. REV. 823 (2006); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717 (1997) (finding that ideology, chance of further review by the Supreme Court, and panel composition all affect judicial voting patterns); for general commentary on New Legal Realism, see Thomas J. Miles & Cass R. Sunstein, *The New Legal Realism*, 75 U. CHI. L. REV. 831 (2008).
13. Miles and Sunstein find that Democratic nominees voted to uphold liberal agency decisions 72% of the time, while Republican nominees voted to uphold liberal decisions 58% of the time. When asked to examine a conservative agency decision, Democratic judges upheld in 55% of cases, while Republicans upheld in 72% of cases. Thomas J. Miles & Cass R. Sunstein, *The Real World of Arbitrariness Review*, 75 U. CHI. L. REV. 761 (2008).
14. See, e.g., Stephen Breyer, *Judicial Review of Questions of Law and Policy*, 38 ADMIN. L. REV. 363, 363-98 (1986) (suggesting that judges do not possess sufficient time or expertise to make well-informed decisions in most policy areas); Frank B. Cross, *Shattering the Fragile Case for Judicial Review of Rulemaking*, 85 VA. L. REV. 1243 (1999) at 1269-79 (arguing that judges' decisions tend to reflect their own political views, while doing little to improve the quality of administrative decisionmaking); Thomas O. McGarity, *Some Thoughts on "Deossifying" the Rulemaking Process*, 41 DUKE L.J. 1385, 1396-1403 (1992) (arguing that judicial review has imposed major new procedural requirements on regulatory agencies, contributing to the general ossification of the policymaking process).
15. Cross, *supra* note 14; Jerry L. Mashaw, *Improving the Environment of Agency Rulemaking: An Essay on Management, Games, and Accountability*, 57 LAW & CONTEMP. PROBS. 185 (1994) (arguing that judicial review, among other factors, has severely hampered the ability of federal regulators to make decisions in an efficient manner).
16. Thomas O. McGarity, *Courts and the Ossification of Rulemaking: A Response to Professor Seidenfeld*, 75 TEX. L. REV. 525, 558 (1996) (responding to claims about the benefits of judicial review); Richard J. Pierce Jr., *Seven Ways to Deossify Agency Rulemaking*, 47 ADMIN. L. REV. 59, 65 (1995) ("with the exception of a few agencies, the judicial branch is responsible for most of the ossification of the rulemaking process").

agencies from using their rulemaking powers.¹⁷ Because of these problems, Cross, Richard Pierce, and others argue that courts ought to withdraw from the policymaking arena, granting greater deference to decisions made by administrative agencies.¹⁸

Other scholars are more optimistic. In response to the normative attacks outlined above, Sunstein, Mark Seidenfeld, and Thomas Sargentich point out a number of benefits that judicial review can offer. Among other advantages, judges can increase adherence to the law, block unreasonable regulations, enhance agency legitimacy, and protect individual rights.¹⁹ Similarly, Eric Posner argues that ideologically motivated judges can actually play a positive role in the lawmaking process, discouraging the U.S. Congress from passing biased legislation and providing agencies with more neutral legislative directives.²⁰ As a result, these writers claim, judges may actually be able to enhance the quality of administrative policy.

The “ossification” argument may also be overstated. Contrary to the scholarship cited above, empirical evidence indicates that agencies still use their rulemaking powers aggressively, in spite of perceived increases in judicial involvement.²¹ In some ways, this finding is not surprising; as Cary Coglianese has noted, agency rules are not challenged as often as some scholars claim, leaving judges with fewer (direct) opportunities to derail the rulemaking process.²² Moreover, even when agencies are

sued, the actual costs of judicial involvement may not be that great. In a survey of U.S. Court of Appeals for the District of Columbia (D.C.) Circuit decisions from 1985-1995, William Jordan finds that agencies “recovered” from remands, i.e., were able to implement their rule in, roughly or entirely, its original form, in approximately 80% of cases.²³ In those cases in which the agency “recovered,” the “recovery” took an average of two years, allowing agencies to obtain final judgments in a relatively short period of time.²⁴ Cornelius Kerwin and Scott Furlong also find that rules drafted under court order tend to be finalized faster than nonlitigated rules, suggesting that courts may help to enforce statutory deadlines and quicken the overall rulemaking time frame.²⁵ As such, though these findings are far from definitive, they do suggest that court involvement may not be as disruptive as scholars sometimes claim.

B. Litigation and the ESA

The ESA provides an extreme example of the features described in this debate. As a number of commentators note, the ESA is one of the broadest and most ambitious biodiversity statutes in the world, granting broad powers to administrative officials to protect endangered taxa.²⁶ Enacted in 1973, the law allows citizens and government officials to nominate species or subspecies for legal protection, which initiates a lengthy finding and investigation procedure known informally as the “listing process.” If officials determine that a species is in danger of extinction, that species can be formally “listed” under the Act as either “threatened” or “endangered,” providing members of that species with an array of legal safeguards. In particular, the ESA forbids the “take” of protected species²⁷ and contains strong recovery plan requirements²⁸ and critical habitat provisions for listed taxa.²⁹ Federal agencies must

17. Jerry L. Mashaw & David L. Harfst, *Regulation and Legal Culture: The Case of Motor Vehicle Safety*, 4 YALE J. ON REG. 257 (1986) (claiming that judicial review contributed to a marked decrease in the use of rulemaking in the field of motor vehicle safety, and a corresponding increase in the use of vehicle recalls); Richard J. Pierce Jr., *Two Problems in Administrative Law: Political Polarity on the District of Columbia Circuit and Judicial Deterrence of Agency Rulemaking*, 1988 DUKE L.J. 300 (1988) (arguing that ideological judges, combined with aggressive administrative jurisprudence, imposing new costs onto agencies and discouraging them from using their rulemaking powers).

18. For a particularly forceful version of this argument, see Cross, *supra* note 14, at 1327-34; see also Richard J. Pierce Jr., *Judicial Review of Agency Actions in a Period of Diminishing Agency Resources*, 49 ADMIN. L. REV. 61 (1997) (arguing that courts ought to give agencies more leeway in deciding how to allocate scarce resources); Kathryn A. Watts, *Proposing a Place for Politics in Arbitrary and Capricious Review*, 119 YALE L.J. 2 (2009) (proposing that agencies be allowed to cite certain kinds of political considerations to fulfill the requirements imposed by arbitrariness review).

19. Thomas O. Sargentich, *The Critique of Active Judicial Review of Administrative Agencies: A Reevaluation*, 49 ADMIN. L. REV. 599 (1997) (noting that, among other benefits, courts tend to allow individuals greater access into the policymaking process); Mark Seidenfeld, *Getting Beyond Cynicism: New Theories of the Regulatory State, Cognitive Loafing, Social Conformity, and Judicial Review of Agency Rulemaking*, 87 CORNELL L. REV. 486 (2002) (arguing that judicial review helps limit the impact of certain types of cognitive biases within administrative agencies, forcing officials to consider more types of evidence as they make their decisions); Cass R. Sunstein, *On the Costs and Benefits of Aggressive Judicial Review of Agency Action*, 1989 DUKE L.J. 522 (1989) (citing a number of possible benefits of judicial review, and suggesting ways for courts to maximize those benefits).

20. Eric A. Posner, *Does Political Bias in the Judiciary Matter: Implications of Judicial Bias Studies for Legal and Constitutional Reform*, 75 U. CHI. L. REV. 853 (2008).

21. Cary Coglianese, *Empirical Analysis and Administrative Law*, 2002 U. ILL. L. REV. 1111 (2002).

22. EPA rulemaking provides a commonly cited example of this trend. See, e.g., Cary Coglianese, *Assessing Consensus: The Promise and Performance of Negotiated Rulemaking*, 46 DUKE L.J. 1255 (1997) (finding that, from 1987-1991, 25% of EPA's rules overall, and 36% of EPA's “significant”

rules, were challenged in court); for commentary on agencies besides EPA, see Coglianese, *supra* note 21; but see Stephen M. Johnson, *Ossification's Demise: An Empirical Analysis of EPA Rulemaking From 2001-2005*, 38 ENVTL. L. 767 (2008) (finding that, from 2001-2005, 40% of EPA's significant rules were challenged in court, but 75% of all “economically significant” rules were challenged).

23. William S. Jordan III, *Ossification Revisited: Does Arbitrary and Capricious Review Significantly Interfere With Agency Ability to Achieve Regulatory Goals Through Informal Rulemaking?*, 94 NW. U. L. REV. 393 (1999).

24. *Id.* at 440.

25. Specifically, Kerwin and Furlong find that court involvement has a positive correlation with the length of the start-to-proposal phase of the process, but a negative correlation with the length of the proposal-to-finalization phase of the process. They argue that this finding indicates that “rules under court order are [likely] in the preproposal stage longer, thus increasing the likelihood of a lawsuit by an impatient litigant.” As a result, after the proposed rule is published, litigated cases tend to proceed more quickly than nonlitigated ones. Cornelius M. Kerwin & Scott R. Furlong, *Time and Rulemaking: An Empirical Test of Theory*, 2 J. PUB. ADM. RES. THEORY 113, 132 (1992).

26. Tennessee Valley Authority v. Hill, 437 U.S. 153, 180, 8 ELR 20513 (1978); Holly Doremus, *Patching the Ark: Improving Legal Protection of Biological Diversity*, 18 ECOLOGY L.Q. 265 (1991); John Copeland Nagle, *The Effectiveness of Biodiversity Law*, 24 J. LAND USE & ENVTL. L. 203, 203 (2008) (characterizing the ESA as “one of the most powerful environmental laws ever enacted by Congress”).

27. 16 U.S.C. §1532(19).

28. 16 U.S.C. §1533(f).

29. 16 U.S.C. §1533(a).

also avoid taking actions that might place members of listed species in jeopardy.³⁰ In most areas, the Act's evidentiary standards require policymakers to prioritize scientific information, placing biological considerations above political or economic ones.³¹ Last, but certainly not least, the law also contains strong citizen suit provisions, allowing private groups and individuals to challenge agency decisions in court.³²

Strong as the statute might appear, scholars disagree about the ESA's effectiveness as an actual piece of public policy. At the most basic level, some analysts claim that the ESA has failed to achieve its stated goals.³³ Few listed groups, these critics note, have recovered to the point of "delisting," forcing many species to rely on continued government protection.³⁴ By contrast, Holly Doremus and Joel Pagel argue that "delisting" may not be a realistic goal for many endangered populations.³⁵ A series of empirical studies also show that ESA protections slow the *rate* of extinction amongst listed species compared with nonlisted groups, emphasizing the statute's importance in the conservation arena.³⁶

Other scholars argue that the ESA ought to be overhauled entirely. For example, John Charles Kunich describes the ESA's reactive policymaking approach as "deathbed conservation," and calls for agencies to take a more preventative approach to endangered species protection.³⁷ Similarly, some authors assert that regulators ought to abandon the species-centric model of biodiversity conservation. Instead, these writers claim, officials ought to preserve habitats and landscapes, safeguarding ecosystems, rather than focusing on individual species.³⁸

The ESA's citizen suit provisions provide a focal point in this debate. In general, critics of administrative litigation argue that lawsuits tend to constrict agency discretion in complex matters, limiting the government's flexibility and encouraging an inefficient allocation of resources. In a study of EPA litigation, Rosemary O'Leary finds that lawsuits have forced EPA officials to focus on high-profile issues, preventing the government from addressing less publicly salient problems.³⁹ Similarly, Alden Abbott claims that court-ordered deadlines force agencies to rush their decisions, reducing the overall quality of their rulings.⁴⁰ Extending these ideas to endangered species law, Michael Greve argues that judicial involvement in biodiversity management has "only rarely and coincidentally generated enforcement choices close to those that would result from an impartial, disinterested assessment of the public environmental benefits to be gained from enforcement."⁴¹

Other writers, however, have taken a very different approach. Rather than focusing on the costs of judicial intervention, these commentators emphasize the danger of regulatory "capture" by anti-environmental organizations. As Robert Glicksman and Katherine Renshaw argue, citizen suits and other judicial oversight mechanisms can play a critical role in keeping environmental agencies accountable to the public.⁴² The results of at least one empirical study of ESA procedure support this viewpoint emphatically. After comparing species nominated for protection by outside interest groups (through petitions and lawsuits) with those selected by governmental experts, Eric Biber and Berri Brosi conclude that private groups are no less adept at identifying at-risk species than agency officials. As a result, citizen suits and petitions "can contribute meaningfully to agenda-setting in a productive and rational way" without necessarily producing the kinds of inefficiencies predicted by critics of petitions and of court intervention.⁴³

Overall, then, scholarly opinion on judicial review seems mixed. To many authors, encouraging private litigation in the administrative context produces a trade off between agency autonomy and agency accountability.⁴⁴ More judicial review produces a more accountable and

30. 16 U.S.C. §1536(a)(2).

31. 16 U.S.C. §1533(b).

32. 16 U.S.C. §1540(g).

