SETTLING FOR NATURAL RESOURCE DAMAGES

Karen Bradshaw*

The United States manages natural resources held in the public trust for the collective benefit of all citizens. When human action injures certain natural resources, the government has statutory authority to pursue monetary damages, which are used to restore the resources to their pre-injury condition. As the only statutory tort remedy in environmental law, natural resource damages provide a valuable opportunity to consider the efficiency of a tort regime as a tool for addressing environmental problems. Moreover, administration of the remedy provides insights into interagency dynamics and valuation of natural resources without a market value. At present, these important inquiries are sharply limited by a lack of comprehensive information about the remedy. Commentators routinely underestimate the frequency and size of claims by failing to account for settlement, which resolves over ninety-five percent of natural resource damages matters, and lesser-known applications of the remedy.

This Article begins to fill the void of information surrounding natural resource damages settlements. It presents a novel empirical overview of all settlements by federal trustees between 1989 and 2015, constructed from data gathered by Freedom of Information Act requests to each relevant agency. The available data indicate that federal agencies settled for \$10.4 billion across hundreds of claims over more than twenty years. This Article maps the statutory authorities that agencies use to provide a comprehensive overview of the field. Ultimately, the data presented in this Article lay a foundation for the important, yet under-theorized, questions surrounding the potential for statutory tort remedies to address environmental problems.

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Associate Professor of Law, Sandra Day O'Connor College of Law, Arizona State University. The author appreciates the comments provided by the participants of the Sabin Colloquium for Innovative Environmental Law Scholarship at Columbia University and the Law and Economics Workshop at George Mason University, as well as by Peter Appel, Kevin Bell, Adam Chodorow, Ira Ellman, Michael Gerrard, Betsy Grey, Lisa Heinzerling, Rhett Larson, Florencia Marótta-Wurgler, Richard Revesz, Arden Rowell, J.B. Ruhl, Troy Rule, Catherine Sharkey, Roselle Wissler, and reviewers who provided comments through anonymous peer review processes. Private practitioners also generously shared their time and expertise for this project: Ann Al-Bahish, Mark Barash, Monique Coady, Jerry George, Michael Hammerschmidt, Evan van Hook, Brian Israel, and, especially, Kerry Smith. The dataset was made possible by the considerable efforts of attorneys and Freedom of Information Act officers in a variety of agencies. The author is especially thankful to those who went to extraordinary lengths in gathering data, including Brooks Liswell and Ronald McClain at the Office of General Counsel for the United States Department of Agriculture, John Carlucci and John Rudolph at the Department of the Interior, and Joe Islee and Tom Buchman at the National Oceanic and Atmospheric Administration. Beth DeFelice and Lyndsey Buchanan provided library services; Lauren Ferrigni and Zachary Rosenberg provided research assistance. I am grateful for the excellent editing and feedback provided by the editors of the Harvard Environmental Law Review.

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Natural resource damages are the best kept secret in environmental law.

—Lori Faeth, Deputy Assistant Secretary of the

Department of the Interior¹

Introduction

A judge recently approved the *Deepwater Horizon* consent decree,² which, at \$8.1 billion, is the largest natural resource damages settlement in

Lori Faeth, Deputy Ass't Sec'y for Pol'y & Int'l Affairs, U.S. Dep't of the Interior, Keynote Address at the Natural Resources Damage Assessment and Restoration National Workshop (May 2014).

Consent Decree Among Defendant BP Exploration & Production Inc. ("BPXP"), the United States of America, and the States of Alabama, Florida, Louisiana, Mississippi, and Texas at ¶ 15, In re: Oil Spill by the Oil Rig "Deepwater Horizon" in the Gulf of Mexico, on April 20, 2010, Nos. 10–4536, 10–04182, 10–03059, 13–4677, 13–158, and 13–00123

history.³ The *Deepwater Horizon* consent decree alone exceeds the Environmental Protection Agency's ("EPA") 2015 budget⁴ and triples the total of all other settlements collected by agencies in the 35-year history of the remedy. It also raises broad, unanswered questions about the potential application of natural resource damages. What is this remedy? Why do we hear so little about it? Can it be used to resolve other environmental problems? Should it be? At present, there is so little information about administration of natural resource damages in practice that it is impossible to answer these questions. This Article seeks to provide a comprehensive empirical overview of the remedy, which lays the foundation for future normative inquiry into settlement practices in realms with little established case law.

Natural resource damages are a tort-like remedy⁵ designed to make the public whole after environmental harm by restoring injured natural resources to their baseline conditions.⁶ The remedy is neither a fine nor payment for

- (E.D. La. Apr. 4, 2016). ("BPXP shall pay \$7.1 billion, plus any of the \$1 billion and accrued interest not yet paid by BPXP under the Framework Agreement, to the United States and the Gulf States for Natural Resource Damages resulting from the Deepwater Horizon Incident.").
- 3. Background Sheet on Agreement in Principle with BP, DEP'T OF JUSTICE, https://perma.cc/T5ST-V9T7 (noting that the consent decree, which had not yet been approved, "will be the largest environmental settlement in the history of the United States").
- 4. EPA, FY 2015 EPA BUDGET IN BRIEF, EPA-190-S-14-001, at 1, 3 (2014), https://perma.cc/PLF5-FTDG (describing the 2015 fiscal year budget as \$7.89 billion).
- Natural resource damages may be pursued for the release of oil or hazardous materials into 5. waterways or damage to national parks, marine sanctuaries, and forests. Natural resource damages provisions are found in five federal statutes. National Marine Sanctuaries Act, 16 U.S.C. §§ 1431–1445c (2012); Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. §§ 1251-1388 (2012) (allowing trustees to recover for damage to natural resources caused by discharges of oil into the navigable waters of the United States, adjoining shorelines, and other waters in specified zones and statutes); Oil Pollution Act ("OPA"), 33 U.S.C. § 2701 (2012) (amending the Clean Water Act to authorize a recovery mechanism for the discharge of oil into waterways); Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9601-9675 (2012) (allowing for recovery of damages for injury to "land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources" caused by hazardous materials released into waterways); Park System Resource Protection Act, 54 U.S.C. §§ 100721-100725 (2014) (allowing recovery for any incident producing damage to resources within a National Park, including natural and cultural resources). The United States Forest Service collects natural resource damages under its statutory and common law authorities. The Forest Service keeps recovered funds under the Restoration of National Forest Lands and Improvements Act, 16 U.S.C. § 579c (2012).
- 6. For a discussion of the public trust doctrine as it relates to natural resources, see generally Richard Lazarus, Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine, 71 IOWA L. REV. 631 (1986), Joseph L. Sax, The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention, 68 MICH. L. REV. 471 (1970), and Jan S. Stevens, The Public Trust: A Sovereign's Ancient Prerogative Becomes the People's Environmental Right, 14 U.C. DAVIS L. REV. 195 (1980).

cleanup.⁷ Funds must be spent on restoration—they go directly to restoring the harmed resources. Conventional wisdom holds that agencies seldom pursue natural resource damages, and when they do the settlements are relatively small.⁸ This Article argues that scholars and commentators systematically underestimate the value and frequency with which claims are pursued, because they fail to incorporate settled claims into their analyses.⁹ In fact, over ninety-five percent of natural resource damage claims settle.¹⁰ Incorporating settlement data into this discussion suggests that the remedy is far larger than presently estimated, and deserves more attention than it currently receives as a source of funding for ecological projects. The data also raise normative questions about

- 7. James Boyd, Financial Assurance Rules and Natural Resource Damages Liability: A Working Marriage? 2 (Res. for the Future, Discussion Paper No. 01-11, 2001) (distinguishing natural resource damages from other types of remedial liability).
- 8. The few existing data points dramatically understate the amount of funds generated by settlement. A frequently cited General Accounting Office report from 1996 describes federal NRD claims settled prior to that year as totaling approximately \$106 million, but those data reflect damages under only one statutory provision and are obsolete given recent growth of recovery programs. U.S. Gen. Accounting Office, GAO/RCED-96-71, Superfund: Outlook for and Experience with Natural Resource Damage Settlements 5 (1996) [hereinafter GAO, Superfund]. In the absence of better data, commentators have dramatically understated the frequency and size of settlements. See David Driesen et al., Environmental Law: A Conceptual and Pragmatic Approach 408 (2d ed. 2011) (describing natural resource damages under CERCLA as "used sparingly"); see also Richard L. Revesz, Environmental Law and Policy 830 (2d ed. 2012) (noting that "liability for damages . . . amount[s] in some cases to tens of millions of dollars").
- 9. Commentators have erroneously conflated a lack of litigation for natural resource damages with trustees' not pursuing claims, overlooking the possibility of settlement. See supra note 8; see also, e.g., J. Terence Ryan, The Evolution of Natural Resource Damage Assessments Under the Oil Pollution Act and Comprehensive Environmental Response, Compensation, and Liability Act, 6 FORDHAM ENVIL. L. Rev. 29, 34 (2011) ("[T]o date, relatively few natural resource damage actions have been pursued.").
- Assessing Damages Resulting From Gulf Oil Spill: Hearing Before the S. Comm. on Env't and Pub. Works, 111th Cong. 8 (2010) (statement by Cynthia Dohner) [hereinafter Dohner Testimony] ("[M]ore than 95 percent of [NRD assessment restoration] claims are resolved cooperatively with court approved settlements "); GAO, SUPERFUND, supra note 8, at 5 ("To date, almost all natural resource damage claims have been settled without litigation."); IRA GOTTLIEB ET AL., A PRACTICAL GUIDE TO LITIGATING NATURAL RESOURCE DAMAGES CLAIMS IN ENVIRONMENTAL LAW LITIGATION: LAW AND STRATEGY (2009) (noting that virtually all natural resource damage claims settle); VALERIE ANN LEE & P.J. BRIDGEN, THE NATURAL RESOURCE DAMAGE ASSESSMENT DESKBOOK: A LEGAL AND TECHNI-CAL ANALYSIS 51 (2002) (same); Interview with Mark Barash, Senior Attorney, Office of the Solicitor, U.S. Dep't of the Interior, in Phoenix, Ariz. (Apr. 28, 2014) [hereinafter Barash Interview] (interviewee had only one case go to trial in entire career at Department of the Interior Office of the Solicitor); E-mail from Joe Inslee, Policy/Outreach Analyst, Nat'l Oceanic & Atmospheric Admin., Office of Response & Restoration (July 20, 2015) (on file with author) (finding only four cases brought to trial by the National Oceanic and Atmospheric Administration since 1988).

the efficacy of the remedy's administration and its potential application to other environmental harms.

This Article provides a comprehensive overview of settlement data for natural resource damage claims, reflecting every settlement tracked and reported by nearly every federal trustee. ¹¹ It demonstrates that federal agencies have settled claims for over \$10.4 billion. ¹² The Department of the Interior ("DOI") alone is actively pursuing approximately 550 claims across the country, ¹³ and has more than \$600 million in unspent funds generated from settlements. ¹⁴ Potential future claims comprise tens of billions of dollars. ¹⁵ Moreover, natural resource damage actions produce considerable funds for environmental recovery, an important earmarked source of funds for ecological projects that can be deployed without the need for political approval.

Accounting for settlement data does more than correct the dollar value ascribed to natural resource damages. It lays the foundation for future normative and empirical exploration of the effectiveness of the remedy within environmental law and larger questions about agency settlements. This Article identifies and discusses, but does not conclusively answer, key questions about the broader applicability of tort remedies for environmental harms, agency administration of such remedies, and the complicated dynamics underlying agency settlement.

Part I argues that legal scholarship underestimates the frequency and size of natural resource damages claims by not accounting for settlements. Although almost all natural resource damages claims settle, the process of settlement, and its results, are largely unstudied. There is no comprehensive source of settle-

^{11.} For a discussion of the comprehensiveness of the settlement data presented in this Article, see *infra* Part III.A.

^{12.} See infra Part III.B.

^{13.} Dohner Testimony, supra note 10, at 3 ("DOI is currently pursuing approximately 550 [NRD assessment restoration] cases across the country.").

^{14.} U.S. DEP'T OF THE INTERIOR, BUDGET JUSTIFICATIONS AND PERFORMANCE INFORMATION FISCAL YEAR 2016: NATURAL RESOURCE DAMAGE ASSESSMENT AND RESTORATION PROGRAM 25 (2015) [hereinafter DOI, NRDAR] (estimating settlement funds held in the DOI restoration fund at \$496 million and settlement funds held in various court registry accounts at \$100 million in 2015 and \$680 million in 2016).

^{15.} The General Accounting Office valued the natural resource damage liability resulting from nuclear testing at between \$2.3 and \$20.5 billion in 1996. U.S. GEN. ACCOUNTING OFFICE, GAO/RCED-96-206R, NATURAL RESOURCE DAMAGES AT DOE, 2 (1996) [hereinafter GAO, DOE]. In 1996, the DOI and the NOAA forecasted a minimum of \$1.2 billion in not-yet-pursued claims under CERCLA alone. GAO, SUPERFUND, *supra* note 8, at 2, 4–5 (tabulating 40 claims of at least \$5 million and 20 of at least \$50 million, but noting that claims may settle for below the forecasted amount). Another category of potential claims is those for which injury has not occurred yet almost certainly will, such as from hydraulic fracturing. *See, e.g.*, DOI, NRDAR, *supra* note 14, at 43–44.

See infra Part I.B (describing scholarship on natural resource damages as focused on cases, statutes, and regulation, but silent on the topic of settlement).

ment data across statutes and trustees.¹⁷ In twenty-five years, only three courts have ruled on the assessment methods underlying natural resource damages claims.¹⁸ None of the leading environmental law or natural resources casebooks discuss settlement of natural resource damages claims.¹⁹ One law review article—providing an analysis of two cases—has been written on settlement practices.²⁰

Part II provides a brief but comprehensive overview of the legal framework surrounding natural resource damages. It outlines the federal statutes that provide a basis for claims, charts the agency trustees empowered to pursue claims by various statutes, and delineates authority for various natural resources. This

- 17. Neither government trustees nor potentially responsible parties maintain a comprehensive record of all settlements across federal trustees. Telephone Interview with Brian Israel, Partner & Chair of Envtl. Practice Grp., Arnold & Porter (July 30, 2015) [hereinafter Israel Interview] (describing his considerable, ongoing effort to obtain data across state trustees, but reporting that he was not aware of a centralized source of data across federal trustees); Telephone Interview with Ronald McClain and Brooks Liswell, Office of Gen. Counsel, U.S. Dep't of Agr. (July 29, 2015) [hereinafter McClain Interview] (explaining that Forest Service data is distributed across nine regional offices and not maintained in a central repository). But see Ann Al-Bahish et al., State NRD Claims: A Snapshot of Key Issues, Settlements, and Program Priorities (unpublished manuscript) (on file with the author) (compiling a number of state-trustee NRD settlements).
- 18. For a discussion of all natural resource damages cases, see generally LEE & BRIDGEN, *supra* note 10.
- Natural resource damages are briefly discussed in five of the leading six environment law casebooks and none of the leading natural resources law textbooks. The discussion in the former centers on the statutes covering release of hazardous materials and oil into waterways under CERCLA and OPA; the statutes providing natural resource damage recovery on public lands and marine sanctuaries are not mentioned in any casebook. Compare ROBIN KUNDIS Craig, Environmental Law in Context: Cases and Materials 205-08 (3d ed. 2012) (describing natural resource damages claims under CERCLA and using Exxon Valdez as an example of such a claim), DAVID DRIESEN ET AL., ENVIRONMENTAL LAW: A CON-CEPTUAL AND PRAGMATIC APPROACH 407-09 (2d ed. 2011) (describing natural resource damages under CERCLA as "used sparingly"), ROBERT L. GLICKSMAN ET AL., ENVIRON-MENTAL PROTECTION: LAW AND POLICY 990, 995-97 (7th ed. 2015) (discussing natural resource damages under CERCLA and OPA), REVESZ, supra note 8 at 830-43 (2d ed. 2012) (explaining natural resource damages under CERCLA), and J.B. RUHL ET AL., THE PRACTICE AND POLICY OF ENVIRONMENTAL LAW 345 (3d ed. 2013) (discussing the natural resource damages provision contained in CERCLA, and the difficulty of assessing economic harm of non-use values), with JAN LAITOS ET AL., NATURAL RESOURCES LAW (2d ed. 2012) (not discussing natural resource damages), ROBERT V. PERCIVAL ET. AL, ENVI-RONMENTAL REGULATION: LAW, SCIENCE, AND POLICY (7th ed. 2013) (same), and James Rasband et. al, Natural Resources Law and Policy (2d ed. 2009) (same).
- 20. Michael B. Runnels & Andrea Giampetro-Meyer, Cooperative NRDA & New Governance: Getting to Restoration in the Hudson River, the Gulf of Mexico, and Beyond, 77 BROOK. L. REV. 107, 121–23 (2011) (discussing two collaborative assessment and restoration projects).

Part attempts to capture the entire landscape of the remedy; it does not delve into the minutiae of individual statutes.²¹

Part III provides an empirical overview of natural resource damage settlements. The author submitted Freedom of Information Act ("FOIA") requests for settlement data to each federal trustee and the Department of Justice.²² This Part presents a detailed overview of the data, organized by statute and agency. It also highlights limitations to the data, which serve to caution about the extent to which they can be used to reach normative conclusions.

Part IV outlines the difficulty surrounding the question of whether natural resource damages are working. It describes the four standards by which this analysis could proceed, then identifies the information necessary to apply each standard. Analysis is sharply limited by a lack of data, caused primarily by disparate record-keeping practices and the limited information about how claims are settled in practice.²³ This Part concludes by identifying how the data presented in this Article lay the foundation for future research on whether natural resource damages achieve the ecological restoration that lies at the heart of the remedy.

I. Overview

This Part briefly explains natural resource damages. It argues that the few commentators who have discussed the remedy have universally underestimated the size and scope of its administration by failing to account for settled claims. Accurately capturing the scope of the remedy in practice provides a necessary

- 21. It does, however, seek to correct a few commonly misunderstood aspects of the remedy, like the persistent scholarly misperception that a lack of litigation of natural resource damages cases equates to a lack of claims under the relevant statutes. *See infra* note 48 and accompanying text.
- 22. See infra Part III.A (describing the purpose and process of submitting Freedom of Information Act requests to obtain settlement data); infra Appendix II (providing a sample of the letter used for Freedom of Information Act requests).
- 23. Following the Deepwater Horizon oil spill, Congress, the media, and the public became deeply interested in natural resource damages. KRISTINA ALEXANDER, CONG. RESEARCH SERV., R41396, THE 2010 OIL SPILL: NATURAL RESOURCE DAMAGE ASSESSMENT UNDER THE OIL POLLUTION ACT (2010) (responding to a congressional request for information about natural resource damages); Curtis Brainard, Cracking the Case: Why Is It So Difficult to Cover Investigations of Environmental Crimes?, COLUM. JOURNALISM REV. (Oct. 28, 2011), https://perma.cc/XU9T-3YUT (reporting on concerns from members of the media that agency trustees were inadequately forthcoming with information about natural resource damage settlements). Agencies were forced to become more transparent about settlement and assessment practices in light of the newfound attention. See Dohner Testimony, supra note 10 (testifying that agency trustees have developed more transparent practices of assessing natural resource damages in response to public attention to the Deepwater Horizon oil spill). But see Brainard, supra (reprinting a response from a DOI official explaining the need for confidentiality in ongoing matters).

first step toward assessing the larger normative question of whether it is working to protect and restore valuable public trust resources. Economists and policymakers should also be interested in natural resource damages as it is the only tort remedy in environmental statutes, and is a rare example of a statutory provision that attempts to force polluters, and other environmental tortfeasors, to fully internalize the negative externalities created by their actions.

A. An Overview of Natural Resource Damages

The United States government acts as a trustee for the public trust in managing a vast portfolio of natural resources, such as land, coral reefs, and wildlife.²⁴ Congress has passed laws authorizing trustees to pursue damages when public trust resources are injured, referred to generally as "natural resource damages." Several federal statutes²⁵ contain provisions allowing agencies to pursue natural resource damages when hazardous materials²⁶ or oil²⁷ are released into waterways, or injury occurs to national parks²⁸ or marine sanctuaries.²⁹ Additionally, the Forest Service claims authority under a sixth statute to pursue damages for environmental injury to national forests caused by wildfire.³⁰

Examples of environmental injury that give rise to natural resource damages include incidents like a ship grounding on a coral reef³¹ or oil spilling into a bay.³² The responsible party³³ must pay damages to compensate the public for

- 24. The linchpin of natural resource damages is the notion of the government holding natural resources in the public trust, reflective of a pre-colonial common law tradition suggesting that natural resources belonging to the government should be managed for the benefit of the public as a collective whole. Sax, *supra* note 6, at 475 (describing American public trust doctrine as derived from Roman and English traditions); Lazarus, *supra* note 6, at 689–91.
- 25. These statutes operate against the broader backdrop of common law tort actions for environmental injury, which may include damages for injury to natural resources. This Article focuses exclusively on natural resource damages claims arising from these statutes. For a table overviewing the various statutory authorities, see *infra* Part II.B.
- 26. 42 U.S.C. § 9607 (2012).
- 27. 33 U.S.C. § 2702 (2012); 33 U.S.C. § 1321 (2012).
- 28. 54 U.S.C. § 100722 (2014).
- 29. 16 U.S.C. § 1443 (2012).
- 30. The United States Forest Service collects natural resource damages arising under statutes based on common law. The Forest Service keeps recovered funds under the Restoration of National Forest Lands and Improvements Act, 16 U.S.C. § 579c (2012) (allowing the Forest Service to retain funds collected from fines, judgments, and settlements).
- 31. Tug Allie-B, Inc. v. United. States, 273 F.3d 936 (11th Cir. 2001).
- 32. U.S. FISH & WILDLIFE SERV. ET AL., COMMAND OIL SPILL: FINAL RESTORATION PLAN AND ENVIRONMENTAL ASSESSMENT (2004), https://perma.cc/HU7H-GMQD (concerning an oil spill that injured and killed a large number of seabirds, including endangered California brown pelicans).
- 33. The term "responsible party" or "potentially responsible party" is a legal term of art in the natural resource damages context; it is analogous to "defendant," but lacks the normative implication of guilt in anticipation of settlement. Simply put, potentially responsible parties

the injury caused, which may include lost use values in addition to the value of damage to natural assets. The funds paid are used to restore resources to their pre-injury condition.³⁴ Natural resource damages are distinct from other categories of civil remedies arising from environmental injury. They are neither fines nor penalties; they are distinct from cleanup costs and remediation.³⁵ Only federal, state, tribal, and foreign government trustees may bring claims;³⁶ municipal governments and individual tort plaintiffs cannot.³⁷

The funds generated by natural resource damages do not return to general public coffers; they may be used only for direct, on-the-ground restoration projects.³⁸ They provide an earmarked source of funding for restoration projects removed from annual political approval.³⁹ The trustees that collect natural resource damages decide how to spend the fund within the broad umbrella of restoration activities.⁴⁰