33. CHARLES C. MANN, *NOAH'S CHOICE: THE FUTURE OF ENDANGERED SPECIES* (1995) (claiming that the ESA has done very little to help preserve biodiversity while incurring heavy societal costs); Ray Vaughan, *State of Extinction: The Case of the Alabama Sturgeon and Ways Opponents of the Endangered Species Act Thwart Protection for Rare Species*, 46 ALA. L. REV. 569 (1994) (arguing that private landowners can often destroy populations of endangered taxa on their land without repercussions).

34. Mary Christina Wood, *Protecting the Wildlife Trust: A Reinterpretation of Section 7 of the Endangered Species Act*, 34 ENVTL. L. 605, 605 (2004) (noting that, as of 2004, only 15 of 1,288 species listed under the ESA had fully recovered); for a general overview of these kinds of criticisms, see Nagle, *supra* note 26.

35. Holly Doremus & Joel E. Pagel, *Why Listing May Be Forever: Perspectives on Delisting Under the U.S. Endangered Species Act*, 15 CONSERVATION BIOLOGY 1258 (2001).

36. Jeffrey J. Rachlinski, *Noah by the Numbers: An Empirical Evaluation of the Endangered Species Act*, 82 CORNELL L. REV. 356 (1996); Mark W. Schwartz, *The Performance of the Endangered Species Act*, 39 ANNUAL REVIEW OF ECOLOGY, EVOLUTION, AND SYSTEMATICS 279 (2008).

37. John Charles Kunich, *The Fallacy of Deathbed Conservation Under the Endangered Species Act*, 24 ENVTL. L. 501 (1994); see also Federico Cheever, *The Road to Recovery: A New Way of Thinking About the Endangered Species Act*, 23 ECOLOGY L.Q. 1 (1996).

38. Jacqueline Leslie Brown, *Preserving Species: The Endangered Species Act Versus Ecosystem Management Regime, Ecological and Political Considerations, and Recommendations for Reform*, 12 J. ENVTL. L. & LITIG. 151 (1997); Doremus, *supra* note 26. Oliver Houck uses a more balanced approach, arguing for the use of carefully chosen "indicator species" to gauge the health of broader environmental communities. Oliver A. Houck, *On the Law of Biodiversity and Ecosystem Management*, 81 MINN. L. REV. 869 (1997).

39. Rosemary O'Leary, *The Impact of Federal Court Decisions on the Policies and Administration of the U.S. Environmental Protection Agency*, 41 ADMIN. L. REV. 549, 562 (1989). For a more aggressive version of this argument—asserting that powerful judicial review mechanisms may allow interest groups to force agencies to misdirect and waste scarce resources—see Mark Seidenfeld, *A Big Picture Approach to Presidential Influence on Agency Policy-Making*, 80 IOWA L. REV. 1, 7 (1994).

40. Alden F. Abbott, *The Case Against Federal Statutory and Judicial Deadlines: A Cost-Benefit Analysis*, 39 ADMIN. L. REV. 171, 186-200 (1987).

41. Michael S. Greve, *Private Enforcement of Environmental Law*, 65 TUL. L. REV. 339, 365 (1990).

42. Robert L. Glicksman, *The Value of Agency-Forcing Citizen Suits to Enforce Nondiscretionary Duties*, 10 WIDENER L. REV. 353, 383-85 (2003); Katherine Renshaw, *Leaving the Fox to Guard the Henhouse: Bringing Accountability to Consultation Under the Endangered Species Act*, 32 COLUM. J. ENVTL. L. 161, 164-65 (2007).

43. Eric Biber & Berry Brosi, *Officious Intermeddlers or Citizen Experts? Petitions and Public Production of Information in Environmental Law*, 58 UCLA L. REV. 321, 378 (2010).

44. Glicksman, *supra* note 42, at 387-92; Daniel P. Selmi, *Jurisdiction to Review Agency Inaction Under Federal Environmental Law*, 72 IND. L.J. 65, 138-42 (1996).

more transparent decisionmaking process, but also undermines independent agency judgment. Conversely, discouraging judicial review means sacrificing some agency accountability, but strengthens the agency's own decision-making procedures. In addition, litigation can impose significant costs onto the policymaking process, both in policy delays and in actual fiscal costs.⁴⁵ However, at least in the context of endangered species protection, these costs are not always so large, and the benefits are—at least potentially—substantial.⁴⁶

II. Endangered Species Law in a Comparative Context

With these arguments in mind, in this Article, I attempt to provide a new angle on the citizen suit debate. Using endangered species law as a case study, I assess the effectiveness of private litigation through a comparative study of two species—polar bears and loggerhead sea turtles—as they navigate the biodiversity management systems in the United States and Canada, and the United States and Australia, respectively. As I document later in this Article, the ESA is both a remarkably clear and a remarkably powerful statute, stating well-articulated goals and imposing obvious, easily understood duties onto administrative officials. In addition, compared with other American administrative statutes, American environmental laws (including the ESA) generally contain broad citizen suit provisions, granting citizen groups wide authorization to challenge administrative decisions in court. As a result, the ESA represents both an easily studied and a relatively “tough” test case for a project of this kind. Because of the statute's clarity, the extent to which its goals and requirements are being realized is relatively easy to determine, making case-by-case comparisons much less complicated. In addition, since the statute's citizen suit provisions are so powerful, courts theoretically possess more opportunities to help (or harm) the policymaking process, making their impacts easier to identify.

International comparisons provide this study with additional inferential leverage. As noted above, much of the scholarship on the American legal system attempts to perform a kind of cost-benefit analysis, weighing the procedural and transactional costs of litigation against its perceived benefits. Though these efforts are useful, assessing the performance of citizen suit provisions from an international standpoint provides significant added value to the discussion. In the American legal system, the adversarial process constantly “lurk[s] in the bushes,” influencing official behavior in both direct and indirect ways.⁴⁷ As a result, isolating the specific impact of litigation is extremely difficult, making it easy to confuse the effects of litigation with the constraints imposed by the broader political and policy landscapes.

Cross-national analysis helps resolve this difficulty. By providing an actual, real-life alternative to the U.S. system of law, studying the systems used in other countries can help scholars to identify the specific impacts of judicial review. Focusing on the experiences of two individual species limits this study's generalizability, but allows me to examine each case in more detail. As a result, the conclusions I draw will hopefully provide scholars with a different perspective on the strengths and weaknesses of judicial review, and help generate hypotheses and guide future research in this area.

A. Defining “Effectiveness”: The Procedural Versus Substantive Divide

To structure my analysis, I use two primary criteria to compare the states and cases I examine. The first criterion, which I call *procedural* effectiveness, refers to an institution's tendency to make decisions quickly, transparently, and with a minimum of transactional costs. This idea is based in commonsense goals for good government; all else being equal, virtually everyone would agree that governments ought to maintain a clear, obvious, and straightforward set of decisionmaking procedures, which guarantee a certain level of procedural regularity and speed for regulated groups.⁴⁸ Similarly, ensuring participation rights for affected stakeholders is also important, forming a basic tenet of American administrative law.⁴⁹

Often, administrative statutes explicitly protect these values, providing an easy way to identify the procedural priorities in a particular legal system. In biodiversity law, for example, major statutes like the ESA usually lay out a variety of deadlines and reporting requirements, which agencies and officials must follow. Agencies themselves also commonly publish guidelines and decision rules, which form another part of this procedural framework. Regardless of the source, if a country's institutions follow these sorts of stipulations closely, the biodiversity protection system in that country would be *procedurally* effective.

My other criterion, *substantive* effectiveness, assesses the quality of the policy choices made by a particular endangered species management program. As I explain later in this Article, the biodiversity statutes in the United States, Australia, and Canada all prioritize biological evidence very highly, often barring policymakers from considering political and economic matters. My formulation of substantive effectiveness is derived from these rules. For the purposes of this Article, if an endangered species management system is able to make policy decisions that are

45. KAGAN, *supra* note 1 at 7.

46. Biber & Brosi, *supra* note 43, at 371-73.

47. KAGAN, *supra* note 1 at 231.

48. Of course, these principles often conflict. As Stephen P. Croley and William F. Funk note, there is a “classic tension—familiar to students of administrative government—between principles favoring openness, participation, and accountability, on one hand, and those favoring administrative speed, efficiency, and sure-footedness, on the other. In short, ‘good government’ encompasses different values that can lead [. . .] in different directions.” Stephen P. Croley & William F. Funk, *The Federal Advisory Committee Act and Good Government*, 14 YALE J. ON REG. 451, 457 (1997).

49. Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667, 1769-70, 1805-13 (1975).

broadly in line with the recommendations of the relevant scientific experts, I classify that system as a *substantively* effective one. Whenever possible, I use reports published by government agencies to identify the scientific recommendations in a particular case, supplementing with independent studies and interest group filings when necessary.

Importantly, both substantive effectiveness and procedural effectiveness are fundamentally *process-based* criteria. Conceivably, another way to measure the “effectiveness” of a biodiversity statute might be to use a *results-based* system, measuring the number of extinctions prevented or recoveries enabled by that law. Under this kind of model, if litigation helped produce decisions that led to fewer extinctions, then litigation would be an “effective” policymaking tool. However, as noted above, endangered species often take a very long time to recover, requiring close oversight and complex managerial decisions.⁵⁰ As a result, identifying the specific impact of a single court case on an individual species’ recovery prospects is usually impossible. In addition, as Doremus and Pagel have argued, many species are unlikely to ever recover to the point of delisting, making it very difficult to define what counts as a “successful” recovery.⁵¹ By contrast, determining whether or not an agency has complied with its statutory mandate is much less complicated, especially when analyzing a law like the ESA. As such, using process-based criteria offers a more methodologically sound way of measuring statutory performance.

That discussion aside, the procedural/substantive division does have other problems. Most notably, procedural and substantive requirements often cut against each other, preventing agencies from creating programs that accomplish both sets of goals. In particular, studying and analyzing scientific evidence takes a great deal of time, sometimes more than the relevant statutes allow. As a result, administrators must sometimes choose between my two standards, prioritizing either the timeliness or the quality of the proposed policy.

Worse, substantive effectiveness is a difficult concept to measure. In biodiversity law more generally, designations like “threatened” and “endangered” are often poorly defined, making it difficult for courts and agencies to use these terms in a consistent manner.⁵² Compounding the problem, scientific studies often conflict, with different experts drawing different conclusions and offering differ-

ent policy recommendations. Because of these problems, most U.S. judges are extremely reluctant to intervene on substantive scientific questions, deferring to agency judgment in all but the most extreme instances.⁵³ As a result, some commentators have argued that recalcitrant agencies can embark on a kind of “science charade,” cherry-picking scientific evidence to fool lay judges into upholding their decisions.⁵⁴ Even for well-meaning officials, though, arriving at an empirically “correct” decision in an endangered species case is often very difficult, with few clear guidelines or standards from which to work.

Despite these issues, the procedural/substantive framework remains a useful way to judge the effectiveness of a particular administrative system. In all governments, policy programs and institutions are established for specific purposes, with a particular set of ideas in mind. Any study of institutional effectiveness must take these goals into account, judging the success of a particular program based on its ability to accomplish its explicitly stated ends. Or, as phrased by political scientist Robert Putnam, a measure of institutional performance “must correspond to the objectives and evaluations of the institution’s protagonists [. . .] we must beware of imposing alien standards that are uncongenial to those constituents.”⁵⁵ Though a program’s goals may sometimes conflict,⁵⁶ the extent to which that agency achieves those goals provides an important and useful standard for assessing its performance.

Luckily, in the context of endangered species law, the relevant guidelines are usually quite clear. Within a given time frame and according to certain reporting requirements, administrators must decide which species are in danger of extinction, and how to help those species to

50. Schwartz, *supra* note 36, at 292-94.

51. Doremus & Pagel, *supra* note 33.

52. Compared with the United States, Australia and Canada do a somewhat better job of defining their terms. For example, when outlining designations like “threatened” and “endangered,” the scientific advisory committees in both nations employ quantitative criteria based on those used by the International Union for Conservation of Nature (IUCN), a biodiversity advocacy group. For the specific systems used by each nation, see Australian National Audit Office, *The Conservation and Protection of National Threatened Species and Ecological Communities*, AUSTRALIAN COMMONWEALTH 50, available at http://www.anao.gov.au/-/media/Uploads/Documents/2006%2007_audit_report_311.pdf; COSEWIC, *COSEWIC’s Assessment Process and Criteria*, GOVERNMENT OF CANADA 8-10, http://www.cosewic.gc.ca/eng/sct0/assessment_process_e.cfm (last visited Dec. 14, 2012). For discussion on American problems in this area, see Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn’t Always Better Policy*, 75 WASH. U. L.Q. 1029 (1997).

53. In endangered species cases, courts operationalize the APA’s “arbitrary and capricious” standard through a “rational basis” test, which requires an agency or other government defendant to prove that its decision has a rational connection to the relevant evidence in a particular case. Importantly, a “rational” decision need not be the *best* possible decision, or even a *good* decision. In order to pass a “rational basis” test, a government defendant needs only to prove that its policy choice was a *possible* decision that a rational evaluator *could have reached*, rather than the *most correct* decision in a given situation. 5 U.S.C. §706(2)(A); *In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation*, 818 F.2d 214 (D.C. Cir. 2011), citing *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 13 ELR 20544 (1983). *See also* *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 1 ELR 20110 (1971) (describing arbitrariness review as an attempt to determine “whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment”); *Motor Vehicle Mfrs. Ass’n v. State Farm Ins.*, 463 U.S. 29, 13 ELR 20672 (1983) (“an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise”).

54. Sara A. Clark, *Taking a Hard Look at Agency Science: Can the Courts Ever Succeed?*, 36 *ECOLOGICAL L.Q.* 317 (2009); Holly Doremus, *Scientific and Political Integrity in Environmental Policy*, 86 *TEX. L. REV.* 1601 (2007). On the other hand, scientists themselves also sometimes present biased information, particularly in politically controversial cases. *See, e.g.*, Holly Doremus, *A Challenge for the Obama Team: Put Science and Federal Scientists to Better Use*, 36 *ECOLOGICAL L. CURRENTS* 151 (2009).

55. ROBERT D. PUTNAM ET AL., *MAKING DEMOCRACY WORK: CIVIC TRADITIONS IN MODERN ITALY* 64 (1994).

56. *See supra* note 48.

recover. Biodiversity statutes often frame these decisions in scientific terms, restricting policymakers from using nonbiological information in their considerations. As in other areas of administrative governance, agencies must accomplish these ends in a transparent and efficient manner, creating a predictable and comprehensible regulatory environment. By comparing an agency's actions with its procedural mandate and with expert recommendations, we can at least begin to assess the effectiveness of a particular biodiversity statute.

B. Why Polar Bears? Why Loggerheads? Why the United States, Canada, and Australia?

In legal as well as biological terms, the United States, Australia, and Canada offer a number of distinct advantages as case studies. As I explain in the next section of this Article, Canada and Australia both use lawsuits relatively infrequently in their endangered species protection systems. Otherwise, though, the biodiversity statutes in each country are quite similar, enabling more direct comparisons across the three countries.

At the species level, polar bears and loggerhead sea turtles also possess certain useful features. In geographic terms, both animals are very widely distributed, occurring in U.S./Canadian and U.S./Australian waters, respectively. Conveniently, both species face a similar set of conservation challenges throughout their ranges; most loggerhead sea turtle deaths, for example, result from bycatch caused by large-scale commercial fishing operations,⁵⁷ while global warming and hunting pressures are far and away the largest threats to polar bear populations.⁵⁸ Based on the scientific evidence, then, the conservation programs for these species ought to look roughly the same in each country I examine. Finally, as well-known and well-studied groups, polar bears and loggerhead sea turtles attract a high level of scientific and interest group attention, generating a large volume of evidence about these two species.

No case is perfect, and these two animals are no exception. Though selecting a high-profile pair of cases has certain advantages, animals like polar bears and loggerhead sea turtles likely receive a disproportionate amount of attention from scientists, environmental advocates, and administrative officials in their respective countries. Generally speaking, scholars have found that U.S. endangered species agencies tend to devote more resources to large species and to mammals and birds at the expense of smaller amphibians, reptiles, and invertebrates.⁵⁹ Similar biases are

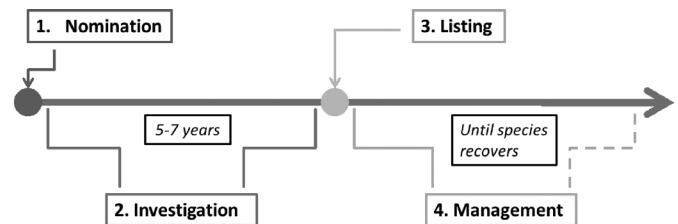
likely apparent in other systems of biodiversity law around the world, though no scholarship on the issue appears to exist for non-U.S. governments. As a result, these two cases may not be fully representative of the legal systems I seek to study.

For exploratory purposes, though, examining the conservation experiences of these two species remains useful. Because of their cross-national ranges and consistent conservation needs, loggerhead sea turtles and polar bears represent good case studies for a cross-national study of this sort, allowing me to compare the conservation programs I examine in a more direct fashion. As a result, researching these cases gives me a good idea of the specific impact of litigation onto the biodiversity policymaking process, allowing me to draw conclusions with a higher degree of confidence.

III. Legal Mechanics: A Comparative Overview of Biodiversity Statutes

As noted earlier, the biodiversity statutes in the United States, Canada, and Australia are remarkably similar. In all three nations, species nominated for legal protection undergo a basic four-step process, outlined in Figure 1. Essentially, private individuals or public officials must first nominate a species for protection, which activates an expert investigation into that species' conservation status. Afterwards, an agency head or other politically appointed official must decide whether to "list" the nominated species, providing it with formal protection under the law.

Figure 1: Basic Endangered Species Protection Timeline



Finally, if decisionmakers choose to list the species in question, agency officials begin to manage that species directly, banning threatening activities and working with landowners to help that species to recover. In

57. Therese A. Conant et al., *Loggerhead Sea Turtle (Caretta Caretta) 2009 Status Review Under the U.S. Endangered Species Act*, NATIONAL MARINE FISHERIES SERVICE (Aug. 2009), available at <http://www.nmfs.noaa.gov/pr/pdfs/statusreviews/loggerheadturtle2009.pdf>.

58. Steven C. Amstrup et al., *Forecasting the Range-Wide Status of Polar Bears at Selected Times in the 21st Century*, U.S. GEOLOGICAL SURVEY (2007), available at http://www.usgs.gov/newsroom/special/polar_bears/docs/USGS_PolarBear_Amstrup_Forecast_lowres.pdf.

59. Eric Biber, *The Application of the Endangered Species Act to the Protection of Freshwater Mussels: A Case Study*, 32 ENVTL. L. 91, 137, 156 (2002) (arguing that funding rates for freshwater mussels are much lower on a per-

species basis than birds, mammals, and other so-called charismatic taxa); Andrew Metrick & Martin L. Weitzman, *Patterns of Behavior in Endangered Species Preservation*, 72 LAND ECON. 1 (1996) (showing that members of certain taxonomic groups, e.g., mammals, birds, are much more likely to be listed under the ESA and tend to obtain a higher level of funding than others, e.g., amphibians. Authors report similar correlations based on body size, finding that larger animals are more likely to be listed and more likely to be funded at a higher level than smaller ones); Benjamin M. Simon et al., *Allocating Scarce Resources for Endangered Species Recovery*, 14 J. POL'Y ANALYSIS & MGMT. 415 (1995) (finding that factors such as taxonomic classification and length of time on the endangered species list explain variation in expenditures on individual species better than internal agency prioritization criteria).

evidentiary terms, officials in all three countries are required to use scientific recommendations to make the most of their decisions, placing scientific evidence at an equal or higher position than economic or political considerations.

Broadly speaking, then, the single biggest difference between these statutes is in their enforcement provisions. Generally, American law grants citizens broad standing to challenge administrative decisions in court. Australian and Canadian statutes do not. Instead, these nations rely upon administrative provisions and the democratic process for enforcement of their laws. As such, though other differences between these statutes do exist, these three systems provide an excellent opportunity to compare the impact of litigation on the endangered species policymaking process.

A. *The ESA: A Litigation-Oriented Model*

In recent decades, biodiversity protection has become a major issue in environmental politics and policy around the world. The 1973 ESA was one of the first major responses to the issue, providing a model for many of the other biodiversity statutes around the world. Under the law, citizens can present petitions asking the U.S. Fish and Wildlife Service (FWS, a subset of the U.S. Department of the Interior) to list a particular species as either “threatened” or “endangered.” The FWS must respond to these petitions within 90 days.⁶⁰ If the FWS finds that the proposed listing “may be warranted,” the agency must then conduct a year-long investigation, after which the Secretary of the Interior must make a final decision on whether a listing action is warranted.⁶¹ If this 12-month finding is favorable, the Secretary then publishes a proposed regulation, which remains open to public comment for an additional year.⁶² After the comment period closes, the Secretary must reject the listing altogether, extend the deadline, or publish a final rule listing the species under the law.⁶³

Once the listing process is complete, the ESA provides designated species with a broad array of legal protections. In general, all persons in the United States are prohibited from taking any action that would result in the “take” of a listed species, which is defined as an attempt to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or

collect” a member of a listed taxonomic group.⁶⁴ Significant habitat degradation is also banned.⁶⁵ At the national level, the statute bars federal agencies from taking actions “likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat.”⁶⁶ To ensure that this requirement is fulfilled, federal agencies must consult with the FWS to determine the biodiversity-related impacts of their proposed actions.⁶⁷ The FWS, in turn, must furnish a “biological opinion” assessing the risks presented by actions in question, examining their impact on listed species occurring in the relevant geographical area.⁶⁸ If the biological opinion returns a “jeopardy” or “adverse modification” finding, the FWS will include recommendations on ways to reduce the action’s impact. However, so long as the action places a population in jeopardy or adversely modifies a species’ habitat, that action must be abandoned.⁶⁹

Finally, the ESA forces agencies to take specific actions to help promote the recovery of listed species. To begin with, the statute requires regulators to draw up recovery plans for listed taxa, which must include a planned set of government actions to help designated groups reach sustainable population levels.⁷⁰ In addition, the statute usually requires regulators to identify “critical habitat” for protected taxa, integral to the species’ long-term survival.⁷¹ These so-called critical habitat designations can be made at the time of listing, or set up after the fact through a petition system.⁷²

In addition to this procedural framework, the ESA also allows private citizens to challenge agency decisions in court.⁷³ According to the statute, the FWS must make most of its decisions based on “best scientific and commercial data available,” barring agency officials from using economic or political considerations in their analyses. In particular, listing decisions⁷⁴ and jeopardy findings⁷⁵ are both subject to this standard, though some other decisions are not.⁷⁶ As such, if a private individual or group believes that the FWS has missed a procedural requirement or failed to consider important evidence, that party can take the agency to court. Known as “citizen suit provisions,”

64. 16 U.S.C. §1532(19).

65. 50 C.F.R. §17.3.

66. 16 U.S.C. §1536(a)(2).

67. 16 U.S.C. §1536(b).

68. 16 U.S.C. §1536(c).

69. Exemptions to this prohibition can be granted by the Cabinet-level Endangered Species Committee, created in response to the 1978 Supreme Court decision in *TVA v. Hill*. However, the Committee has only granted two exemptions over the course of its history (out of six total applications). Patrick W. Ryan & Erika E. Malmen, *Interagency Consultation Under Section 7, in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES* 117-18, n.124 (Donald C. Baur & William Robert Irvin ed., 2d ed., 2010).

70. 16 U.S.C. §1533(f).

71. 16 U.S.C. §1533(a).

72. 16 U.S.C. §1533(b).

73. 16 U.S.C. §1540(g).

74. 16 U.S.C. §1533(b).

75. 16 U.S.C. §1536(c).

76. *E.g.*, critical habitat findings, which require the FWS to balance economic considerations with biological ones. 16 U.S.C. §1533(b)(2).

60. The FWS may also propose listings on its own initiative. 16 U.S.C. §1533(b).

61. Besides “warranted” and “not warranted” findings, the Secretary may also designate a listing proposal as “warranted but precluded.” Species that fall into this category are those species for which the listing action is scientifically justifiable, but “precluded” by other, more urgent priorities (ESA §4(b)(3)(B)). Scholars often criticize the “warranted but precluded” category as a major loophole in the ESA, allowing resource-strapped (and sometimes recalcitrant) officials to ignore large numbers of worthy listings. Other scholars, though, have highlighted the “safety valve” features of the provision, arguing that it allows the FWS to manage the costs created by petitions. *Compare* Biber & Brosi, *supra* note 43, with Houck, *supra* note 38, at 374-75; Schwartz, *supra* note 36; K. Mollie Smith, *Abuse of the Warranted but Precluded Designation: A Real or Imagined Purgatory?*, 19 SOUTHEASTERN ENVTL. L.J. 119 (2010).

62. 16 U.S.C. §1533(b).

63. *Id.*

these sorts of legal tools can theoretically provide members of the public with a high level of influence over the policy-making process. By bringing suits against agencies like the FWS, citizen organizations can ensure that officials remain faithful to their statutory mandates.

B. *Canada, Australia, and Collaborative Biodiversity Protection*

During the 1980s and 1990s, other nations began to develop their own biodiversity protection systems. Many of these statutes, including Australia's Endangered Species Protection Act (1992), were based partly on the American model, though most were less comprehensive than the ESA.⁷⁷ In recent years, though, both Canada and Australia enacted major new biodiversity measures: specifically, the Environment Protection and Biodiversity Conservation Act (EPBC Act) in Australia, and the Species at Risk Act (SARA) in Canada. Passed in 1999 and 2002,⁷⁸ respectively, both laws were meant to provide significant updates to existing endangered species protection regimes, changing these systems in a variety of ways. As such, though both statutes are still being revised and interpreted, both now play a major role in the biodiversity management programs in their respective countries.