- are responsible for causing the injury. The number of potentially responsible parties in a particular case varies considerably across injury types, and can give rise to interesting strategic implications for negotiations and settlement. *See infra* Part III.C.2 (discussing potentially responsible parties negotiating amongst themselves).
- 34. Richard B. Stewart, Liability for Natural Resource Injury: Beyond Tort, in ANALYZING SUPERFUND: ECONOMICS, SCIENCE, AND LAW 220 (Richard L. Revesz & Richard B. Stewart eds., 1995) [hereinafter Stewart, Beyond Tort] (describing natural resource damages as "an effort to protect the commons through statutory extension of tort liability").
- 35. Agencies often seek fines and penalties, along with cleanup costs and remediation, for the same environmental injury that gives rise to natural resource damages, but the statutory authority for pursuing such claims is different, as is the allowable use of the funds.
- 36. For an overview of which trustees may bring claims under the various federal statutes, see *infra* Part II.A.
- 37. Boyd, supra note 7, at 9 (noting that private persons may not claim natural resource damages) (citing Artesian Water Co. v. Gov't of New Castle Cty., 851 F.2d 643 (3d Cir. 1988)); Sanne H. Knudsen, Remedying the Misuse of Nature, 1 UTAH L. REV. 141, 190–91 (2012) [hereinafter Knudsen, Misuse of Nature] ("Local governments and private parties have to rely on the relief provided under state or common law,"). The data gathered for this Article indicate, however, that in practice, cities sometimes receive natural resource damages. See, e.g., Consent Decree at 11–12, United States v. Mobil Mining and Minerals, No. 4:96-cv-00605 (S.D. Tex. June 12, 1996), https://perma.cc/595J-QZSE (noting that the responsible party paid assessment and restoration costs for natural resource damages to the City of New York).
- 38. The use of damages for assessment and restoration activities creates incentive effects for both trustees and potentially responsible parties that would not exist if the funds were simply returned to the general treasury. For a discussion of the incentives, see *infra* Part III.
- 39. See infra Part III.
- 40. Trustee agencies spend funds pursuant to restoration plans, which go through public notice and comment period but do not require legislative approval. Trustees manage funds cooperatively with co-trustees, and require consensus for disbursement of funds. McClain Interview, supra note 17 (describing the process through which unallocated funds shared by co-trustees are disbursed from the DOI settlement fund). Richard Stewart has suggested that this dynamic incentivizes agencies to collect funds aggressively. Stewart, Beyond Tort, supra note 34, at 230 ("[Trustee agencies are] incentivized to 'gold plate' restoration activities, loading on

B. Existing Scholarship

Natural resource damages tend to be overlooked by those outside the narrow field. Scholarly attention tends to focus on the cleanup and remediation provisions of pollution statutes, which is surprising, as natural resource damages can exceed the cleanup, remediation, and penalty costs associated with an injury.⁴¹ Commentators, casebook authors, and government officials understate the frequency with which claims are pursued and the cumulative dollar value of claims.

Many articles on natural resource damages focus on exploring the statutory language, regulations, and handful of cases addressing the topic.⁴² Several focus on the interesting scientific and economic questions imbedded in valuing natural resources that do not have a market value,⁴³ including a few exceptional recent articles exploring complicated scientific questions.⁴⁴

- overhead charges and designating their own employees to undertake damage assessments and restoration activities in order to maximize recovery of off-budget moneys and expand their operations.").
- 41. REVESZ, *supra* note 8 (noting that the cost of natural resource damages can exceed cleanup costs). For example, although *Deepwater Horizon* gave rise to the largest Clean Water Act penalty in history at \$5 billion, the natural resource damages claim of \$8.1 billion exceeds this penalty. *See supra* notes 1–4.
- 42. See Craig H. Allen, Proving Natural Resource Damage Under OPA 90: Out with the Rebuttable Presumption, in with APA-Style Judicial Review?, 85 TULANE L. REV. 1039 (2012); Frank B. Cross, Requiring Restoration for Natural Resource Damages, 24 TOLEDO L. REV. 319 (1993); Allan Kanner, Tribal Sovereignty and Natural Resource Damages, 25 Pub. LAND RESOURCES L. REV. 93 (2004); Patrick Tolan, Natural Resource Damages Under CERCLA: Failure, Lessons Learned, and Alternatives, 38 N.M. L. REV. 409 (2008).
- This work builds upon a long-held scholarly fascination with economic methodology used to assess non-use values, the source of more law review articles than cases on the subject. See Brian R. Binger et al., Contingent Valuation Methodology in the Natural Resource Damage Regulatory Process: Choice Theory and the Embedding Phenomenon, 35 NAT. RESOURCES J. 443 (1995); Jason J. Czarnezki & Adrianne K. Zahner, The Utility of Non-Use Values in Natural Resource Damages Assessments, 32 B.C. Envil. Aff. L. Rev. 509 (2005); Allan Kanner & Tibor Nagy, Measuring Loss of Use Damages in Natural Resource Damage Actions, 30 COLUM. J. ENVIL. L. 417 (2005); Miriam Montesinos, It May Be Silly, But It's an Answer: The Need to Accept Contingent Valuation Methodology in Natural Resource Damage Assessments, 26 Ecology L.Q. 49 (1999); Richard B. Stewart, Regulation in a Liberal State: The Role of Non-Commodity Values, 92 YALE L.J. 1537 (1983) [hereinafter Stewart, Non-Commodity Values]; Dale B. Thompson, Valuing the Environment: Courts' Struggles with Natural Resource Damages, 32 ENVTL. L. 57, 70 (2002); Note, "Ask a Silly Question . . .": Contingent Valuation of Natural Resource Damages, 105 HARV. L. REV. 1981 (1992); Jeffrey C. Dobbins, Note, The Pain and Suffering of Environmental Loss: Using Contingent Valuation to Estimate Nonuse Damages, 43 DUKE L.J. 879 (1994); John M. Hyde, Comment, Is Contingent Valuation Worth the Trouble? 62 U. CHI. L. REV. 331 (1995). Economists have written several thousand articles on the topic of valuing non-use values.
- 44. See Sanne H. Knudsen, The Long-Term Tort: In Search of a New Causation Framework for

Settlement is rarely mentioned in the natural resource damages scholar-ship. The exception is a 1995 book chapter by Richard Stewart, which provides a compelling account of the dynamics of settlement, but not its scope.⁴⁵ Others have mentioned settlement within the context of a single incident,⁴⁶ or acknowledged the existence of settlement without further discussion.⁴⁷ Some have conflated the lack of litigation with trustees' inactivity. For example, one commentator notes that "to date, relatively few natural resource damage actions have been pursued" without considering the role of settlement.⁴⁸ Several commentators have predicted that claims will soon flood the courts with litigation without acknowledging that settlement is the more likely outcome.⁴⁹

Natural resource damages are only briefly discussed in several environmental law casebooks. These discussions center on the statutes covering release of hazardous materials and oil into waterways under Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") and the Oil Pollution Act ("OPA"); the statutes providing natural resource damages recovery on public lands and marine sanctuaries are not mentioned in any casebook. Casebooks reflect existing scholarship on the remedy, noting that natural resource damages under CERCLA are "used sparingly," and that the "liability for damages . . . amount[s] in some cases to tens of millions of dollars." 52

The few existing public sources of data are outdated, and thus dramatically underestimate the amount of funds generated by settlement to date. One report from 1996 describes claims in the hundreds of millions of dollars.⁵³ Those data reflect damages under only one statutory provision, and the figure is obsolete given recent growth of recovery programs. The *Deepwater Horizon* spill has, however, attracted renewed attention to the remedy. Congressional hearings in 2010 prompted federal trustees to publicly testify about the size and scope of

- 45. Stewart, Beyond Tort, supra note 34.
- 46. Runnels & Giampetro-Meyer, *supra* note 20, at 123–32 (discussing settlement in the context of specific incidents).
- 47. Allen, *supra* note 42, at 1055 ("Most potential NRD assessment and restoration claims are obviated either by cooperation and negotiation between the trustees and the [responsible party] or by settlement.").
- 48. Ryan, supra note 9, at 35.
- 49. Shawn Kelly et al., New Jersey's Natural Resource Damages Initiative: Is the "Sleeping Giant" Waking Up?, 56 Fed'n Def. Corp. Couns. Q. 345 (2006) (forecasting an increase in natural resource damage litigation); Heidi S. Minuskin & Joseph C. Amoroso, In Hot Pursuit of Natural Resource Damages Claims, 19 Envil. Claims J. 219 (2007) (same); Ryan, supranote 9, at 34 (suggesting that few natural resource damage claims have been pursued).
- 50. See supra note 19.
- 51. Driesen, supra note 8, at 408.
- 52. REVESZ, supra note 8, at 830.
- 53. GAO, SUPERFUND, supra note 8, at 5.

Natural Resources Damages, 108 Nw. U. L. Rev. 475 (2014) [hereinafter Knudsen, Long-Term Tort]; Knudsen, Misuse of Nature, supra note 37.

the remedy. A representative of the DOI reported that her agency was "currently pursuing approximately 550 . . . cases across the country." 54

Courts, too, have failed to document the frequency and size of claims across individual settlements. Although judges and juries ostensibly are available to hear natural resource damages cases,⁵⁵ claims are rarely litigated in practice; they virtually always settle. Only a handful of cases have been decided on the wildly controversial topic of which economic methods may be used to assess damages.⁵⁶

Courts generally encounter natural resource damage statutes in the context of being asked to approve consent decrees,⁵⁷ which formalize settlements between trustees and potentially responsible parties.⁵⁸ Judicial review of a consent decree is limited to the statutory requirement that settlement be "fair, reasonable, and in the public interest,"⁵⁹ without relation to previously settled cases. Consequently, a review of consent decrees and documents filed in support of them does not indicate that the parties or the judges know the number of consent decrees that exist, or their cumulative dollar value.⁶⁰

- 54. Dohner Testimony, supra note 10.
- 55. Whether natural resource damages claims are subject to a jury trial is an open legal question. Allen, *supra* note 42, at 1069–73 (suggesting that although neither CERCLA nor OPA provides a statutory right to jury trial, courts have found that there are legal questions involved in natural resource damages cases); Stewart, *Beyond Tort*, *supra* note 34, at 227 ("A central, unresolved legal uncertainty created by the hybrid NRD system is whether the right to jury trial attaches to NRD liability claims."). Of the three courts that have considered the question, two have ruled that claims can go to a jury.
- 56. For example, a search on Westlaw for the phrase "natural resources damage(s)" in proximity to variations of "assessment" and with variations of "method" in the opinion returned only 30 results as of May 15, 2016. Search Results—Advanced Search, Westlaw, https://l.next.westlaw.com/Search/Home.html (searching under "All Content" in "All State & Federal" jurisdictions for "adv: ("natural resources damage!" /p assess!) AND method!"). But see, e.g., Kennecott Utah Copper Corp. v. U.S. Dep't of the Interior, 88 F.3d 1191 (D.C. Cir. 1996) (striking down NRD assessment regulations); Ohio v. U.S. Dep't of the Interior, 880 F.2d 432 (D.C. Cir. 1989) (upholding some, and striking down other NRD assessment regulations).
- 57. Unlike litigation, consent decrees represent the end of disagreement between parties. They serve to formalize the settlement, provide the imprimatur of the judiciary on the agreement, and reinforce the availability of judicial enforcement of the settlement terms. The exception is if environmental nongovernmental organizations raise issue with the consent decree. An interesting and worthwhile line of future research would be studying the category of consent decrees for natural resource damages *not* approved and ascertaining the reasons why they were rejected.
- 58. Claims of less than \$500,000 may be entered as administrative orders on consent, which are judicially enforceable but, unlike consent decrees, are not subject to ex ante judicial approval.
- 59. 15 C.F.R. § 990.25 (2015).
- 60. The lack of information about the dollar value of claims is exacerbated by the non-pecuniary nature of restoration-based remedies, such as a potentially responsible party providing land instead of money to satisfy the damages claim. This point is discussed in greater detail in Part III.A.

C. Accounting for Settlement

Natural resource damages comprise a far more vibrant practice area than previously recognized. Existing commentary understates the scope of the remedy in at least two ways. First, by failing to account for settlement, 61 sources are missing the bulk of the action: over ninety-five percent of natural resource damages claims settle, 62 representing hundreds of millions of dollars a year. 63 Indeed, nearly all of the action of natural resource damages occurs by settlement.

Second, discussion of the remedy often operates within silos centered on particular statutory provisions to the exclusions of others. Commentary focuses on CERCLA and OPA, statutes centered on the release of hazardous materials or oil into waterways. ⁶⁴ Commentators virtually ignore the category of natural resource damages statutes designed to protect public lands—national parks, marine sanctuaries, and national forests. Similarly, discussion focuses on state and federal trustees, while ignoring tribal trustees and foreign governments. ⁶⁵ Taking a step back from individual statutes to see the whole picture of natural resource damages reveals a vast landscape with large swaths unmapped by legal scholarship.

- 61. Some commentary erroneously conflates the lack of litigation with a lack of action in pursuing natural resource damages, overlooking the role of settlement. *See, e.g.*, Ryan, *supra* note 9.
- 62. In 2010, a DOI official testified before Congress that "more than 95 percent of [natural resource damages] claims are resolved cooperatively with court-approved settlements." *Dohner Testimony, supra* note 10, at 4.
- 63. Even the most conservative estimates indicate that millions of dollars in natural resource damages are pursued by trustees each year. *See infra* Part II.B (overviewing natural resource damages as exceeding \$3.5 billion over twenty-five years).
- 64. See supra note 19 (noting that casebooks discuss CERCLA, OPA, and the Clean Water Act, but not the National Marine Sanctuaries Act, Park System Resource Protection Act, or Forest Service recoveries); see also, e.g., Allen, supra note 42 (discussing OPA); Ryan, supra note 9 (discussing CERCLA and OPA); Tolan, supra note 42 (discussing CERCLA). But see Knudsen, Misuse of Nature, supra note 37 (listing the National Marine Sanctuaries Act and the Park System Resource Protection Act in an overview of natural resource damage statutes).
- 65. Little has been written about tribes or foreign governments acting as trustees; the extent of their involvement remains an open empirical question. Kanner, *supra* note 42 (discussing how the statutes relate to tribal trustees in theory, but not addressing empirical questions of how frequently tribes participate in natural resource damage claims in practice). Foreign officials may act as trustees only under OPA. 33 U.S.C. § 2706(b)(1) (2012). For a discussion of how Canada or Mexico might qualify as a foreign trustee in the *Deepwater Horizon* spill, see ADAM VANN & ROBERT MELTZ, CONG. RESEARCH SERV., R41972, THE 2010 *DEEPWATER HORIZON* OIL SPILL: NATURAL RESOURCE DAMAGE ASSESSMENT UNDER THE OIL POLLUTION ACT (2013).

Due to a variety of recordkeeping issues, there is little publicly available information about natural resource damages settlements.⁶⁶ The economic⁶⁷ and ecological⁶⁸ importance of settlements is underestimated and unreported, offering few incentives to explore further. There is no centralized record of settlements.⁶⁹ Trustees keep settlements confidential.⁷⁰ Nevertheless, collecting data on natural resource damages is vital to answering pressing questions about the administration of natural resource damages provisions.

- 66. A small body of practitioners is intimately familiar with the frequent use of settlement and internal guidelines and procedures that govern it, but this institutional knowledge exists largely outside of scholarly literature. The high settlement rate of natural resource damages is an open secret—although few outside of a small group of insiders know the value of settlement, no one appears to be trying to hide this information. Indeed, agency officials and attorneys who routinely practice in the area not only openly acknowledge that virtually all cases settle but view the settlements as successes to be celebrated and publicized.
- 67. The most readily available estimate of settlement data is over twenty years old and dramatically understates the value of the field. *See generally* GAO, SUPERFUND, *supra* note 8, at 5 (valuing claims at approximately \$166 million).
- 68. There is little scholarly awareness of the surprising extent to which recovery projects are achieving valuable environmental restoration. Trustee agencies collect and retain funds directly from potentially responsible parties and spend them without political intervention. The ability to fund restoration projects is a key motivator for agency officials who act as trustees. DOI, NRDAR, *supra* note 14, at 29–42 (describing numerous on-the-ground restoration activities, including improving aquatic habitat, stream restorations, and creating a nature-like bypass channel around a dam); Barash Interview, *supra* note 10 (describing a number of restoration projects that natural resource damages have funded); Daniel Brooks, Tribal Forester, Envtl. Health & Safety Div., Oneida Nation, Panel Address at the Natural Resource Damages Trustees Conference (Apr. 30, 2014) (suggesting that Oneida could use its own funds alongside NRD settlement money to restore wetlands), https://perma.cc/HA[2-XH]M.
- 69. Boyd, supra note 7, at 36.
- 70. Agency trustees keep large swaths of data surrounding settlement confidential. See Brainard, supra note 23 (noting press frustration with federal investigators thwarting reporters' access to information surrounding the Deepwater Horizon oil spill); Ann D. Cummings, Comment, The Exxon Valdez Oil Spill and the Confidentiality of Natural Damage Assessment Data, 19 ECOLOGY L.Q. 363, 365 (1992) (noting that trustees withhold the results of natural resource damage assessment studies "through a variety of mechanisms, including confidentiality agreements with researchers, litigation privileges created in the Federal Rules of Civil Procedure, Criminal Procedure, and Evidence, and through exemptions to the disclosure requirements of the Freedom of Information Act and Alaska's Public Records Statutes"); Barash Interview, supra note 10 (describing certain information—including internal memoranda outlining assessment data and settlement figures—as exempt from FOIA under an exemption governing internal agency communication leading to a settlement, and Federal Rule of Evidence 408); see also infra Part III.A (discussing agencies not responding to certain requests for documents).

D. Why This Matters

Lawyers, judges, politicians, nongovernmental groups and citizens should pay more attention to natural resource damages for a variety of practical and theoretical reasons. Commentators have yet to weigh in on whether this remedy achieves its goals along statutory, ecological, or economic dimensions. Such inquiry matters partially because of the size of the remedy—it is far larger and more often used than currently recognized. Ecologically, it provides a rare pocket of earmarked government funds for environmental restoration projects. From the perspective of procedural fairness, the absence of information about previously settled claims makes it difficult for judges to evaluate any particular consent decree that comes before them. Moreover, law and economics scholars should be interested in this remedy as the sole statutory tort remedy in environmental law and as an attempt to fully embody the "polluter pays" principle. Each of these points is discussed below.

Anecdotally, natural resource damages claims are increasing in number and size. State and tribal trustees are pursuing claims more frequently.⁷¹ The largest natural resource damages claim ever has settled for a staggering \$8.1 billion, which triples all other natural resource damages on which the author was able to obtain information.⁷² Resource extraction projects with a high likelihood of environmental harm, such as fracking, suggest that injuries to natural resources will continue.⁷³

The ecological importance of the remedy appears to be increasing as well. Funds generated through natural resource damages must be spent on achieving ecological restoration, and do not require Congressional action.⁷⁴ This source of

^{71.} Israel Interview, *supra* note 17 (describing, based upon ongoing tracking of state claims and interactions with state trustees, an anecdotal increase in the number and size of damages pursued by state trustees); *see also* John C. Cruden & Matthew R. Oakes, *The Past, Present, and Future of Natural Resource Damages Claims*, 28 GEO. ENVIL. L. REV. 291, 297–99 (2016).

^{72.} See supra notes 2-3.

^{73.} DOI, NRDAR, *supra* note 14, at 43–44 (anticipating injury to natural resources caused by hydraulic fracturing).

^{74. 16} U.S.C. § 1443(d) (2012) ("[D]amages recovered . . . under [the National Marine Sanctuaries Act] shall be retained by the Secretary in the manner provided for in [CERCLA], and used . . . (A) to reimburse . . . any . . . agency that conducted [response and damage assessment] activities; and (B) after reimbursement of such costs, to restore, replace, or acquire the equivalent of any sanctuary resource."); 33 U.S.C. § 1321(f)(5) (2012) ("Sums recovered [in natural resource damages actions under the Clean Water Act] shall be used to restore, rehabilitate or acquire the equivalent of such natural resources by the appropriate agencies."); 33 U.S.C. § 2706(f) (2012) ("Sums recovered under [OPA] by a . . . trustee for natural resource damages . . . shall be retained by the trustee in a revolving trust account, without further appropriation, for use only to reimburse or pay costs incurred by the trustee under subsection (c) of this section with respect to the damaged natural resources."); 42 U.S.C. § 9607(f)(1) (2012) ("Sums recovered by the United States Government as trustee

earmarked funds that are partially shielded from political process is relatively remarkable.

The number and dollar value of natural resource damages settlements are almost wholly unknown to the public they are designed to protect. Judges and lawyers also have limited access to relevant information, making it difficult for them to assess whether a settlement conforms to broader practices. Without context, it can be impossible to assess whether natural resource damages are doing what Congress intended them to do.

Natural resource damages are conceptually interesting as the only statutory tort remedy in environmental law. The remedy uniquely seeks to measure exactly what was lost and make it right.⁷⁵ The process of valuing natural resources is so complex that thousands of articles have been written on the topic. Despite this robust scholarly literature, real-world applications of these principles are currently found only in the natural resource damages context.

Economists and policymakers should also be interested in the remedy. Natural resource damages are a rare example of the "polluter pays" principle in practice—they require repayment for private externalities affecting natural resources. For this reason, economists should be interested in studying real-world outcomes in natural resource damages actions. Similarly, policymakers should assess the remedy with an eye towards applying its principles to other forms of environmental injuries, since natural resource damages provide unique insight into tort liability to influence ex ante precautions.

Are natural resource damages working? Does the risk of tort liability encourage ex ante precautions to reduce environmental injury? Is congressional intent satisfied by settling claims? Commentators cannot begin to answer these questions without settlement data. There is simply not enough information. Each of these factors suggests that natural resource damages should receive more attention than they currently do. The remainder of this Article begins to

under [CERCLA] shall be retained by the trustee, without further appropriation, for use only to restore, replace, or acquire the equivalent of such natural resources."); 54 U.S.C. § 100724 (2014) ("[A]mounts recovered by the Federal Government under any . . . law or regulation . . . as a result of destruction, loss of, or injury to any [National Park] System unit resource shall be available to the Secretary and without further Congressional action may be used only . . . [t]o reimburse response costs and damage assessments [and t]o restore, replace, or acquire the equivalent [National Park] System unit resources").

^{75.} Barash Interview, supra note 10.

^{76.} Peter M. Manus, Natural Resource Damages from Rachel Carson's Perspective: A Rite of Spring in American Environmentalism, 37 Wm. & MARY L. Rev. 381, 388 (1996) (noting that natural resource damages translate the effects of human activities on nature into financial liabilities); Stewart, Beyond Tort, supra note 34, at 230 (describing natural resources damages as embodying the "polluter pays" principle).

fill this void by overviewing each statute, the number of cases decided in practice, and the dollar value of claims.⁷⁷

II. Mapping the Universe of Natural Resource Damages

This Part maps the complex universe of natural resource damages, charting which trustees administer each statute for the various public trust resources.⁷⁸ It also describes the forms of settlement and related documents.

A. Statutory Administration

Congress has passed six federal statutes allowing government trustees to pursue natural resource damages for certain kinds of environmental injury. CERCLA provides for natural resource damages relating to the release of hazardous materials. OPA works in conjunction with the Clean Water Act ("CWA") to provide for natural resource damages when oil is released into waterways. Presidents have delegated federal authority for pursuing natural resource damages under CERCLA, OPA, and the CWA to the Secretaries of Defense, Interior, Agriculture, Commerce, and Energy. EERCLA also allows state and tribal trustees to bring natural resource damages claims for injury to trust resources they control. OPA and the CWA permit state and tribal

- 79. 42 U.S.C. §§ 9601–9675 (2012).
- 80. 33 U.S.C. § 2702(a) (2012); see also 33 U.S.C. § 1321(f)(4)–(5) (2012).
- 81. In the United States, management of public trust resources generally falls to the state unless a statute puts the federal government in control. ALEXANDER, *supra* note 23, at 1.
- 82. CERCLA required the President to designate trustees for natural resources. 42 U.S.C. § 9607(f)(2)(a). In 1981, President Reagan designated the following agencies as Federal trustees for natural resources under CERCLA and the CWA: the Department of Defense, Department of the Interior, and Department of Commerce. Exec. Order No. 12,316, 46 Fed. Reg. 42,237 (Aug. 14, 1981). In 1987, a subsequent executive order added the Department of Energy as a trustee. Exec. Order No. 12,580, 52 Fed. Reg. 2923 (Jan. 23, 1987).
- 83. 42 U.S.C. § 9607(f)(1).
- 84. 33 U.S.C. § 2706(c).
- 85. 33 U.S.C. § 1321(f)(5).