Before beginning this section, though, one caveat is necessary. Like the United States, both Canada and Australia use federal systems of government, with overlapping state and national statutes in many policy areas. However, in both nations, the federal government has significantly less authority over environmental issues than in the United States, which is reflected in the scope of their endangered species statutes. In particular, under most circumstances, both SARA and the EPBC Act only apply to the oceans and on Crown (federal) land, leaving the states to shape their own endangered species protection programs.⁷⁹

In policy terms, this issue has created a patchwork set of results. In Canada, for example, provinces and territories rarely protect all of the federally listed species within their borders, listing different proportions of SARA-designated species depending on the strength of their individual statutes.⁸⁰ Australia's situation is more complicated; though the EPBC Act's general statement of purpose implies that the Act protects species on all Australian territory, all of the Act's specific prohibitions and powers conferred apply

only on federal property and on the oceans, leaving the enforcement of biodiversity policy on nonfederal land to the states.⁸¹

For the purposes of this Article, though, I largely ignore this issue. As marine species, polar bears and loggerhead sea turtles mostly interact with the national governments in each country I examine, spending most of their time in federally controlled oceanic waters. Loggerhead nesting beaches, the one major exception to this rule, are all situated within state jurisdictions, making their protection a state matter. However, in the United States (and, to a lesser extent, Australia), national conservation agencies have helped inform state agencies and motivate state action, making the federal government a significant player in loggerhead nesting site conservation. As a result, though federalism clearly plays an important role in these statutes, I do not factor federal relationships into my analysis.

From a procedural standpoint, both SARA and the EPBC Act follow a fairly similar framework to that used by the ESA. Essentially, both statutes employ a two-stage listing process; under each law, private citizens and individuals can submit listing petitions to their respective governments, which are then reviewed by an independent group of scientific experts. After analyzing these proposals, scientists forward their recommendations to the Minister of the Environment, who makes a final decision on the listing. Once listed, both countries provide an array of protections to listed species, as well as imposing some set of affirmative duties onto federal conservation agencies.

Canada's SARA follows this outline closely. In Canada, listing petitions are first submitted to a scientific advisory board known as the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which prepares a "status report" summarizing the scientific literature on the species in question.⁸² After completing this analysis, the COSEWIC then has one year to submit recommendations to the Minister of the Environment, who must publish a finding within nine months of receiving the COSEWIC's statement.⁸³ Species can be listed under SARA at three different levels, including "endangered," "threatened," or as a "species of special concern." For threatened and endangered species, SARA provides similar "take" prohibitions to those imposed by the ESA.⁸⁴ "Species of special concern," on the other hand, is an advisory category, and offers no specific protections to designated groups.

Once a species is listed, SARA imposes an array of management duties onto federal officials. Under Canadian law more generally, development projects funded by federal authorities or authorized by federal permits must undergo an environmental assessment. Projects that will have a "significant adverse environmental effect" on federal lands must be halted unless the project can be "jus-

77. John C.Z. Woinarski & Alaric Fisher, *The Australian Endangered Species Protection Act 1992*, 13 CONSERVATION BIOLOGY 959 (1999).

78. Though SARA was passed in 2002, most of the law's major provisions did not actually take effect until 2004.

79. Under SARA, if the Minister of the Environment feels that state laws do not adequately protect a federally listed species, the Minister can issue a so-called safety net order for that species, which makes SARA's protections applicable on nonfederal land. However, as of 2011, this provision had never been utilized by federal officials, limiting the scope of the law to crown-owned lands. Stephané Wojciechowski et al., *SARA's Safety Net Provisions and the Effectiveness of Species at Risk Protection on Non-Federal Lands*, 22 J. ENVTL. L. & PRAC. 203 (2011).

80. Stewart Elgie, *Statutory Structure and Species Survival: How Constraints on Cabinet Discretion Affect Endangered Species Listing Outcomes*, 19 J. ENVTL. L. & PRAC. 1 (2011).

81. GERRY M. BATES, ENVIRONMENTAL LAW IN AUSTRALIA 480-84 (6th ed. 2006).

82. *Species at Risk Act*, S.C. 2002, c. 29, §21-22, available at <http://laws-lois.justice.gc.ca/eng/acts/S-15.3/>.

83. S.C. 2002, c. 29, §27(3).

84. S.C. 2002, c. 29, §32-33, 58.

tified under the circumstances.”⁸⁵ If a project will have a significant adverse effect on a listed species, that project’s director must notify the Minister of the Environment, and “must ensure that measures are taken to avoid or lessen those effects and to monitor them.”⁸⁶ In addition, the Minister of the Environment must draft recovery strategies for all listed species, which must be entered into the public record within 1-5 years of a species’ listing date.⁸⁷ Finally, the statute also allows the Minister to designate certain federal lands as critical habitat for listed species, providing additional protection for members of these groups.⁸⁸

In Australia, the story is much the same. Passed in 1999, Australia’s EPBC Act is actually a broader piece of legislation than either SARA or the ESA, intended to fulfill Australia’s obligations under a number of environmental treaties, as well as preserve the nation’s biodiversity. Under the law, matters of “national environmental significance”—including World Heritage Sites, internationally designated habitat for migratory animals, and threatened and endangered species—are all protected, barring projects or actions that might negatively impact any listed item.⁸⁹ For the purposes of this Article, though, I focus exclusively on the sections of the Act dealing with endangered species protection.

Functionally speaking, the EPBC Act’s biodiversity processes are fairly similar to those laid out by Canadian and American law. If an organization wishes to nominate a species for protection, that group can petition the Minister of the Environment, which activates an independent scientific review conducted by the Threatened Species Scientific Committee (TSSC). Under the original statute, the TSSC had 12 months to forward its recommendations to the Minister of the Environment, who was required to make a final decision within 90 days of receiving the TSSC’s report. 2006 amendments to the EPBC Act allowed the Minister to extend both of these deadlines; however, a study conducted by the Australian National Audit Office found that most listings still follow the original time frame.⁹⁰ After completing this process, species

can be listed at three levels—“vulnerable,” “endangered,” or “critically endangered”—depending on their level of demographic health.⁹¹

Once a species is listed, the EPBC Act provides same sorts of protections offered by the ESA and by SARA. Like the other two statutes I examine, the EPBC Act bars citizens from killing, injuring, or relocating members of listed communities.⁹² In addition, citizens must obtain ministerial approval to undertake so-called controlled actions, defined as actions that “will have [. . .] [or are] likely to have a significant impact on a listed threatened species.”⁹³ The Act also allows the Minister of the Environment to designate critical habit, list so-called key threatening processes (KTPs),⁹⁴ enact conservation orders,⁹⁵ and draft threat abatement plans.⁹⁶ Essentially, KTPs consist of factors or trends that play a significant role in causing the decline of a listed species.⁹⁷ Conservation orders and threat abatement plans allow the government to address KTPs directly, empowering the Minister to regulate KTP-related actions and construct KTP management plans, respectively.

In terms of their evidentiary obligations, the biodiversity protection processes in both Australia and Canada are subject to certain scientific requirements, especially during the listing phase. In Australia, most EPBC Act decisions must follow a principle known as “environmentally sustainable development,” an Australian legal idea that attempts to balance environmental, economic, and social factors.⁹⁸ Outside of the statute’s “take” prohibitions—which operate universally—this principle applies in full during the management phase of the process, allowing federal officials to incorporate nonbiological considerations into their management programs. During the listing phase, though, the EPBC Act is much more restrictive, barring the Environment Minister from considering factors other than the biological impact of a particular listing action. According to the Act’s text, the Minister must only consider “the effect that including the native species or ecological community in that [listing] category could have on the survival of the native species or ecological community,” without regard for the socioeconomic impact of the listing decision.⁹⁹

85. The Governor in Council makes the final decision on whether or not a particular environmental effect is “justified under the circumstances.” This process was changed somewhat in 2012 by the passage of the Canadian Environmental Assessment Act, 2012. This section refers to the updated (2012) version of the Canadian assessment process; however, the new assessment procedure is roughly equivalent to the original. S.C. 2002, c. 29, §79; Canadian Environmental Assessment Act, 2012. S.C. 2012, c. 19, s. 52, §2, 7, 15, 67-70, available at <http://laws-lois.justice.gc.ca/eng/acts/C-15.21/index.html>. For a description of the older version of the assessment process, see Jameson Tweedie, *Transboundary Environmental Impact Assessment Under the North American Free Trade Agreement*, 63 WASH. & LEE L. REV. 849, 875-85 (2006).

86. S.C. 2002, c. 29, §79.1, 79.2.

87. Recovery strategies must be entered into the public record within one year of the listing date for endangered species, two years for threatened species, and five years for species of special concern. S.C. 2002, c. 29, §37-46, 65-72.

88. S.C. 2002, c. 29, §56-64.

89. For the full list, see Environment Protection and Biodiversity Conservation Act 1999 (Cth), s3, available at <http://www.comlaw.gov.au/Details/C2012C00248>.

90. Australian National Audit Office, *The Conservation and Protection of National Threatened Species and Ecological Communities*, AUSTRALIAN COMMONWEALTH 53-54 (Mar. 29, 2007), available at http://www.anao.gov.au/-/media/Uploads/Documents/2006%2007_audit_report_311.pdf.

91. The EPBC Act also contains procedures for listing so-called environmental communities, broadening the scope of the Act’s biodiversity protection mechanisms beyond a species-specific focus. However, the environmental communities provision has proved difficult to implement, and has seen relatively little use. *Id.* at 50, 73-75.

92. Environment Protection and Biodiversity Protection Act 1999 (Cth), s196-196b.

93. *Id.* s66-170.

94. *Id.* s183, 186.

95. *Id.* s463-474.

96. *Id.* s270A-284.

97. Examples include the presence and spread of invasive species, bycatch caused by open-ocean fishing practices, and so forth. For a full list of current key threatening processes, see Department of Sustainability, Environment, Water, Population, and Communities, *Listed Key Threatening Processes*, AUSTRALIAN COMMONWEALTH (last visited Dec. 14, 2012), <http://www.environment.gov.au/cgi-bin/sprat/public/publicgetkeythreats.pl>.

98. For a full definition of “environmentally sustainable development,” see Australian National Audit Office, *supra* note 90, at s3A.

99. Environment Protection and Biodiversity Conservation Act 1999 (Cth), s186; Allan Hawke, *The Australian Environmental Act—Report of the Independent Review of the Environmental Protection and Biodiversity Conserva-*

Canada, on the other hand, is somewhat less stringent. Again, outside of the law's "take" prohibitions, Canadian biodiversity management decisions are not subject to strong evidentiary requirements or prioritization schemes. During the listing phase, the standards are somewhat stronger; according to statute, the COSEWIC's listing recommendations must be based upon the "best available information on the biological status of a species," echoing the ESA's language.¹⁰⁰ However, when making a final listing decision, SARA only requires the Minister of the Environment to "take into account" the COSEWIC's assessment, allowing the government to balance socioeconomic factors with biological information.¹⁰¹

Unlike the ESA or the EPBC Act, though, SARA does contain some additional restrictions on government discretion. In sharp contrast with virtually every other Canadian administrative statute, if the Minister decides not to follow the COSEWIC's recommendations, she is required to publish a statement explaining the reasoning behind her decision.¹⁰² In addition, if the government fails to respond to a COSEWIC report within the prescribed statutory time frame, the species in question is *automatically* listed according to the COSEWIC's recommendations, forcing the government to adhere to SARA's deadlines.¹⁰³ These requirements, which are essentially unique in Canadian law, were inserted during the legislative process to force the government to bear the political consequences of negative listing decisions, heightening the stakes of the Act's processes.¹⁰⁴

Taken together, then, the most important difference between these three laws is in their enforcement procedures. In the United States, the ESA's citizen suit provisions empower private individuals and groups to litigate virtually any decision made under the law, providing a sort of external review over the policymaking process. By contrast, though Australia's EPBC Act does contain a citizen suit provision, issues with standing and inconsistent fee-shifting rules have discouraged activists from using litigation in a widespread fashion.¹⁰⁵ Canadian endangered species law is even more extreme, almost totally restricting

citizens from challenging government decisions in court.¹⁰⁶ Instead, Canada relies on statutory triggers and democratic pressure to ensure that SARA's provisions are enforced.

C. Conclusion

In terms of process and decisionmaking criteria, the major biodiversity statutes in the United States, Australia, and Canada are remarkably similar. These laws, of course, are not perfectly analogous. From a procedural standpoint, Canada and Australia divide the scientific and political segments of the listing process into two separate steps, establishing a kind of a two-tiered listing framework. The United States, on the other hand, combines these two phases. Power relationships between the states and federal governments in each nation have created other differences, leaving the ESA with a much larger scope than either SARA or the EPBC Act. Finally, the ESA places more extensive duties on the federal government than either of the other two laws I examine, requiring agencies to take more steps to ensure that their activities do not negatively affect listed species.

Broadly speaking, though, all three laws follow a very similar structure. In all three countries, citizens can submit petitions asking their governments to investigate and protect particular species, which activates a scientific review and investigation of the species in question. After the scientists complete their review, politically appointed officials make a final listing decision. At all stages, each statute places a high value on scientific evidence, often requiring policymakers to ignore nonbiological considerations. Statutory deadlines and reporting requirements are also important in all three systems. In the United States, though, these evidentiary and procedural directives are backed by citizen suit clauses. By contrast, lawsuits are not an important part of SARA or EPBC Act processes, forcing Canadian and Australian advocates to rely on administrative triggers and democratic pressure.