^{77.} This Article focuses primarily on the pecuniary aspects of the remedy. Future work will explore the environmental impacts of restoration activities.

^{78.} The question of "how" claims are brought is addressed in Part III. This Article does not delve deeply into exploring the temporal question of "when" claims may be brought—a thorny and technical question supposedly defined by statutory provisions providing statutes of limitations, but in practice complicated by contractual tolling provisions in documents governing collaborative assessment proceedings, such as memoranda of understanding between the trustees and potentially responsible parties.

trustees to pursue claims, along with foreign governments.⁸⁶ States, tribes, and foreign governments appoint trustees to pursue damages on behalf of their trust resources.⁸⁷

Three lesser-known statutes provide for damages in response to injury to lands and waterways held in the public trust. The National Marine Sanctuaries Act ("NMSA") allows the National Oceanic and Atmospheric Administration ("NOAA") to pursue natural resource damages for injury to marine sanctuaries. The Park System Resource Protection Act ("PSRPA") allows the National Park Service to pursue damages for injury to natural or cultural resources in national parks, or injury to park facilities. Additionally, the Forest Service claims authority under a sixth statute to pursue damages for environmental injury to national forests caused by wildfire. Figure 1 overviews the statutory authorities.

^{86. 33} U.S.C. §§ 2706(a)(4), (b)(5) (allowing foreign governments to bring claims for natural resources "belonging to, managed by, controlled by, or appertaining to such foreign government[s]").

^{87.} For a discussion of state statutes and trustees, see Al-Bahish et al., supra note 17 (describing states-only natural resource damage claims, including state-by-state charts of claims, which include over \$55 million in settlements); BRIAN D. ISRAEL, STATE-BY-STATE GUIDE TO NRD PROGRAMS IN ALL 50 STATES, https://perma.cc/S8A4-29YD. See generally Amy W. Ando & Madhu Khanna, Natural Resource Damage Assessment Methods: Lessons in Simplicity from State Trustees, 22 Contemp. Econ. Pol'y 504 (2004); Amy W. Ando & Wallapak Polasub, Envelope Backs or the Gold Standard? Choosing the Accuracy of Damages Assessment Methods, 82 Land Econ. 424 (2006). In 2004, Illinois hired an economist to survey how other state trustees calculated damages. Amy W. Ando Et Al., Natural Resource Damage Assessment: Methods And Cases (2004).

^{88. 54} U.S.C. §§ 100721-100725 (2014).

^{89. 16} U.S.C. §§ 1431–1444 (2012).

^{90.} The United States Forest Service collects natural resource damages under the Restoration of National Forest Lands and Improvements Act, 16 U.S.C. § 579c. It is unclear whether this provides a sufficient statutory basis for pursuing natural resource damages claims; no court has considered this question.

FIGURE 1: STATUTORY AUTHORITIES FOR NATURAL RESOURCE DAMAGES

Statute	Citation
Comprehensive Environmental Response, Compensation, and Liability Act	42 U.S.C. § 9607
Oil Pollution Act	33 U.S.C. § 2702
Clean Water Act	33 U.S.C. § 1321
National Marine Sanctuaries Act	16 U.S.C. § 1443
Park System Resource Protection Act	54 U.S.C. § 100724
Restoration of National Forest Lands and Improvements Act*	16 U.S.C. § 579c
* T1	C

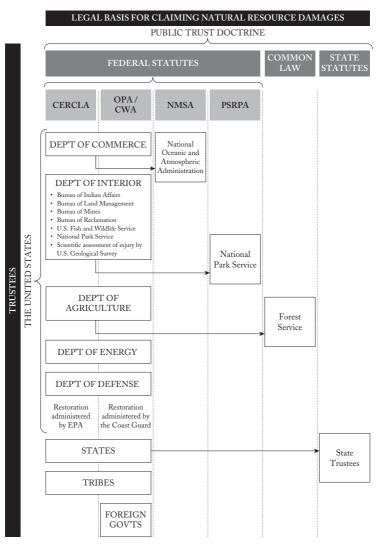
^{*} The statutory language does not explicitly provide for natural resource damages, but the Forest Service uses this provision as authority to claim natural resource damages for harm to Forest Service lands. 91

In addition to trustees, a number of other agencies aid in administering the assessment and restoration portions of these statutes. EPA and the Coast Guard administer on-the-ground restoration projects. ⁹² The United States Geological Survey provides scientific support for injury determination to the DOI. ⁹³ The Department of Justice may be involved in negotiations and must vet consent decrees prior to submitting them to courts for larger claims. ⁹⁴ Additionally, a variety of private contractors aid trustees in bringing claims. ⁹⁵

- 91. McClain Interview, *supra* note 17; E-mail from Ronald McClain, Senior Counsel, Office of Gen. Counsel, U.S. Dep't of Agr., to author (July 30, 2015) (on file with author) ("[I]n any case involving natural resources damages in which the [Forest Service] was receiving settlement funds for restoration of lost or injured natural resources, the authority the [Forest Service] had as a trustee . . . is found in 16 USC 579c.").
- 92. EPA administers CERCLA restoration; the Coast Guard administers OPA restoration. See Stewart, Beyond Tort, supra note 34, at 228 ("Congress gave cleanup authority to EPA (in the case of hazardous substance releases under CERCLA) and the Coast Guard (in the case of oil spills under CWA and OPA)."). Scientists and economists act as private contractors and consultants to value claims and provide on-the-ground restoration services. Dohner Testimony, supra note 10 (noting that agencies contract with economists and scientists to produce information).
- 93. E-mail from Judy Cearley, Gov't Info. Specialist, U.S. Geological Survey, to author (Nov. 18, 2015) (on file with author) ("[U.S. Geological Service] scientists are not involved with settlement negotiations for [natural resource damages] cases. These are handled by the Bureau case manager, the case solicitor, and Department of Justice attorneys. The [U.S. Geological Service] role has historically been to provide science support to DOI and its Bureaus to help determine injury to DOI trust resources.").
- 94. The Department of Justice must concur on consent decrees entered into by trustees, providing a quasi-judicial check against irresponsible outcomes.
- 95. The field also relies heavily on private actors supporting agency activity. Private sector scientists, economists, and remediation specialists play a crucial role in supporting each aspect of administering natural resource damages claims. The role of private actors is generally not contemplated by statute. One open legal question is whether private attorneys may take cases

Figure 2 links each trustee to the statute(s) they administer.⁹⁶

Figure 2: The Administration of Natural Resource Damages



This figure represents the organizational structure of natural resource damages trustees under the various statutory and common law basis for claims. In prac-

on a contingency basis on behalf of state trustees. *See* Kevin Bell, Natural Resource Damages Playbook Version 0.2 (Draft) 24–25 (unpublished manuscript) (on file with author).

^{96.} Charting the statutes, agencies, and underlying trust resources was an iterative process in which new information was continually updated. In the course of this project, for example, it became clear that the United States Forest Service was pursuing natural resource damages

tice, trustees often create joint structures (or co-trusteeships) in which states, tribes, and federal agencies cooperate on individual matters.

B. Trust Resources

Each trustee has statutory authority to pursue natural resource damages claims for the public trust resources they respectively manage. A federal agency's trusteeship is derived from statute. For example, the United States Fish and Wildlife Service within the DOI asserts trusteeship over certain resources based upon the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, the Fish and Wildlife Coordination Act, and the Endangered Species Act.

A single incident can injure multiple resources, which are managed by multiple trustees. For example, a hazardous chemical release might include surface water, groundwater, soils, and biological resources such as plants, invertebrates, mussels, fish, amphibians, reptiles, birds, and mammals. ¹⁰³ If trust resources held by multiple agencies are injured in a single incident, federal

independently, in a way that the author had not seen discussed in other scholarly or practitioner-based material. Figure 2 highlights ample opportunity for future research, which could fill in additional detail along the following dimensions: (1) state, tribal, and foreign trustees; (2) regulatory and policy documents (such as handbooks or restoration projects or assessments) governing various trustees; (3) the few cases outlining assessment processes; (4) consent decrees and administrative orders of consent. The data presented in this chart was obtained from a variety of sources. See, e.g., LEE & BRIDGEN, supra note 10, at 25 (providing a chart entitled "Federal Agency Trusteeship"); Natural Resources Damages: Trustees, EPA, https://perma.cc/G3YZ-5T2M; NRDAR National Workshop Presentations, U.S. DEP'T OF THE INTERIOR, https://perma.cc/28L4-9H94. All charts that were available online appeared to the author to be either incomplete or obsolete in some way; this chart may similarly be imperfect, but attempts to remedy the known shortcomings of existing figures.

- 97. Unpacking which agency is responsible for which public trust resource is complicated. In the 2011 State of the Union Address, President Obama highlighted the complexity of interagency responsibility for public trust resources, saying: "The Interior Department is in charge of salmon while they're in fresh water, but the Commerce Department handles them when they're in saltwater. I hear it gets even more complicated once they're smoked." Barack Obama, State of the Union Address to 112th Cong., 1st Sess. (Jan. 31, 2011), https://perma.cc/46PV-95YL.
- 98. Anniston PCB Site Tr. Council, Anniston PCB Site Stage I Assessment Plan 14 (2010), https://perma.cc/63B8-58SA [hereinafter Anniston] (detailing the statutory authorities granting trust authority to various resources to the United States Fish and Wildlife Service).
- 99. 16 U.S.C. §§ 703–711 (2012).
- 100. 16 U.S.C. §§ 668-668d (2012).
- 101. 16 U.S.C. §§ 661–666c (2012).
- 102. 16 U.S.C. §§ 1531-1544 (2012).
- 103. This example is drawn from a CERCLA claim administered by the State of Alabama and U.S. DOI. Anniston, *supra* note 98, at 15.

trustees must pursue claims jointly as co-trustees.¹⁰⁴ States and tribes may join federal trustees as cooperative trustees, although they have the option to pursue claims separately.

III. Empirical Overview of Settlement Data

This Part provides an empirical overview of natural resource damages settlements by federal trustees. As there is no centralized source of data of claims or settlements, ¹⁰⁵ the author gathered information from six federal agencies using FOIA requests. The data indicate that the United States has settled at least \$10.4 billion in natural resource damages claims from 1989 through April 2016. \$8.1 billion of the \$10.4 billion come from the *Deepwater Horizon* settlement. ¹⁰⁶

A. Methodology and Limitations

This Part describes the process of building the database, which contains all recorded natural resource damages settlements¹⁰⁷ by federal trustees under federal statutes.¹⁰⁸

- 104. Stewart, *Beyond Tort, supra* note 34, at 228–29 (describing overlapping trustee responsibilities). For a discussion of federal agencies, states, and tribes acting as co-trustees to pursue claims arising from federal statutes, see *infra* Part III.C.1.
- 105. Boyd, supra note 7, at 36 ("[T]here is no central repository of data on NRD claims").
- 106. The total amount is \$8.1 billion, \$1 billion of which was paid in 2012 to fund early restoration efforts. See supra note 2.
- 107. Settlements for natural resource damages claims by federal trustees under federal statutes can take a number of forms. The formality of the settlement documents corresponds to the size of the claim. Low-value claims may be resolved by ticket, letter, contract, or administrative orders of consent. Agencies generally file consent decrees with federal district courts for claims valued at \$500,000 or more. Barash Interview, *supra* note 10.
- 108. The data indicate the size and scope of the field, which were previously unknown. There are some silos of data that report settlements, typically in the context of restoration planning. See, e.g., DARP Case Document Archives, NAT'L OCEANIC AND ATMOSPHERIC ADMIN., https://perma.cc/B7R6-8DVH; Natural Resource Damage Assessment, U.S. FISH & WILD-LIFE SERV., https://perma.cc/A7J2-DDS2 (providing data on damages assessment divided by region); Natural Resource Damage Assessment (NRDA) & Restoration, CAL. DEP'T OF FISH AND WILDLIFE, https://perma.cc/GU9S-BLF8; NRDAR Status Reports, DEP'T OF INTERIOR, https://perma.cc/5JVT-MRQV.