IV. Polar Bears and Sea Turtles in the Conservation Arena

That background aside, I now move to a discussion of my two case species: polar bears and loggerhead sea turtles. According to the leading scientific evidence, loggerheads and polar bears both face an array of serious and imminent conservation threats, making them prime candidates for protection under endangered species law. However, policy realities have not always matched these findings. In the polar bear case, American and Canadian officials repeatedly sought to weaken endangered species protections, often through outright disobedience of their statutory mandates. In the United States, environmental organizations challenged these decisions in court, forcing officials to improve both the *procedural* and the *substantive* qual-

tion Act 1999, COMMONWEALTH OF AUSTRALIA 125 (Oct. 30, 2009), <http://www.environment.gov.au/epbc/review/publications/pubs/final-report.pdf>.

100. Species at Risk Act, S.C. 2002, c. 29, §15(2).

101. S.C. 2002, c. 29, §27(2).

102. S.C. 2002, c. 29, §27(1.2).

103. S.C. 2002, c. 29, §27(3).

104. Elgie, *supra* note 79, at 27.

105. In Australia, allocation of legal costs is said to "follow the event"; that is, after a case is decided, the presiding judge may publish an order forcing the loser to pay for the winner's legal fees. However, in EPBC Act litigation, the courts have been remarkably inconsistent in their use of this power. In different cases, different judges have issued anything from a full fee-shifting order to a partial order to no order at all. This uncertainty about cost orders, combined with the "follow the event" rule, has made it extremely difficult for environmental advocates to predict who will be responsible for the legal fees in a given case. As a result, activists have tended not to use the law's citizen suit provisions in a widespread fashion. Hawke, *supra* note 99, at 261-64; Kenneth M. Murchison, *Environmental Law in Australia and the United States: A Comparative Overview*, 22 B.C. ENVTL. AFF. L. REV. 503 (1994); Gerald Walpin, *America's Failing Civil Justice System: Can We Learn From Other Countries?*, 41 N.Y.L. SCH. L. REV. 647 (1996).

106. Katia Opalka & Joanna Myszk, *Sustainability and the Courts: A Snapshot of Canada in 2009*, 10 SUSTAINABLE DEV. L. & POL'Y 59 (2009).

ity of polar bear protections. In Canada, though, no such option was available, allowing officials to run roughshod over statutory requirements.

In the loggerhead sea turtle case, the impacts of litigation are less clear. As in the polar bear case, citizen suits have played a central role in American loggerhead management, allowing a variety of groups to shape and challenge federal conservation policy. By contrast, in Australia, industry representatives, scientists, and agency officials have worked fairly effectively with one another, producing a more cooperative policymaking pattern. In both countries, though, governments have generally managed loggerheads in a responsible fashion, achieving a similar level of *substantive* effectiveness. Additionally, both American and Australian policymakers mostly met their statutory requirements and took about the same amount of time to make their decisions, displaying a similar level of *procedural* effectiveness. At least in this case, then, the costs imposed by litigation do not seem all that high.

A. Polar Bears: Resource Development, Delays, and the Courts

Polar bears (*Ursus maritimus*) are a large, carnivorous, maritime species that occurs throughout most of the Arctic Circle. During the winter, polar bears are heavily dependent on sea ice for their survival, both as a means of travel and as a platform for forays into the ocean.¹⁰⁷ As a result, polar bears are particularly vulnerable to the receding sea ice boundaries predicted to result from global warming over the next 50 to 100 years. Without extensive sea ice coverage, polar bears traveling to preferred denning and hunting habitat will be forced to traverse longer distances and expend more energy, placing significant stress on the species and making it more vulnerable to extinction. Thus, though hunting and habitat degradation are significant concerns for polar bears as well, climate change represents the primary focus for most polar bear conservation advocates.

Because of these challenges, the vast majority of the polar bear scholarship over the last several decades has been decidedly pessimistic. For example, in a 2004 study, a leading polar bear scientist noted that “given the rapid pace of ecological change in the Arctic, the long generation time, and the highly specialized nature of polar bears, it is unlikely that polar bears will survive as a species if the sea ice disappears completely.”¹⁰⁸ A 2007 U.S. Geological Survey (USGS) report, conducted while the American polar bear listing process was underway, came to the same conclusions; unless greenhouse gas emissions drop significantly in the near future, USGS scientists estimated that “realization of the sea ice future which is currently projected would mean loss of $\approx 2/3$ of the world’s current polar bear population by mid-century [2050],”

with the remainder mostly extirpated by 2075.¹⁰⁹ As such, based upon the leading scientific evidence, polar bears clearly appear to be headed toward major population loss or extinction, and would seem to be prime candidates for statutory protections.

I. U.S. Polar Bear Listing

Armed with these findings, in early 2005, an environmental organization called the Center for Biological Diversity (CBD) petitioned the U.S. government to list the polar bear as “threatened” under the ESA.¹¹⁰ However, government officials stalled, missing both the 90-day and the 12-month finding deadlines. The CBD and other environmental groups sued the FWS over both violations, producing a structured settlement agreement setting December 2007 as the revised deadline for the 12-month finding.¹¹¹ As a result, in late December, the FWS released a proposed rule classifying the polar bear as “threatened,” setting January 2008 as the nondiscretionary deadline for the final listing decision.¹¹² Perhaps unsurprisingly, though, the FWS missed that deadline as well, catapulting the listing back into the courts. *Ctr. for Biological Diversity v. Kempthorne*,¹¹³ the case arising from the controversy, was equally favorable to environmental advocates, producing an order requiring federal officials to make a final listing decision. Pressured from all angles, in May 2008, the federal government finally listed the bear as “threatened,” providing the species with substantive protection under federal law.¹¹⁴

After these clearer victories for the environmental advocates, the polar bear listing has entered into a murkier phase. For the past several years, much of the litigation on polar bear protection has centered on a special rule inserted into the 2008 “threatened” listing, known informally as a §4(d) exemption. According to §4(d) of the ESA, “threatened” species do not automatically receive the same “take” restrictions or other legal prohibitions extended to species classified as “endangered.” Instead, the FWS can decide what level of protection to offer to each

109. The authors break polar bear populations into four geographically defined sub-populations, and present separate predictions for each subgroup. For more detailed forecasts, including predictions generated using other climate models and assumptions, see the remainder of their paper. Amstrup et al., *supra* note 58, at 36.

110. Kassie Siegel & Brendan Cummings, *Petition to List the Polar Bear (Ursus Maritimus) as a Threatened Species Under the Endangered Species Act*, CENTER FOR BIOLOGICAL DIVERSITY, available at http://www.biologicaldiversity.org/species/mammals/polar_bear/pdfs/15976_7338.pdf.

111. *Endangered and Threatened Wildlife and Plants; 12-Month Petition Finding and Proposed Rule to List the Polar Bear (Ursus Maritimus) as Threatened Throughout Its Range*, 72 Fed. Reg. 1064, 1065 (Jan. 9, 2007) (to be codified at 50 C.F.R. pt. 17), available at <http://www.gpo.gov/fdsys/pkg/FR-2007-01-09/html/06-9962.htm>.

112. *Ctr. for Biological Diversity v. Kempthorne*, No. 08-1339 (N.D. Cal. filed Apr. 28, 2008).

113. *Id.*

114. *Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Polar Bear (Ursus Maritimus) Throughout Its Range; Final Rule*, 73 Fed. Reg. 28211, 28212 (to be codified at 50 C.F.R. pt. 17, May 15, 2008), available at <http://www.fws.gov/policy/library/2008/E8-11105.html>.

107. Andrew E. Derocher et al., *Polar Bears in a Warming Climate*, 44 INTEGRATIVE & COMP. BIOLOGY 163 (2004).

108. *Id.* at 163.

individual threatened species, subject only to a requirement that its rules “provide for the protection” of listed groups.¹¹⁵ Generally speaking, these §4(d) exemptions are meant to provide the federal government with a certain degree of flexibility in its conservation efforts, allowing officials to create exceptions to broader ESA rules to suit particular situations and species.

Using this provision, FWS officials inserted a §4(d) exemption for global warming-related habitat loss into the original polar bear listing. This decision was highly questionable; based on the USGS study and the independently published papers mentioned above, climate change seems likely to have major impact on polar bear populations over the next half-century, representing a key threat to the species. However, the FWS disagreed. Climate models, the agency claimed, were uncertain enough to justify an exemption for these activities, despite U.S. government and independent evidence to the contrary.¹¹⁶ Environmental advocates responded with a pair of lawsuits, one seeking to “uplist” the polar bear from “threatened” to “endangered” (thereby invalidating the §4(d) exemption), and one seeking to have the §4(d) exemption declared unlawful.¹¹⁷ Neither of these suits was successful; in both cases, federal judges ruled that the FWS’ decisions survived the basic “rationality” test that they were required to meet. As Judge Emmitt Sullivan noted, “climate change poses unprecedented challenges of science and policy on a global scale, and this Court must be at its most deferential where the agency is operating at the frontiers of science.”¹¹⁸ In a small victory for the plaintiffs, the judge in the §4(d) case did find that the FWS had failed to adequately study and report on the potential conservation impact of the exemption, and sent officials back to prepare a formal environmental impact statement. However, in early 2012, the Obama Administration reissued the §4(d) rule, exempting “activities outside identified geographic area [polar bear range]” (including greenhouse gas emissions) from the ESA’s take prohibitions.¹¹⁹

2. Canadian Polar Bear Listing

In Canada, polar bear policy has followed a similar time line to that in the United States. During the pre-SARA period, the COSEWIC assessed the conservation status of Canadian polar bear populations on a number of different occasions, publishing reports in 1986, 1991, 1999, and 2002.¹²⁰ Though the original 1986 opinion categorized the

bear as “not at risk,” in 1991, the COSEWIC upgraded its polar bear recommendation to “species of special concern,” which the organization reaffirmed in its three subsequent studies.¹²¹ The 2002 report, in particular, emphasized “hunting” and “environmental degradation” as the primary threats to Canadian polar bears, as well as acknowledging “the possible long-term effects of climate change on polar bears.”¹²² As a result, once SARA came into effect, the polar bear was one of the first species considered for listing under the new law, obtaining official candidacy for a “special concern” designation in May 2004.¹²³

Almost immediately, though, the listing effort began to run into delays. In early 2005, the Canadian government released a statement rejecting the COSEWIC’s 2002 recommendations, arguing that the COSEWIC’s assessments were outdated and did not adequately incorporate “best available community knowledge and aboriginal traditional knowledge.”¹²⁴ Officials added that “consultations [with traditional authorities] will be undertaken on an urgent basis and are expected to be completed [spring 2005],” presenting these issues as temporary setbacks.¹²⁵ “Urgency” notwithstanding, COSEWIC officials did not produce another polar bear report for a full three years, forwarding an updated proposal to the Canadian government in mid-2008.¹²⁶

Far from settling the matter, though, the second listing attempt was even more controversial than the first. As noted earlier, between 2002 and 2008, a number of well-regarded studies were published projecting the worldwide conservation status of polar bear populations, with a special focus on the possible effects of global climate change. In general, these new models suggested that the bears were likely to experience major demographic declines by mid-century, easily large enough to meet the COSEWIC’s quantitative guidelines for an “endangered” listing.¹²⁷ Despite this new evidence, however, the 2008 COSEWIC statement took a remarkably conservative stance. Though the COSEWIC acknowledged “unknown effects of directional climate change on [bear] survival and recruitment,” the organization’s own internal climate models explicitly “[did] not account for the possible

able at http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_polar_bear_0808_e.pdf.

121. *Id.*; prior to the year 2000, COSEWIC used the term “vulnerable” rather than the phrase “species of special concern.” For consistency, I use the phrase “species of special concern” throughout this Article.
122. COSEWIC, *COSEWIC Assessment and Update Status Report on the Polar Bear Ursus Maritimus in Canada*, CANADIAN GOVERNMENT 20 (2002), available at http://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_polar_bear_e.pdf.
123. *Order Acknowledging Receipt of the Assessments Done Pursuant to Subsection 23(1) of the Species at Risk Act*, SI/2004-48, 138 C. GAZ., no. 9, 472, 475 (May 5, 2004), available at <http://www.gazette.gc.ca/archives/p2/2004/2004-05-05/pdf/g2-13809.pdf>.
124. *Order Giving Notice of Decisions Not to Add Certain Species to the List of Endangered Species*, SI/2005-2, 139 C. GAZ., no. 2, 74, 115 (Jan. 26, 2005), available at <http://laws-lois.justice.gc.ca/PDF/SI-2005-2.pdf>.
125. *Id.* at 96.
126. COSEWIC, *supra* note 121.
127. Shaye Wolf & Kassie Siegel, *Comments on Proposed Order to List The Polar Bear Under SARA*, CENTER FOR BIOLOGICAL DIVERSITY, available at http://www.cbc.org/Storage/130/15542_11-3-Exhibit_G.pdf. For specific details on COSEWIC’s listing criteria, see COSEWIC, *supra* note 52, at 8-10.