Even the most user-friendly databases are missing enormous swaths of information underlying settlements that are interesting and necessary to assess settlement practices. In broad brushstrokes, agencies disclose restoration plans and total settlement values. They do not disclose economic valuation of harm—the amount at which the claim is valued by economists. Thus, although the data in this section provides valuable information, it cannot be used to analyze the settlement relative to the assessed value of the injury.

To build this database, the author submitted FOIA requests to each federal trustee and the Department of Justice. ¹⁰⁹ The author engaged in follow-up conversations with FOIA officers and attorneys within various agencies to negotiate the scope of each request, prompt production of the data, and update the request to incorporate new information provided by agency officials. ¹¹⁰ Agencies' responses to FOIA requests varied widely. The author obtained records from the Department of Justice, NOAA, and the National Park Service. ¹¹¹ The DOI did not maintain a record of settlement agreements when this project began, ¹¹² but sent the author comprehensive data as this Article was

109. See infra Appendix II (providing a sample FOIA request sent by the author). The author sent a FOIA request to each federal trustee except for NOAA, which provided the complete records voluntarily without a formal request. See infra Appendix I.

This project focuses on data held by federal trustees and the Department of Justice, which comprise two of several available repositories of data. Future research into settlements by state, tribal, and foreign governments may be used to verify the accuracy of this data.

EPA and the Coast Guard each act as an administrator of claims and provide restoration services. Public land managers report incidents to these agencies, which may maintain records that could be compared to settlements. McClain Interview, *supra* note 17 (describing the process of reporting spills through e-mail and telephone to EPA and the Coast Guard). Future research could also seek information from states, tribes, and foreign governments. Two practitioners have developed records of state activity. *See* ISRAEL, *supra* note 87; Al-Bahish et al., *supra* note 17. Such research would refine this dataset when the party being studied served as a co-trustee with federal agencies. Moreover, it would provide novel data about trustees other than federal agencies. As with federal trustees, there is no comprehensive data available about state settlements. Al-Bahish et al., *supra* note 17, at 1 ("Comprehensive, readily publically available data on these state-only NRD cases is sparse. (We were, in fact, unable to find a complete overview or listing of such cases.)").

Future research might also pursue data from the potentially responsible parties. This approach presents several logistical difficulties, given the variety and number of parties involved. One might select a distinct category of potentially responsible parties that are grouped in some fashion (like shipping companies that belong to protection and indemnity clubs) and seek the metadata. Alternatively, some companies are repeat players in the natural resource damages realm and therefore may be interested in longitudinal data about claims. Potentially responsible parties might prove unwilling to provide data, although some companies feature their restoration work as a public relations tool. Similarly, further research could focus on obtaining data from economic and scientific consultants who provide assessment, valuation, or restoration services arising from injury to natural resources.

- 110. The author corresponded via telephone and e-mail to clarify the scope of the request with the Forest Service, National Park Service, DOI, United States Geological Survey, and NOAA.
- 111. Several agencies have gone to considerable lengths to produce data for this project; without their cooperation, large swaths of data—such as settlements recorded in administrative orders instead of consent decrees—would not be included in this analysis. Several agency officials generously exceeded the FOIA responsiveness requirements to aid in this research.
- 112. Telephone Interview with John Rudolph, Attorney-Advisor, and John Carlucci, Assistant Solicitor, U.S. Dep't of the Interior, Office of the Solicitor, Branch of Envtl. Restoration (Nov. 19, 2015) (explaining that the DOI did not maintain a record of natural resource damages settlements); E-mail from Lance Purvis, FOIA Officer, Office of the Solicitor,

going to print. The Forest Service responded to the author's FOIA request with 660 pages of unsorted information; it does not appear to maintain a comprehensive spreadsheet or database of records.

The database presented in this Article does not include records from the Department of Defense or Department of Energy. The leading practice guide on natural resource damages indicates that neither agency has ever served as a trustee in a natural resource damages claim against another party, despite their statutory authority to do so. The author nonetheless submitted FOIA requests for records in an attempt to confirm this point. Department of Energy responded by providing a few records in which it was a responsible party, which falls outside the scope of this analysis. Despite repeated attempts, the author was unable to submit a FOIA request to the Department of Defense. The data of the Defense of Defense.

B. Settlement by Statute

This section overviews settlement by statute. The figure below provides an overview, followed by additional commentary on each statute. Dollar amounts reflect agency reporting, which is assumed to be in nominal dollars.

U.S. Dep't of the Interior, to author (Nov. 19, 2015) (on file with author) ("In response to your letter, the Office of the Solicitor searched its records and found no documents responsive to your request.").

^{113.} LEE & BRIDGEN, supra note 10, at 165-66.

^{114.} See Ravi Somaiya, A Wizard at Prying Government Secrets from the Government, N.Y. TIMES (July 19, 2015), https://perma.cc/TB6B-KGEJ ("[The FOIA request process] can seem as if Kafka and Orwell sat down together to plot a nightmare of bureaucratic complication The office of the secretary of defense [sic], a man who runs a department with an annual budget of more than \$500 billion, was reported, in 2013, not to be accepting FOIA requests because its fax machine was broken.").

FIGURE 3: SETTLEMENT TOTALS BY STATUTE¹¹⁵

Statute	Amount Settled by Federal Trustees ¹¹⁶
Comprehensive Environmental Response, Compensation, and Liability Act	\$1,175,781,232
Oil Pollution Act	\$8,244,177,167
Clean Water Act	\$954,337,458
National Marine Sanctuaries Act	\$24,191,375
Park System Resource Protection Act	\$20,958,244
Restoration of National Forest Lands and Improvements Act	Unreported ¹¹⁷
Total	\$10,419,445,476

1. Comprehensive Environmental Response, Compensation, and Liability Act

Federal trustees¹¹⁸ report settling \$1,175,781,232 in natural resource damages across 273 claims under CERCLA. NOAA furnished the most comprehensive list of CERCLA claims, and its largest CERCLA recoveries are reported in the figure below.

^{115.} Some settlements were filed under multiple statutes. In such cases, the author followed the statutory classification used by the agency in reporting the data. When Department of Justice and NOAA reported awards as arising under different statutes, the author deferred to the NOAA determination.

^{116.} Importantly, dollar figures are presented in the format presented by agencies, which is presumed to be nominal dollars. Calculating the real value of settlements would provide future researchers with the opportunity to compare settlement collection over time and improve the accuracy of aggregated data.

^{117.} The U.S. Forest Service appears to have settled some claims under its 16 U.S.C. § 579c authority. However, it provided a large number of unsorted documents in response to the author's request, and the data were not compiled in time for publication.

^{118.} This sum reflects NOAA and Department of Justice data, which the author combined, eliminating overlapping cases to avoid double-counting. See supra Part III.A.

FIGURE 4: NOAA'S TEN LARGEST CERCLA RECOVERIES

Case Name	Year Settled	Restoration Value ¹¹⁹
Blackbird Mine	1995	\$59,064,000
Grand Calumet / Indiana Harbor & Canal (Arco et al. (G9))	2004	\$56,353,000
Montrose / Southern California (4 settlements, different defendants)	2001	\$50,000,000
Boeing (Duwamish)	2010	\$40,000,000
Elliott Bay	1991	\$24,000,000
Kerr-McGee (Tronox Bankruptcy)	2015	\$22,000,000
Fox River / Green Bay (API / NCR Interim)	2001	\$20,000,000
New Bedford (FPE / CDE)	1992	\$19,670,192
Palmerton	2009	\$18,595,000
Aloca / Reynolds (St. Lawrence)	2013	\$18,484,081

Notably, like the numbers provided by agencies throughout this section, the figure uses nominal, not real dollars, and thus might not accurately depict the comparative value of claims.

2. Oil Pollution Act

Federal trustees have collected over \$8.2 billion in natural resource damages through eighty-six settlements under OPA. In the largest recoveries, companies have waived the statutory cap on natural resource damages. ¹²⁰ Such was the case with the *Deepwater Horizon* oil spill. ¹²¹ Exclusive of the unusually large *Deepwater Horizon* payment, the average settlement size was just over \$3 million and the overall settlement amount was roughly \$144 million.

^{119.} Dollar amounts are presumed to be nominal, not real. See supra note 116.

^{120.} For a discussion of the decision to waive the liability cap under OPA, see Allen, *supra* note 42, at 1042.

^{121.} See supra note 2.

FIGURE 5: NOAA'S TEN LARGEST OPA RECOVERIES

Case Name	Incident Date	Date Settled	Restoration Value ¹²²	Oil Spill Size (gallons)
Deepwater Horizon ¹²³	2010	2016	\$8,100,000,000	210,000,000
Exxon Valdez*	1989	1991	\$900,000,000	10,800,000
Cosco Busan	2007	2011	\$32,443,033	54,000
Athos I	2004	2010	\$27,495,751	265,000
North Cape	1996	2000	\$18,000,000	828,000
Exxon Bayway	1991	1991	\$14,021,833	567,000
Barge Morris J. Berman	1994	2000	\$10,000,000	578,750
Bouchard / Buzzards Bay	2003	2011	\$6,076,393	98,000
Cape Flattery	2005	2013	\$5,881,180	Unknown
Apex Houston	1986	1994	\$5,416,430	25,800

^{*}This was not an OPA award, but OPA was passed as a result of the *Exxon Valdez* spill so this award should be commensurate with later OPA recoveries. For more details about the *Exxon Valdez*, see Part III.B.3.

3. Clean Water Act

The United States has collected over \$950 million across thirty claims settled under the CWA. The largest claim was the \$900 million settlement for the Exxon Valdez oil spill. Exclusive of the unusually large Exxon Valdez payment, the average settlement size for natural resource damages under the CWA is roughly \$2.2 million and the total is approximately \$50 million.

4. National Marine Sanctuaries Act

The total recovery under the NMSA is over \$24 million across seventy-six settled claims. The average claim size is approximately \$320,000. Seventeen claims were settled for less than \$10,000. Eight claims were settled for over \$1 million. NOAA, situated within the Department of Commerce, is the primary trustee for natural resource damages arising under the NMSA. NOAA maintains a robust program for assessing and restoring natural resource damages, although far more funds are generated through CERCLA and OPA recovery, as outlined above. The Department of Justice also provided data under the NMSA, adding approximately \$11 million and thirteen cases to NOAA's estimated recovery figures. Neither NOAA nor the Department of Justice reported any NMSA damages collected in the seven-year period from 2009 to 2015.

^{122.} Dollar amounts are presumed to be nominal, not real. See supra note 116.

^{123.} See supra note 2.

5. Park System Resource Protection Act

The National Park Service has collected \$21,036,311 in damages under the PSRPA.¹²⁴ The available records reflect a total of 302 cases with recorded dates between 1999 and 2014.

Within the DOI, the National Park Service maintains a detailed case log of PSRPA cases. As PSRPA is a little-known and rarely studied natural resource damages provision, ¹²⁵ the information is detailed below.

Case Outcome	Number of Cases	Total Damages ¹²⁶
Settled	259	\$20,958,244*
Litigated	5*	\$78,067
Dropped / Barred	30	N/A

FIGURE 6: PSRPA CASES

Overall, 259 cases were settled. The data do not include the dollar value of the settlement for forty-six of the settled cases. Among the 213 cases with reported settlement values, the settlements ranged from just \$145 to \$9 million, with an average settlement of \$98,396. Five cases were litigated, with recovery values ranging between \$815 and \$43,506. The data do not include the settlement value for fifty-four of the settled figures. Thirty-one cases were dropped or closed because the statute of limitations passed, the Park Service was unresponsive, or the Department of Justice refused to pursue the claim.