115. 16 U.S.C. §1533(d).

116. In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation, 794 F. Supp. 2d 65 (D.C. Cir. 2011).

117. In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation, 818 F.2d 214 (D.C. Cir. 2011).

118. *Id.*

119. *Endangered and Threatened Wildlife and Plants; Special Rule for the Polar Bear*, 77 Fed. Reg. 23432, 23439 (amending 50 C.F.R. pt. 17, Apr. 19, 2012), available at <http://www.gpo.gov/fdsys/pkg/FR-2012-04-19/html/2012-9403.htm>.

120. COSEWIC, *COSEWIC Assessment and Update Status Report on the Polar Bear Ursus Maritimus in Canada*, CANADIAN GOVERNMENT (2008), avail-

effects of climate change” on polar bear populations.¹²⁸ As COSEWIC reviewers themselves noted, this shortcoming meant their results “should be used to interpret current and short-term likelihoods of decline only,” with little predictive power beyond the near future.¹²⁹ Even so, COSEWIC officials went ahead with their report, and reaffirmed their original “special concern” recommendation.

In other areas, as well, the 2008 COSEWIC report was remarkably unresponsive to new scientific evidence and proposals. From an early point in the polar bear listing process, a number of leading biologists argued that polar bears ought to be divided into a set of distinct management groups (known as designatable units, or DUs) based on local challenges and needs.¹³⁰ Under this scheme, declining polar bear populations in the southern Arctic would get relatively strong protections, while the healthier populations to the north would be less tightly regulated. However, the 2008 COSEWIC report treated the entire species as a monolith. By its reading of SARA and of COSEWIC administrative guidelines, the agency argued it was only authorized to enact DU schemes based upon genetically identified subpopulations, rather than the geographically based framework suggested by the scientists. As a result, both the COSEWIC report and the proposed listing decision by the Ministry of the Environment left the polar bear as a single unit.¹³¹

Finally, on top of all of these substantive issues, the 2008 listing process *still* encountered significant additional delays from the Canadian government. As noted elsewhere in this Article, SARA requires the Minister of the Environment to respond to COSEWIC listing recommendations within nine months of receiving a COSEWIC report. As an added penalty, if the Minister fails to meet this deadline, the statute mandates that the species in question be *automatically* listed according to the COSEWIC’s recommendations. In the polar bear case, these requirements would have set the deadline for the Minister’s response around mid-2009. However, using a questionable legal maneuver, the Canadian government did not “acknowledge receipt” of the 2008 COSEWIC statement until early 2011, though the report had been publicly available nearly three years earlier.¹³² As a result, Canadian officials did not respond to the COSEWIC’s statement until the end of 2011, over two years past SARA’s nondiscretionary response deadline. In its 2011 response, the government did finally protect the

polar bear, but only at a very low level; despite all the substantive problems with the COSEWIC’s 2008 assessment, Canadian officials took the report at face value, listing the bear as a “species of special concern” throughout its range in Canada.¹³³

3. Conclusion

Overall, these cases clearly illustrate some of the positive functions that courts can serve as part of the policymaking apparatus. In both the United States and Canada, the polar bear listing process was marked by serious procedural and substantive problems, as officials tried to delay the listing and downplay the significance of key scientific evidence. Faced with this intransigence, environmental advocates in the United States shifted the battle into the courts, where judges forced officials into compliance with ESA provisions. By contrast, Canadian officials ignored SARA requirements without repercussions, most notably in the case of the 2009 response deadline. As a result, though U.S. regulators were forced to deal with an array of time-consuming lawsuits, the American listing process was actually slightly *quicker* than the Canadian time frame (39 months vs. 42 months, counting only the second Canadian listing attempt). Thus, the presence of litigation seems to have improved the procedural effectiveness of the American listing system, enforcing the ESA’s deadlines and other rules in a relatively robust fashion.

On substantive questions, litigation had a smaller impact on the American listing process. In both the United States and Canada, substantive elements of both polar bear listings were deeply controversial, generating an array of protests from the environmental community.¹³⁴ In Canada, the government essentially ignored these protests, going ahead with its “special concern” listing as planned. In the United States, environmentalists challenged both the §4(d) exemption and the “threatened” listing in court, but found little success, as judges proved reluctant to overturn the FWS’ interpretation of the relevant scientific evidence. Partly, this decision may have been motivated by the ESA’s underlying structure; as noted above, the only major difference between the “threatened” and “endangered” categories under U.S. law is the availability of §4(d) exemptions. As a result, judges may have viewed the “threatened” listing as a kind of a compromise, protecting the bear against short-term threats while leaving the government with more flexibility on global warming.¹³⁵

128. COSEWIC, *supra* note 121, at 37, 58.

129. To reinforce the point, one leading polar bear scientist claimed that this shortcoming rendered COSEWIC’s projections “useless” for any serious attempt to project polar bear populations any distance into the future. Interview with Andrew E. Derocher Professor, University of Alberta (Oct. 18, 2011).

130. Gregory W. Thiemann et al., *Polar Bear (Ursus Maritimus) Conservation in Canada: An Ecological Basis for Identifying Designatable Units*, 42 FLORA & FAUNA INT’L 504 (2008).

131. *Order Amending Schedule 1 to the Species at Risk Act*, 145 C. GAZ., no. 27, 2144 (July 2, 2011), available at <http://www.gazette.gc.ca/rp-pr/p1/2011/2011-07-02/pdf/g1-14527.pdf>; COSEWIC, *supra* note 120.

132. *Species at Risk Act: Order Acknowledging Receipt of the Assessment Done Pursuant to Subsection 23(1) of the Act*, SI/2011-11, 145 C. GAZ., no. 4, 430 (Feb. 16, 2011), available at <http://www.gazette.gc.ca/rp-pr/p2/2011/2011-02-16/pdf/g2-14504.pdf>.

133. *Order Amending Schedule 1 to the Species at Risk Act*, SOR/2011-233, 145 C. GAZ., no. 23, 2282 (Nov. 9, 2011), available at <http://www.gazette.gc.ca/rp-pr/p2/2011/2011-11-09/pdf/g2-14523.pdf>.

134. For examples of protests by Canadian scientists and advocates against the government’s polar bear policies, see Dag Vongraven, *Guest Editorial—The Ballyhoo Over Polar Bears*, 28 POLAR RES. 323 (2009). Sarah Uhlemann et al., *Citizen Petition Submitted to the Commission for Environmental Cooperation Pursuant to Article 14 of the North American Agreement on Environmental Cooperation*, CENTER FOR BIOLOGICAL DIVERSITY (Nov. 30, 2011), available at http://www.biologicaldiversity.org/species/mammals/polar_bear/pdfs/11-30-11_CEC_PB_Petition.pdf.

135. Indeed, one federal judge essentially said as much. In rejecting petitions to both delist and uplist the polar bear, Judge Emmitt Sullivan argued:

In Canada, by contrast, those same judges might have taken a very different approach. Again, under Canadian law, the “special concern” designation is essentially an advisory category. Though the government must prepare management plans for species of special concern, SARA’s “take” prohibitions do not apply to species listed under the “special concern” designation.¹³⁶ As a result, the Canadian polar bear listing was clearly out of line with climate models and other scientific evidence in the case, far more so than the American ruling. Faced with this wide gap between scientific recommendations and policy choices, an American-style court might have been willing to overturn the Canadian government’s decision.

Speculation aside, the cautious approach utilized by the judiciary in these cases did have some tangible benefits. As the judges themselves noted, climate science is a complicated, fast-shifting field, making it difficult for nonexperts to differentiate between faulty and legitimate evidence.¹³⁷ Thus, though the courts were likely more deferential than necessary, their caution also allowed them to avoid uninformed decisions. And, even here, courts may have had an indirect effect on the listing process. Throughout the polar bear saga, the FWS was constantly operating under the shadow of litigation, which may have made the agency more receptive to climate change-related evidence than it otherwise would have been.

B. *Loggerhead Sea Turtles: Management on the Beaches and the Seas*

My second case species, the loggerhead sea turtle (*Caretta caretta*), offers a more complicated set of lessons. Unlike polar bears, loggerhead sea turtles have been protected under both Australian and American law for several decades. In the United States, for example, loggerheads were listed as threatened in 1978 and have remained under ESA protection ever since. In Australia, the turtle was first listed under Queensland state law in 1968, with the other states and the federal government following suit in subsequent decades.¹³⁸ This situation complicates my analysis somewhat; as noted above, the EPBC Act requires Australian biodiversity officials to follow a principle known as

“ecologically sustainable development” in their management efforts. As a result, Australian agencies are allowed to consider nonbiological evidence to a greater degree than American counterparts, making it more difficult to compare the two systems directly. However, as implied by the language of the statute, biological evidence still occupies a very important position in the management phase of the Australian biodiversity management process, keeping the two systems at least somewhat comparable. In addition, the loggerhead’s long history with the conservation programs in both countries gives me an opportunity to compare the management side of these two statutes, allowing me to expand my analysis to other areas of these laws.

In terms of conservation issues, anthropogenic threats to loggerhead survival can be divided into two groups: nesting, and oceanic. On the nesting side, beachside development has been a major issue for loggerhead breeding populations throughout the management history of the species, especially in the United States. Seaside construction, beach vehicle use, and sand compaction can all render beaches unsuitable for loggerhead nesting.¹³⁹ In developed areas, light pollution is another potential threat. Generally speaking, hatchling turtles rely on natural light to orient themselves, helping them find their way from their nests to the ocean; as a result, man-made lighting can confuse hatchlings, preventing them from reaching the water.¹⁴⁰ In Australia, nesting predation by introduced European red foxes represents another major problem, devastating recruitment rates at nesting sites around the country.¹⁴¹ Other near-shore anthropogenic interactions, including boat strikes and harbor development, are also important in some parts of the world.¹⁴²

Though terrestrial threats remain a significant problem for loggerhead conservation, interactions between loggerhead oceanic fishing operations currently represent the main focus for loggerhead management. As a globally distributed species, loggerhead sea turtles are found in most of the world’s major oceans, and are extremely migratory. In an example typical of the species, the Northern Pacific loggerhead population breeds predominantly off the coast of Japan before migrating over to foraging grounds in Baja California Sur and the East China Sea. Because of these sweeping migratory paths, the loggerhead life cycle tends to conflict with commercial fishing operations, which exploit many of the ocean regions through which loggerheads routinely travel. As a result, in a 2009 U.S. National Marine Fisheries Service (NMFS) review, the authors identified commercial bycatch as “the most significant manmade factor affecting the conservation and recovery of the loggerhead.”¹⁴³

Some plaintiffs in this case believe that the Service went too far in protecting the polar bear; others contend that the Service did not go far enough [. . .] [however,] this Court is bound to uphold the agency’s determination that the polar bear is a threatened species as long as it is reasonable, regardless of whether there may be other reasonable, or even more reasonable, views.

In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation, 794 F. Supp. 2d 65 (D.C. Cir. 2011).

136. Environment Protection and Biodiversity Conservation Act, S.C. 2002, c. 29, §32.1, 65.

137. See, e.g., In re Polar Bear Endangered Species Act Listing and §4(d) Rule Litigation, 794 F. Supp. 2d 65 (D.C. Cir. 2011). The Supreme Court has laid out similar principles, stating that courts must be the most deferential when an agency is “making predictions, within its area of special expertise, at the frontiers of science.” *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 13 ELR 20544 (1983), at 17.

138. Colin Limpus, *A Biological Review of Australian Marine Turtles: Loggerhead Turtle*, THE STATE OF QUEENSLAND, ENVIRONMENTAL PROTECTION AGENCY 54 (2008), available at <http://www.derm.qld.gov.au/register/p02785aa.pdf>.

139. Conant et al., *supra* note 57, at 100-03.

140. *Id.*

141. Limpus, *supra* note 139, at 20, 34.

142. National Marine Fisheries Service and U.S. Fish and Wildlife Service, *Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta)*, Second Revision (Dec. 31, 2008), available at http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_loggerhead_atlantic.pdf.

143. Conant et al., *supra* note 57, at 108.

I. U.S. Loggerhead Management

In the United States, most nesting-related loggerhead management has been undertaken by state and local jurisdictions.¹⁴⁴ Onshore, agencies have generally focused on curtailing beachside development and light pollution, both of which have been identified as major threats to loggerhead survival.¹⁴⁵ Responding to these concerns, counties and municipalities in Florida, Georgia, North Carolina, and South Carolina have all enacted restrictions on beachside lighting and construction over the last several decades.¹⁴⁶ Beachfront driving, beach cleaning, and non-native plants have also received regulatory attention, as state and local officials have sought to protect loggerhead nesting habitat in these regions.¹⁴⁷

However, despite these actions, many American loggerhead nesting sites remain in jeopardy. Throughout the southeastern United States, seaside development has led to significant beachfront erosion, reducing nesting site quality.¹⁴⁸ As of 2009, Florida, North Carolina, and Texas still allowed beach driving on much of their coastlines, further degrading sea turtle nesting habitat.¹⁴⁹ In Florida, in particular, light pollution also remains a significant problem; in a 1993 study, researchers found that approximately 10-30% of Florida loggerhead nests “showed evidence of hatchlings disoriented by lighting.”¹⁵⁰ As a result, a 2009 FWS review speculated that “the number of hatchlings disoriented by lighting in Florida is calculated in the range of hundreds of thousands per year.”¹⁵¹

By contrast, oceanic fishing regulations have mostly been a federal endeavor. Starting in the late 1980s, scientific studies began to identify large-scale commercial fishing operations as a major threat to loggerhead survival.¹⁵² Shrimp trawlers have been especially destructive, ensnaring and drowning significant numbers of turtles each year. As a result, in the late 1980s and early 1990s, the United States became the first nation in the world to require shrimp trawlers to use so-called turtle excluder devices (TEDs).¹⁵³ First released in 1988, this requirement was

met with hostility from state governments in Louisiana, North Carolina, and elsewhere along the Atlantic and Gulf Coasts. Though the other state governments soon fell into line, Louisiana decided to challenge the ruling in court, suing the federal government repeatedly during 1988 and 1989. In the suits, state officials primarily alleged that the scientific evidence did not show a clear link between TED usage and reduced sea turtle mortality, making the ruling an “arbitrary and capricious” expression of federal authority.¹⁵⁴ As in the polar bear cases, though, judges essentially deferred to federal officials, applying a relatively lenient set of legal tests to government actions. Based on these standards, the courts rejected Louisiana’s claims, allowing the TED rulings to come into force in 1989.

Since then, scientists and officials have consistently recognized TED rules as a critical part of the broader sea turtle conservation campaign. In recent government reports, for example, reviewers characterized TED requirements as “arguably the most significant conservation accomplishment in the marine environment since loggerheads were listed under the ESA.”¹⁵⁵ Though TEDs are not required on all types of trawling fleets, their usage has nevertheless played a huge role in loggerhead conservation, significantly reducing bycatch rates off the coast of the southeastern United States. In addition, as TED technology and turtle conservation science have advanced, federal officials have also been reasonably responsive, implementing several major changes to TED regulations during the late 1990s and early 2000s.¹⁵⁶ As a result, though the TED decision was initially controversial, TEDs have become an integral part of the larger sea turtle conservation strategy.

Throughout the early 1990s, most American loggerhead conservation efforts remained focused on refining restrictions on shrimp trawling operations. However, starting in the late 1990s, environmental groups began to turn their attention to other kinds of fishing practices. This time around, though, the federal government was much less willing to accommodate environmentalists’ demands, shifting the battle into the courts. Over the course of the 2000s, environmental groups filed legal actions seeking to restrict or close a variety of different fisheries in both the Pacific and Atlantic Oceans, including longline fisheries near Hawaii and off the coast of California.¹⁵⁷ By and large, these suits were intended to compel the government

144. Federal regulators have occasionally involved themselves in loggerhead nesting conservation. However, these efforts have usually been prompted by litigation. *See, e.g.,* *Loggerhead Turtle v. County Council*, 896 F. Supp. 1170, 1175-76 (M.D. Fla. 1995) (court injunction helped force a Florida county to develop a comprehensive Habitat Conservation Plan to manage loggerhead nesting beaches within its borders); Katherine R. Butler, *Coastal Protection of Sea Turtles in Florida*, 13 J. LAND USE & ENVTL. L. 399, 428-31 (1998).

145. Interview with Brendan Cummings, Senior Counsel and Public Lands Director, Center for Biological Diversity (Aug. 5, 2011).

146. U.S. Fish and Wildlife Service, *Loggerhead Sea Turtle 2* (2001), available at <http://www.fws.gov/northflorida/SeaTurtles/Turtle%20Factsheets/PDF/Loggerhead-Sea-Turtle.pdf>.

147. National Marine Fisheries Service and U.S. Fish and Wildlife Service, *supra* note 143.

148. Conant et al., *supra* note 57, at 100.

149. *Id.*

150. *Id.* at 130.

151. *Id.*

152. NATIONAL RESEARCH COUNCIL, COMMITTEE ON SEA TURTLE CONSERVATION, *DECLINE OF THE SEA TURTLES: CAUSES AND PREVENTION* (1990).

153. Though designs vary, TEDs generally resemble large gratings woven into trawling nets. These gratings catch sea turtles and other large animals en-

snared in trawling nets, allowing them to escape through a specialized set of escape holes placed just outside the bars. Smaller animals pass through the bars, and into the deeper parts of the net.

154. *State of Louisiana ex rel. William J. Guste Jr. v. Verity*, 853 F.2d 322 (5th Cir. 1988); *State of Louisiana ex rel. William J. Guste Jr. v. Mosbacher*, 1999 U.S. Dist. LEXIS 23317 (D. Haw., Oct. 18, 1999).

155. National Marine Fisheries Service and U.S. Fish and Wildlife Service, *supra* note 143, at 71.

156. Conant et al., *supra* note 57, at 134-35.

157. *Leatherback Sea Turtle v. Daley*, 1989 U.S. Dist. LEXIS 8937 (E.D. La., Oct. 18, 1999) (requiring the NMFS to develop an environmental impact statement on longline fishing in Hawaii, and issuing an injunction closing the fishery while the statement was being developed); *Turtle Island Restoration Network et al. v. NMFS*, 340 F.3d 969 (9th Cir. 2003) (finding that NMFS was obligated to regulate longline fishery interactions with loggerhead sea turtles off the coast of California). For a full timeline of loggerhead conservation litigation, see Center for Biological Diversity, *Loggerhead Sea*

to issue new rules regarding fishing equipment and practices, and were generally successful.¹⁵⁸ In the Hawaiian and Californian cases, litigation forced federal officials to release new restrictions on maximum loggerhead “take” and to develop new regulations and a new environmental impact statement (EIS) addressing the impact of longline fishing on loggerhead populations. These regulations had a substantial impact on loggerhead populations in both states, bringing bycatch rates in California and Hawaii down to more acceptable levels.¹⁵⁹

Though these actions have helped limit loggerhead deaths, most loggerhead populations around the world remain in bad shape. Because of the loggerhead’s migratory habits, most turtle populations spend at least some of their time off the coast of poorly regulated areas like South America and Southeast Asia, leaving them vulnerable to fishing-related incidental take.¹⁶⁰ As a result, in 2007, the CBD filed petitions asking the federal government to upgrade the loggerhead from threatened to endangered throughout most of its worldwide range.¹⁶¹ After the FWS missed ESA deadlines to respond to the petition, environmentalists filed a notice of intent to sue in 2009, forcing the government to reply to the document. In 2010, federal officials issued a proposed rule upgrading most of the loggerhead populations around the world from threatened to endangered, including those specified in the petitions.¹⁶²

2. Australian Loggerhead Management

In Australia, loggerhead sea turtle management has followed a basically similar pattern. As in the United States, the Australian loggerhead listing was not controversial; in 2000, barely a year after the EPBC Act was passed, the Australian federal government designated the loggerhead as endangered, where it remains at the time of this Article’s writing.¹⁶³ At the state level, both Western Australia and

Queensland began protecting the turtle in the 1960s, with the other Australian states and territories (save Victoria) following suit over the next several decades.¹⁶⁴ However, though the loggerhead occurs off all parts of the Australian coast, virtually all of the turtle’s Australian nesting sites are situated in Queensland and Western Australia.¹⁶⁵ As a result, those two states—plus the federal government—direct most of the country’s loggerhead conservation efforts.

Unlike other Australian governments, Queensland took significant actions to protect loggerheads at a relatively early stage. In particular, starting in the 1970s and 1980s, Queensland regulators began a major campaign to eradicate loggerhead nest predators, particularly European red foxes. On some beaches in northern Queensland, scientists estimated that foxes were taking as many as 90-95% of all turtles hatched at the sites, decimating recruitment rates in the region.¹⁶⁶ Faced with this situation, between the 1960s and the 1980s, the Queensland government acquired most of the major loggerhead nesting sites within its borders, bringing over 80% of its sea turtle nests onto protected land.¹⁶⁷ In addition, starting in the mid-1970s, Queensland began an intensive program of fox baiting and removal at its protected sites, virtually eliminating fox predation by the mid-1980s.¹⁶⁸ Since then, though some “low-density” Queensland nesting sites are still unprotected, fox predation throughout the state has remained at “variable but generally low levels.”¹⁶⁹

In Western Australia, marine turtle protection has received much less attention. As in Queensland, fox predation has been a major issue on Western Australia’s mainland nesting beaches, slashing recruitment rates at these sites. Motivated by these and other conservation issues, starting in the 1960s, Western Australia began to examine its territory “on a biological system by system basis,” with the goal of creating a comprehensive system of state parks and biodiversity reserves.¹⁷⁰ As a result, “some” of Western Australia’s loggerheads currently nest within state-managed habitat.¹⁷¹

However, even at these sites, protections for sea turtles were historically quite limited. Notably, Western Australia did not list the loggerhead until 1994, when the turtle was designated as “endangered” by the state.¹⁷² Worse still, as

Turtle Action Timeline, http://www.biologicaldiversity.org/species/reptiles/loggerhead_sea_turtle/action_timeline.html (last visited Dec. 14, 2012).

158. Interview with Brendan Cummings, Senior Counsel and Public Lands Director, Center for Biological Diversity (Aug. 5, 2011).

159. Conant et al, *supra* note 57, at 108, 116.

160. Conant et al, *Loggerhead Sea Turtle (Caretta Caretta) 2009 Status Review Under the U.S. Endangered Species Act*, Report of the Loggerhead Biological Review Team to the National Marine Fisheries Service, August 2009.

161. Center for Biological Diversity, *Petition to Reclassify the North Pacific Distinct Population Segment of the Loggerhead Sea Turtle (Caretta Caretta) From a Threatened to an Endangered Species Under the Endangered Species Act* (July 12, 2007), available at http://www.biologicaldiversity.org/species/reptiles/loggerhead_sea_turtle/pdfs/Petition-No-Pac-Loggerhead-07-12-07.pdf; Center for Biological Diversity, *Petition Pursuant to the Endangered Species Act to Designate the Western North Atlantic Subpopulations of the Loggerhead Sea Turtle (Caretta Caretta) as a Distinct Population Segment and to Reclassify the Western North Atlantic Subpopulations as Endangered* (Nov. 15, 2007), available at http://www.biologicaldiversity.org/species/reptiles/loggerhead_sea_turtle/pdfs/Loggerhead-Petition-WNA.pdf.

162. Endangered and Threatened Species; Proposed Listing of Nine Distinct Population Segments of Loggerhead Sea Turtles as Endangered or Threatened; Proposed Rule, 75 Fed. Reg. 12598 (amending 50 C.F.R. pt. 17, 223, 224, Mar. 16, 2010), available at <http://www.gpo.gov/fdsys/pkg/FR-2010-03-16/html/2010-5370.htm>.

163. Department of Sustainability, Environment, Water, Population, and Communities, *EPBC Act List of Threatened Fauna*, AUSTRALIAN GOVERNMENT,

<http://www.environment.gov.au/cgi-bin/sprat/public/publicthreatenedlist.pl?wanted=fauna> (last visited Dec. 14, 2012).

164. Queensland first listed the loggerhead in 1968. The Western Australia government began a campaign to study state ecosystems—including turtle populations—in the 1960s. As a result of these studies, the Western Australian government began to formally some loggerhead nesting habitat after that date. However, the turtle was not formally listed under Western Australian law until 1994. *Wildlife Conservation (Specially Protected Fauna) Notice 1994 (WA)* (unpublished) (on file with author); Limpus, *supra* note 139, at 32, 54.

165. Limpus, *supra* note 139, at 9.

166. *Id.* at 21.

167. *Id.* at 14.

168. *Id.* at 21.

169. *Id.*

170. *Id.* at 32.