PSRPA permits the Park Service to collect damages for injury to natural and cultural resources, along with park facilities. ¹²⁷ Natural resource damages comprise the most cases and the largest dollar value in settlement. There are relatively few cultural claims, but their average value is still higher than the more frequent facility cases.

Natural resource claims comprised 165 cases and the largest source of damages at over \$17 million. These included injuries like "vessel grounding," "campfire out of control," "[heli]copter on lake bottom," and "forest cut." Cul-

^{*} One of the five cases is unclear—it is reported as both litigated and settled. It is reported here as litigated, as that is the entry in the "Resolution" category.

^{124.} Dollar amounts are presumed to be nominal, not real. See supra note 116.

^{125. 54} U.S.C. §§ 100721–100725 (2014). The case log provided by the National Park Service includes other causes of action, like Clean Air Act violations and criminal cases. The analysis in this Article is limited to PSRPA.

^{126.} See supra Part I.B.

^{127.} Dollar amounts are presumed to be nominal, not real. See supra note 116.

tural resource claims comprised twenty-six cases settled for a total of over \$1 million. Cultural resource injuries included "graffiti on petroglyphs" and several instances of "repair historic rock wall" after "car crash" or "accident." Park facility cases included ninety cases for over \$876,000. Facility injuries included "sign destroyed" and "vehicle knocked over light pole." Nineteen cases included injury to two or more resources and produced \$675,977 in claims. Two settlements did not report the resources injured.

6. Restoration of National Forest Lands and Improvements Act

The Forest Service did not furnish collated data about collection of natural resource damages under the Restoration of National Forest Lands and Improvements Act. Although this Article focuses on FOIA-generated research, the author encountered other sources of information suggesting that the Forest Service has conducted numerous natural resource damages assessments related to wildfire. For example, a casual internet search of newspaper articles and press releases indicates that the Agency has collected over \$289 million in natural resource damages funds for wildfire damage in the past five years. This is a subject worthy of future research.

C. Caution Against Comparing Administration of Claims

This section cautions against some forms of analysis of the data presented above by comparing administration of natural resource damages across trustees or statutes. It explains that features endogenous to various kinds of claims make apples-to-apples comparisons difficult; each claim is tied to a specific injury type, trustee, and potentially responsible party. Comparing claims requires isolating each of these variables and controlling for it—a complicated task.

1. Injury Types and Trustees

Various statutes provide for damages arising from different kinds of injuries. ¹²⁹ Some injuries simply tend to be larger than others. For example, oil spills covered by OPA are more significant than park facility resource injuries, such as signs being shot—under PSRPA. Naturally, the size of injury influences the settlement process and outcome. Procedurally, the assessment process for some-

^{128. 54} U.S.C. § 100723.

^{129.} See Dave Owen, The Biggest Natural Resource Damages Case You've Never Heard Of, ENVIL. LAW PROF BLOG (Aug. 2, 2012), https://perma.cc/V7TL-EAFX (settlement for \$55 million in damages and \$122.5 million in land); Courtney Lowery, Forest Service Wins \$10 Million for "Natural Resource" Damage from Wildfire, New West (July 29, 2009), https://perma.cc/PDT9-LRRG; Union Pacific Agrees to \$102M Storrie Fire Settlement, SACRAMENTO Bus. J. (July 22, 2008), https://perma.cc/QRE4-7W8Q.

thing like a damaged park sign is simple and subject to limited discretion. In contrast, assessing the injury caused by a major oil spill can take years and depend on many subjective judgment calls.

Accordingly, one might expect the estimated damage ranges to be lower for more straightforward injuries and these settlement amounts to more closely resemble the damage amounts. Similarly, the dollar value of awards arising from OPA might be greater, on average, than those arising under PSRPA. For these reasons, one cannot simply look to settlement data to see which agencies are performing their statutory duty as trustees. Even trustees collecting many large claims may be underperforming relative to their potential recoveries.

2. Potentially Responsible Parties

Settlement processes—and outcomes—are affected by the potentially responsible parties. Variations include: the number, size, and financial resources of potentially responsible parties; their corporate structures; and whether any potentially responsible party is a government agency.

Multiple potentially responsible parties—ranging from an individual ship captain to a multinational corporation—can be named for a single injury. The number of potentially responsible parties varies widely by claim type. In CER-CLA cases there are typically dozens; for OPA there may be a handful, and under PSRPA there may only be an individual person.

The settlement process varies based upon the defendants and their incentives. Smaller potentially responsible parties may be judgment-proof, particularly against large awards. Trustees assess ability to pay when deciding damages; if a party has shallow pockets, the trustee may not pursue an elaborate assessment process.¹³⁰

Domestic companies tend to care about the press and the ability to report on restoration work, whereas foreign companies reportedly do not.¹³¹ Similarly, companies that are not publicly traded typically derive virtually no value from the public relations benefits that publicly traded companies get and have a different set of incentives for negotiating a settlement.¹³² This is true, for example,

^{130.} For a discussion of the statutory regimes, see supra Part II.A.

^{131.} E-mail from Kerry Smith, Emeritus Regents' Professor and Emeritus Univ. Professor of Econ., Dep't of Econ., W.P. Carey Sch. of Bus., Ariz. State Univ., to author (May 20, 2014) (on file with author) ("I believe trustees only invest assessment resources when the [potentially responsible party] is large. Otherwise they use simple benefit transfer methods and very limited analysis—so it is possible that components of a larger injury would be treated differently for small [potentially responsible parties] than large—due to investment of resources to perform the assessment.").

^{132.} Barash Interview, supra note 10.

with the protection and indemnity clubs—an insurance system of ship owners, such as West of England and Guard of Norway.¹³³

An interesting variation occurs when government agencies cause the injury giving rise to natural resource damages. For example, the Department of Energy and Department of Defense have both been potentially responsible parties for natural resource damages claims.¹³⁴

The same federal agency may sometimes be both a trustee (assessing damages) and also a potentially responsible party (paying damages for harm it caused on different matters). This raises contentious relationships between the agency that is a potentially responsible party and other agencies that did not cause the harm but are equally responsible for recovery. Generally, a key to agency negotiating power is the threat of bringing the case to trial. Federal agencies typically cannot sue other federal agencies; some agency officials believe that such suits are often prohibited by the doctrine of the unitary executive and contrary to the interest of the President. 135 Similarly, one bureau within an agency often cannot sue another bureau within the same agency because they share the same solicitor. This substantially reduces the negotiating power of agencies seeking to recover on behalf of the public interest for lost natural resources. Moreover, agencies acting as co-trustees have shared access to information about assessments, whereas potentially responsible parties do not. Consequently, agencies that are potentially responsible parties have full access to the case being made against them and a vote in deciding what methods should be used.

IV. EVALUATING SETTLEMENTS

Over \$10.4 billion have been generated in natural resource damages settlements. Is that enough to make the public whole again for decades of environmental injury? Deciding among competing claims of "success" is a difficult task,

^{133.} Cf. Lee & Bridgen, supra note 11, at 414 (noting that potentially responsible parties involved in cooperative assessments have increased certainty in the costs of assessment, "a plus for business executives, especially in companies with stock that is publicly traded"). Factors that encourage potentially responsible parties to cooperate include: (1) obtaining insight into trustee assessment; (2) influencing trustee assessment; (3) reducing net transaction costs; and (4) reaching settlement faster to get the matter off their books. Mark Barash, Senior Attorney, Office of the Solicitor, U.S. Dep't of the Interior, Panel at ELI Associates Seminar: Natural Resource Damage Assessments (May 30, 2013), https://perma.cc/83WF-JAQT. For a discussion of the Deepwater Horizon oil spill, see Samuel Issacharoff & D. Theodore Rave, The BP Oil Spill Settlement and the Paradox of Public Litigation, 74 La. L. Rev. 397 (2014).

^{134.} Barash Interview, supra note 10.

^{135.} For example, a 2001 Government Accountability Report contemplated the natural resource damages arising from Department of Energy nuclear testing. For a discussion of the Department of Energy acting as a trustee, see GAO, DOE, *supra* note 15.

given the fuzziness of that metric. The \$8.1 billion *Deepwater Horizon* consent decree underscores the disparity between the previous twenty-five years' settlements and the potential value of natural resource damages. Evaluating success also depends upon on an unknown figure: the amount of harm that actually occurred—not only the harm agencies successfully detected and assessed, and for which they negotiated payment. Establishing an appropriate denominator of harm against which to measure the damages collected is a daunting task.

This Part flags the open empirical and normative questions of whether natural resource damages are working. It identifies four lines of what "success" might mean in this context: (1) satisfying congressional intent; (2) obtaining sufficient financial compensation; (3) restoring damaged resources; and (4) incentivizing potentially responsible parties to take appropriate precautions to avoid future harms. This Part concludes by briefly sketching out two broader issues implicated in this work: the expanded use of statutory tort remedies as a tool in environmental law, and the inter- and intra-agency dynamics underlying administration of the remedy.

A. Satisfaction of Legislative Intent

Do natural resource damages satisfy legislative intent? This inquiry begins with identifying what, precisely, Congress originally intended. The history of the OPA natural resource damages provision is closely tied to the *Exxon Valdez* oil spill. Beyond that dramatic backdrop, relatively little had been written about its legislative history. A handful of scholars have considered portions of the legislative history surrounding OPA, CERCLA, and the CWA. The same questions as applied to the NMSA, the PSRPA, and the statutory authority on which the Forest Service rests its claims is, as yet, unstudied. Thus, establishing Congress's intent in passing these statutes is a necessary first task in this line of analysis.

A thorough look into legislative history would also consider the legislative engagement with the various statutes after enactment. Such review would consider the trend in the 1990s of companies attempting to dismantle natural resource damages statutes through legislative action limiting liability. After

^{136.} The doctrine of the unitary executive holds that the President controls the entire executive branch. The Executive Vesting Clause of the Constitution provides, "The executive Power [of the United States] shall be vested in a President of the United States of America." U.S. Const. art. II, § 1, cl. 1. Although there is a debate about the strength of the unitary executive doctrine, the existence of the concept is well recognized. See, e.g., Lawrence Lessig & Cass R. Sunstein, The President and the Administration, 94 Colum. L. Rev. 1, 8 (1994) ("No one denies that in some sense the framers created a unitary executive.").

^{137.} See Russell Randle, The Oil Pollution Act of 1990: Its Provisions, Intent, and Effects, 21 Envil. L. Rep. 10119, 10119 (1991).

^{138.} See, e.g., Craig H. Allen, Proving Natural Resource Damage Under OPA 90: Out with the Rebuttable Presumption, in with APA-Style Judicial Review?, 85 Tul. L. Rev. 1039 (2011);

Deepwater Horizon, Congress exhibited a renewed interest in natural resource damages, requesting reports on the topic¹³⁹ and hearings from agency trustees.¹⁴⁰

B. Sufficiency of Monetary Damages

Are the damages paid sufficient to make the natural resources and the public whole again? Calculating the damages relative to injury requires unknown information about the injury—a denominator which cannot be calculated based upon publicly available information.

Agencies refuse to release the assessed values of harms, claiming that they are legally privileged. Accordingly, judges, commentators, and the public cannot compare settlement amounts with asssessed injuries. The few data points in which harm assessments were accidently released suggest reason for concern that settlements may be pennies on the dollar. For example, in April 2015, public outcry followed an announcement that New Jersey proposed settling an \$8.9 billion natural resource damages claim against Exxon Mobil for just \$225 million. Set 1225 million.

Even if injury data were available, they would be difficult to assess because injury valuation techniques are negotiated on a case-by-case basis, and small differences in technique can yield tremendous differences in valuation. Valuing trust resources is fraught with methodological and definitional choices that produce dramatically different valuations of monetary damages. Similarly, two federal agencies tasked with estimating the Department of Energy's liability in a natural resource damages claim arising from nuclear waste came up with dramatically different figures: \$159–611 million versus \$2.3–20.5 billion. More-

Knudsen, Long Term Tort, supra note 44, at 503–506; J. Terence Ryan, The Evolution of Natural Resource Damage Assessments Under the Oil Pollution Act and the Comprehensive Environmental Response, Compensation, and Liability Act, 6 FORDHAM ENVIL. L. Rev. 29 (2011).