171. *Id.*

172. *Wildlife Conservation (Specially Protected Fauna) Notice 1994 (WA)* (unpublished) (on file with author).

late as 2003, vehicles were still allowed to drive on many Western Australian nesting beaches, packing the sand over nesting sites and preventing hatchlings from reaching the water.¹⁷³ In addition, prior to that same date, Western Australia had not conducted a major fox removal program at any of its beaches.¹⁷⁴ Because of these problems, a commenter writing in 2004 noted that “there is a high probability that the egg loss to foxes and vehicle traffic in recent years [. . .] has exceeded the sustainable level of loss for the western Australian loggerhead turtle population.”¹⁷⁵

More recently, Western Australian sea turtle policy has improved somewhat. In 2008, the Western Australia government issued a new marine turtle management plan, which described an array of new actions and conservation goals. Most importantly, the government agreed to develop an expanded fox control program, design policies to reduce the impact of vehicle and tourist traffic on nesting sites, and fund a major new study on marine turtle habits and threats in the more remote parts of the state.¹⁷⁶ Data on the results of these actions were not available at the time of this Article’s writing. However, in an interview with the author, a leading Australian turtle biologist rated these actions positively, and characterized them as a turnaround in Western Australian marine turtle management.¹⁷⁷

Moving away from the Australian states, loggerhead conservation efforts at the federal level have primarily focused on commercial fishing regulations. Prior to the late 1990s, Australian officials did not regulate interactions between marine fisheries and sea turtles, despite mounting evidence of their importance from the United States. However, starting in 1996, Australian officials set up an exploratory TED program, and asked trawlers off the east coast of the continent to begin using TEDs on a voluntary basis. Unlike in the United States, this move was not especially controversial; driven in large part by U.S. sea turtle policy, between the late 1980s and the late 1990s, TED technology had been refined to the point where the devices had a fairly low impact on shrimp catches, assuaging shrimp fishermen’s concerns.¹⁷⁸ After the passage of the EPBC Act in 1999, otter prawn-trawling operations off northeastern Australia were officially identified as a key threatening process for marine turtle species, and were listed as such in 2000. As a result, most of the major shrimp fisheries off the eastern coast of the continent were soon required to utilize TEDs in their nets, reducing marine turtle bycatch levels to as low as 5% of the 1989-90 rates.¹⁷⁹

Since then, Australian officials have also begun to investigate the impact of other fisheries on loggerhead populations around the continent. However, due to a lack of data, these efforts have largely been exploratory in nature, as researchers have sought to identify and quantify the impacts of other fishing fleets operating in Australian waters. Until the early 2000s, turtle populations in Western Australia were the primary target for this kind of work; because of the region’s remoteness, scientists knew relatively little about the general health of loggerhead populations in the area.¹⁸⁰ However, starting in 2002, shrimp trawlers off Western Australia and in the Torres Straights were made subject to the same kinds of restrictions as those operating off the coast of Queensland and New South Wales.¹⁸¹ More recently, researchers have begun to investigate the impact of gillnet and longline fishing boats, though neither technique is used extensively in Australian waters.¹⁸² As a result, at least within the confines of Australian territorial waters, loggerheads appear to be in reasonably good shape.

3. Conclusion

In this case, the impact of litigation is less clear. Throughout the 1980s, 1990s, and 2000s, U.S. loggerhead sea turtle policy was largely characterized by litigation and hostility, which were noticeably absent from the corresponding Australian protection process. Indeed, while American loggerhead policy was ensnared in a series of increasingly messy legal battles, Australian policymakers appear to have fostered a cooperative spirit amongst stakeholders, bringing fishermen and scientific experts together to form a coherent policy system. As a result, the Australian government probably acted more efficiently than the American one, avoiding many of the transaction costs involved in litigation and achieving a higher level of *procedural* effectiveness.

Taken as a whole, though, the costs imposed by litigation do not appear to be all that high. On the mainland, both countries left nesting beach protection to the states, and both achieved inconsistent results. In the United States, though some governments did provide loggerhead populations with substantial protections, others, particularly in Florida, were not nearly as active. Litigation did force a few municipalities to develop more comprehensive loggerhead policies, but played a relatively small role in the broader policymaking process. Australia achieved a similarly mixed level of success; on the one hand, Queensland’s loggerhead program has been exemplary, responding quickly and effectively to new scientific information from the 1980s up until the present. By contrast, in Western Australia, the government’s loggerhead protection measures were decidedly half-hearted. The state’s 2008 marine turtle recovery plan may represent a step in the right direction, but no

173. Limpus, *supra* note 139, at 34.

174. *Id.*

175. *Id.*

176. Tamra Chapman et al., Marine Turtle Recovery Plan for Western Australia, Government of Western Australia, Department of Environment and Conservation (Nov. 17, 2008), available at <http://www.broome.wa.gov.au/council/pdf/attach/2008/Nov/20081120-111.pdf>.

177. Interview with Colin Limpus, Adjunct Associate Professor, University of Queensland (Oct. 14, 2011).

178. Anton D. Tucker et al., *Adopting Turtle Excluder Devices in Australia and the United States: What Are the Differences in Technology Transfer, Promotion, and Acceptance?*, 25 COASTAL MGMT. 405 (1997).

179. Marine Species Section, *Recovery Plan for Marine Turtles in Australia*, ENVIRONMENT AUSTRALIA (July, 2003), available at <http://www.environment.gov.au/coasts/publications/turtle-recovery/pubs/marine-turtles.pdf>.

180. *Id.*

181. Limpus, *supra* note 139, at 34-35.

182. Marine Species Section, *supra* note 180, at 11-13; Interview with Colin Limpus, Adjunct Associate Professor, University of Queensland (Oct. 14, 2011).

data appear to exist regarding its actual implementation or impact. Overall, then, state-level loggerhead conservation policies in these two countries appear to have achieved a similar level of effectiveness, with litigation neither helping nor hurting the biodiversity protection process.

On the oceans, U.S. courts were much more involved, but the basic lessons from this case remain the same. In procedural terms, both the United States and Australia took roughly the same amount of time to issue final TED regulations, despite the prevalence of lawsuits in the American case. Both American and Australian conservation agencies also followed their substantive directives quite closely, adhering to the scientific recommendations in the case. Importantly, though, U.S. policymakers faced a much more contentious policymaking environment than their Australian counterparts, and not just because of the presence of litigation. During the 1980s and 1990s, U.S. policymakers were at the vanguard of the global sea turtle conservation campaign, making fishermen extremely wary of their proposals. By the late 1990s, when Australia began to introduce TED regulations, industry representatives had a better understanding of the costs involved in installing TEDs into their equipment. As a result, American shrimp fishermen were far more hostile toward the new regulations than their Australian counterparts, and put far more pressure on their state governments to fight TED requirements. Even so, litigation only delayed the new American TED standards for about a year, moving the effective date of the regulations from early 1988 to mid-1989.¹⁸³

In the 2000s, the story is much the same. Though U.S. environmental groups sued the government repeatedly throughout this period, many of these lawsuits were actually intended to force the government to meet the statutory deadlines set out by ESA's language, speeding up the process, rather than slowing it down. Similarly, though Australia listed the loggerhead as "endangered" a full decade before the United States (2000 versus 2010), litigation prevented the American government from further delaying the uplisting process. And, in substantive terms, this delay was less important than it might appear; because no loggerhead-related §4(d) exemption was ever issued, loggerheads enjoyed very similar protections as "threatened" species to those they possessed as an "endangered" group, keeping the substantive quality of the two programs roughly equal throughout the 10-year gap.

Importantly, many of the legal decisions issued during the 2000s also highlighted an array of previously ignored threats, incorporating new scientific evidence into American loggerhead regulatory programs. In California, Hawaii, and other areas besides, lawsuits pushed agencies to regulate longline fisheries, gillnet operations, and other such practices. And, once again, American officials likely faced a more difficult task during this period than their Australian counterparts. In Australia, shrimp trawlers are

by far the largest oceanic threat to loggerhead populations, with few other fisheries playing a significant role in the turtle's decline. By contrast, American loggerheads interact with a much more diverse group of fisheries, which litigation helped to bring under the ESA's regulatory umbrella.

Overall, litigation contributed positively to American loggerhead protection. At the state level, lawsuits did not play a significant role in loggerhead conservation, neither helping nor hindering regulatory efforts. Nationally, litigation did impose some real delays, both in the TED case and in later turtle campaigns. In the end, though, American regulators reached final rulings on the TED issue in about the same amount of time as their Australian counterparts, despite working in a more adversarial policymaking environment. During the 2000s, litigation also increased the *procedural* and the *substantive* effectiveness of the American system in a number of important ways, enforcing statutory deadlines and forcing regulators to respond to new scientific information. Viewed as a whole, then, citizen suits raised the quality of American loggerhead management.

V. Lessons: Courts and the Biodiversity Policymaking Process

Based on this evidence, two observations seem worth noting. First, *court intervention can significantly improve the policymaking process*, particularly when dealing with *procedural* problems. In both the polar bear and the loggerhead cases, U.S. courts played a major role in supporting the ESA's basic structure, repeatedly enforcing deadlines and reporting requirements against reluctant administrators. By contrast, the statutes in Australia and Canada were not always so strongly enforced. Though Australia's agencies followed EPBC Act procedure fairly closely, Canada's officials were extraordinarily resistant, fighting the polar bear listing at least as hard as their American counterparts. Without a citizen suit provision or some other kind of appeals process, Canadian advocates had no way to challenge official policy, leaving their government free to undermine the listing.

On *substantive* issues, the U.S. courts were more deferential. During the polar bear listing process, this deference was probably more expansive than necessary, as the scientific evidence contradicted the government's preferred policies. In endangered species law more generally, though, this deference has a number of important benefits. Because of the complicated nature of conservation science, a strategy of substantive deference helps courts avoid issuing decisions that misinterpret scientific findings. By acting aggressively on *procedural* questions and deferentially on *substantive* ones, courts can maximize their contributions to the policymaking process while limiting their exposure to unfamiliar policy areas.

Second, and to build on this latter point, *the costs of judicial intervention appear fairly low*. This is a significant finding, and one that is at odds with other scholarship on the

183. South Carolina Department of Natural Resources. *Turtle Excluder Device (TED) Chronology* (2003), <http://www.dnr.sc.gov/seaturtle/teds.htm> (last visited Dec. 14, 2012).

topic.¹⁸⁴ In both the polar bear and the sea turtle cases, the American listing and management processes took about as long to complete as their Australian and Canadian counterparts, despite repeated legal challenges in the American cases. In addition, compared with the other countries I assess, the American biodiversity protection system produced equivalent or superior substantive results. Generally, courts seem to have adhered to the doctrine laid out in *Baltimore Gas* and other holdings, intervening only when agencies clearly and undeniably contravene the scientific evidence in a particular case. As such, at least in the context of this study, judges managed to improve the substantive quality of agency policy without producing any decisions that obviously contravened the relevant scientific evidence.

Importantly, I do not mean to suggest that a litigation-heavy policymaking system necessarily represents the *best* policymaking model. The analysis contained within this study is not sufficient to reach this kind of conclusion; litigation almost certainly imposes other, nontemporal costs onto the policymaking process, forcing the government and advocacy groups alike to expend man-hours and financial resources making their cases in court. Measuring these costs, and others like them, is beyond the scope of this Article. In addition, even in the cases I examine, the American system was clearly imperfect. In the loggerhead sea turtle case, for example, lawsuits did probably impose some extra delays onto the policymaking system, even if the magnitude of those delays was relatively low.

The ESA also contains some provisions that may make biodiversity litigation particularly effective. As noted elsewhere in this Article, the ESA is a remarkably clear statute, containing forceful, easily understood, and easily enforceable guidelines and standards. As a result, judges can discern the ESA's intent without much difficulty, giving them a straightforward set of rules from which to work. Better still, for reasons mentioned above, judges tend not to intervene on substantive scientific questions, mostly restricting themselves to procedural issues. In the two cases I examine, this balancing act allowed courts to perform important oversight functions without addressing complicated biological questions, maximizing their contributions to the process while minimizing the costs of intervention. Com-

pared with other policy areas, then, endangered species issues may be especially well-suited for legal remedies.

Overall, though, one conclusion does seem clear. Oversight mechanisms, whatever form they may take, play a critical role in policy systems like biodiversity protection. Citizen suits are one such program, allowing interest groups and private individuals to challenge government decisions in a court of law. Though other enforcement options certainly exist, the legal system *can* act as an effective institutional solution in this sort of situation.

Many of the problems I identify with the Canadian and Australian biodiversity protection systems are not restricted to the two cases I examine. In Canada, for example, the federal government commonly ignores SARA deadlines and requirements, especially at the listing and critical habitat stages.¹⁸⁵ Because of these problems, one polar bear scientist described SARA as “gutless.”¹⁸⁶ Australia's EPBC Act has a better track record, but also possesses some real problems. In a 10-year review of the EPBC Act, Australia's Standing Senate Committee on the Environment, Communications, and the Arts concluded that “ministerial discretion [. . .] [was] undermining the credibility of the nomination and listing process,” and argued that the system ought to be made more transparent and more accountable.¹⁸⁷

Based on this evidence, this study concludes that litigation can be a useful and effective component of the policymaking process. This finding is independent of one's views on the importance of endangered species protection. Whether or not one sees biodiversity as an important public good, statutes like the ESA remain on the books, making their enforcement a rule-of-law question rather than a policy issue. In the cases I examine, courts and litigation helped promote the enforcement of the law, forcing reluctant officials to adhere to procedural and substantive requirements. In addition, the courts performed this oversight function without imposing significant additional costs. Further research is needed to understand how generalizable this pattern might be, and whether it stretches into other areas of law and policy. Under the circumstances examined in this Article, though, courts can clearly provide positive contributions to the policymaking process.

184. See *supra* Part I.A.

185. David L. VanderZwaag et al., *Canada's Species at Risk Act and Atlantic Salmon: Cascade of Promises, Trickle of Protection, Sea of Challenges*, 22 J. ENVTL. L. & PRAC. 267 (2011).

186. Andrew E. Derocher (Professor, University of Alberta), in discussion with author, Oct. 18, 2011.

187. Standing Committee on Environment, Communications, and the Arts, *The Operation of the Environment Protection and Biodiversity Conservation Act 1999: First Report*, AUSTRALIAN SENATE (Mar. 2009), available at http://www.aph.gov.au/senate/committee/eca_ctte/epbc_act/report/report.pdf.