- 139. Boyd, *supra* note 7 (describing congressional testimony in the mid 1990s as illustrating companies attempting to persuade Congress to limit the reach of the statutes).
- 140. U.S. Gov't Accountability Office, GAO-12-86, *Deepwater Horizon* Oil Spill: Actions Needed to Reduce Evolving but Uncertain Federal Financial Risks (2011).
- 141. Dohner Testimony, supra note 10.
- 142. It is an open legal question whether concealing natural resource injury assessments from the public post-settlement is allowable as a matter of procedural fairness under trust law.
- 143. Benjamin Weiser, New Criticism After New Jersey Posts Text of Exxon Settlement, N.Y. TIMES (Apr. 7, 2015), https://perma.cc/RPN4-B6VG.
- 144. Israel Interview, *supra* note 17 (describing large variations in damage valuations depending upon methodology used, from the perspective of a natural resource damage practitioner representing potentially responsible party); *see also* Raymond J. Kopp & V. Kerry Smith, *Benefit Estimation Goes to Court: The Case of Natural Resource Damage Assessments*, 8 J. POL'Y ANALYSIS & MGMT. 593 (1989) (discussing disparities between natural resource damages assessments produced by methodological differences).

over, there is no generally accepted ratio of injury to settlement across legal fields with which to compare natural resource damages.

Further, measuring the denominator of harm has several complicating factors. An unknowable number of injuries elude settlement because they are lost in the process of detection, reporting, and record-keeping. Within any single injury, the harm may also be underestimated because the baseline condition of the resource prior to injury must be retroactively determined, a scientifically uncertain task. Conversely, potentially responsible parties often perceive that harms are overestimated; these parties may invest in documenting baseline conditions prior to beginning operations to provide a legal defense in case of a spill. 146

C. Completeness of Ecological Restoration

Do natural resource damages claims achieve the ecological goal of restoring damaged resources? This inquiry requires research focused on restoration—the process of planning, implementation, and completion. Restoration as it operates in practice is almost entirely unstudied. Agencies produce damage assessment and restoration reports which are publicly available.

Also embedded in this question is the unknown collection rate of damages, another unstudied issue. A few preliminary data points suggest, however, that restoration might fall short of ecological goals. The DOI maintains over \$600 million in yet-unspent natural resource damages funds, 147 including an estimated \$100 million in funds from the *Exxon Valdez* spill which occurred over thirty years ago. 148 Failing to deploy the funds means that on-the-ground restoration may not be happening to the extent imagined by statute.

Restoration projects also appear to be subject to popular will that may not align with statutory definitions of natural resources. A 2005 report noted that restoration plans that included "proposals to build community centers, parking lots, education facilities, or aquariums have attracted strong support from local community members or trustees." Responsible parties that undertake in-kind restoration projects may fail to complete projects. Restoration funds may fall short, too, for the necessary projects. Although some settlements contain provi-

^{145.} GAO, DOE, supra note 15, at 2.

^{146.} See Allen, supra note 42, at 1054 ("[The baseline condition requirement] imposes a Catch-22: to be able to determine whether an injury occurred, the trustee needs baseline data for comparison. By definition, such data must be obtained before the oil impacts the resource.").

^{147.} Cf. Stewart, Beyond Tort, supra note 34, at 230 (noting that agencies are incentivized to increase the claimed injury as a negotiating tactic).

^{148.} DOI, NRDAR, *supra* note 14, at 25 (estimating settlement funds held in the DOI restoration fund at \$496 million and funds held in various court registry accounts at \$100 million in 2015, and \$580 million and \$100 million, respectively, in 2016).

^{149.} McClain Interview, supra note 17.

sions for increased damages if future injury is found, anecdotal evidence suggests that these are difficult to enforce.

D. Deterrence of Future Injury

Do natural resource damages prompt actors to take appropriate precautions to prevent and limit environmental injury? As with any tort regime, one would suspect that the fear of being forced to internalize the externality of an environmental injury would cause actors to alter their behavior. For example, oil companies might pay for safety measures to avoid oil spills. Ship captains might undertake additional precautions to avoid groundings.

Insurers, too, may play a role in precautions. The role of insurers in natural resource damage claims is also largely unstudied. Practitioners provide contradictory reports, with some claiming that almost all potentially responsible parties are self-insured, and others suggesting that insurers often manage damages claims on behalf of responsible parties. These differing reports likely reflect practitioners' experiences with different kinds of injuries and different kinds of trustees. The role of insurers might suggest, however, their potential to act as regulators prompting precautions. 151

The deterrence effect of natural resource damages likely depends heavily on both the actor and the average size of damages awards. Major corporations who are repeat players in natural resource damages cases under CERCLA, for example, are more likely to undertake precautions as a result of the statutes than a motorist driving through a national park who does not know that crashing a car into a rock wall will incur a natural resource damages penalty.¹⁵²

This analysis also depends on the statute type. CERCLA damages are often based on decades-old injuries, and may be "legacy" sites inherited by the potentially responsible party in mergers and acquisitions. Oil pollution damages, in contrast, are often internalized by the same company that caused the damages.

^{150.} Fed. Advisory Comm. of the Dep't of the Interior, Natural Resource Damage Assessment and Restoration Federal Advisory Committee Final Report 14 (2007), https://perma.cc/W4TT-MTZA.

^{151.} But see Boyd, supra note 7; Keith S. Brais, Brais & Assocs., P.A., & Captain Ed Wilmot, Great Am. Ins. Co., Natural Resource Damages: Plowing Your Way into Environmental Liabilities in South Florida, Presentation at Fort Lauderdale Mariner's Club 18th Annual Seminar (Oct. 25, 2006), https://perma.cc/7695-P6VS (discussing how yachting insurance companies have responded to natural resource damages claims in Florida).

^{152.} See Omri Ben-Shahar & Kyle D. Logue, Outsourcing Regulation: How Insurance Reduces Moral Hazard, 111 Mich. L. Rev. 197 (2012).

E. Broader Questions

Natural resource damages relate to several larger themes in environmental and administrative law. Two natural extensions of this research are briefly considered below.

First, this Article demonstrates that there is a relatively widespread—and growing—use of statutory tort remedies to repay the public for damage to natural resources. This trend prompts the question of whether statutory tort remedies should be extended to other environmental problems (which, in turn, implicates the question of whether the current remedy works in practice, the metrics of which are addressed above). Emerging environmental problems beg for legal innovation, and the potential surrounding further use of tort remedies is worthy of consideration. Naturally, the suitability of this tool depends largely upon its regulatory targets, the protected resources, and the capacity of resource administrators.

Second, the recent wave of administrative law scholarship on inter- and intra-agency collaborations¹⁵³ suggests theoretical interest in the ways that agencies pool resources to accomplish shared objectives. The data in this Article provide a novel source of twenty-five years' worth of information about collaborative assessment processes used by agencies, states, tribes, and potentially responsible parties. Drawing upon this information—and additional institutional detail regarding the collaborations themselves—may provide insights into how collaborations function mechanically and serve as a mechanism for assessing their outcomes.

Conclusion

Natural resource damages are an underappreciated area of law long obscured by a high settlement rate, in which large payments can directly influence on-the-ground environmental quality and may deter environmental injury. This Article overviews the legal framework of natural resource damages statutes and their administration, presents data about their consent decrees, and provides an overview of the mechanics of these settlement processes. It flags but does not seek to answer several open legal, scientific, and economic questions regarding this remedy. It also leaves unresolved the broader question of whether

^{153.} Of course, the motorists have other concerns, such as fear of bodily injury, that incentivize precautions. Furthermore, income effects may mitigate the difference between a \$10 million damages award paid by a company and a \$10,000 fine paid by a motorist.

^{154.} Jody Freeman & Jim Rossi, Agency Coordination in Shared Regulatory Space, 125 Harv. L. Rev. 1131 (2012); Daphna Renan, Pooling Powers, 115 Colum. L. Rev. 211 (2015); Bijal Shah, Uncovering Coordinated Interagency Adjudication, 128 Harv. L. Rev. 805 (2015); Catherine M. Sharkey, Agency Coordination in Consumer Protection, 2013 U. Chi. Legal F. 329 (2013).

natural resource damage settlements are working, although it does outline the dimensions under which that analysis might occur. Overall, this Article lays the groundwork for much-needed future research and policy recommendations surrounding record-keeping practices, assessment methods, and restoration projects for natural resource damages.

APPENDIX I: CREATING THE DATABASE

I constructed the database underlying this project using data collected from responses to FOIA requests, which were sent to each federal trustee. I combined the various sources of data into a single database, which included transferring data from agencies' proprietary formats into Microsoft Excel. ¹⁵⁵ I consolidated the same consent decrees reported by multiple agencies in statutory summaries to avoid double-counting. I reviewed consent decrees to input settlement details when agencies reported case names but not settlement amounts.

Data Sources

NOAA and the Department of Justice provided seemingly comprehensive and well-maintained databases that formed the basis for CERCLA, OPA, and NMSA awards.

At the time this project began, the DOI did not maintain records of natural resource damages settlements.¹⁵⁶ Further, restoration figures exclude assessment fees and portions of the award paid to other trustees or the Department of Justice and therefore cannot be used to compare settlements with the other data presented in this Article. In April 2016, shortly before this Article went to press, the DOI provided me with comprehensive settlement data and announced the release of the impressive, publicly available Damage Assessment and Restoration Tracking System.¹⁵⁷ The timing rendered it impossible for me to incorporate these DOI data into this Article, but the database will provide a useful source of information and comparison in future work. The Park Service—located within the DOI—provided excellent, comprehensive data in response to the FOIA request for PSRPA data in time for inclusion in this Article.

The Forest Service is the primary trustee within the Department of Agriculture. In an interview with me, an attorney with the Office of General Counsel for the Department of Agriculture indicated that the Agency recovers natural resource damages for wildfires. The Forest Service does not maintain national data in a centralized database, nor does the Office of General Counsel

^{155.} Natural resource recovery comprises one of several so-called "hidden remedies" within environmental and natural resource law—an enormous, growing, and largely unexplored area. See generally Courtney R. McVean & Justin R. Pidot, Environmental Settlements and Administrative Law, 39 HARV. ENVIL. L. REV. 191 (2015).

^{156.} The author is indebted to Kerry Smith for converting Department of Justice data from the proprietary software provided by Department of Justice to Excel. An early case-by-case transcription of National Park Service data from a website into Excel was later rendered obsolete by the eventual provision of a case log by the National Park Service.

^{157.} See E-mail from Lance Purvis to author, supra note 112.

under the Department of Agriculture keep a centralized list of natural resource damages recovery actions. To the extent that they exist, data on natural resource damages recovery by the Forest Service are maintained in nine regional offices. In response to the FOIA request, the Forest Service furnished 660 pages of unsorted documents. The records reflected various consent decrees and administrative orders on consent in which the Forest Service acted as a trustee. There did not appear to be a comprehensive list of settlements.

The Department of Energy appears to have never pursued a natural resource damages claim as a trustee. ¹⁵⁸ In response to my FOIA request, the Department of Energy provided 111 pages of records. Among these records were various court filings and reports related to claims under CERCLA brought by state and tribal governments in which the Department of Energy was a potentially responsible party. The documents did not include an instance in which the Department of Energy was acting as a trustee in bringing a claim.

This Article does not report data about Department of Defense natural resource damages claims because I was unable to successfully submit a FOIA request to the Department of Defense. Secondary sources suggest that the Department of Defense has never pursued a natural resource damages claim as a trustee, but may have been a potentially responsible party in claims brought by state and tribal governments.¹⁵⁹

Constructing the Database

Below, I overview some of the inconsistencies in the data, and resulting decisions that were necessary in constructing the database. These comments are necessary for other scholars to be able to assess the accuracy and integrity of the database. They should not be construed as criticisms of the agencies. On the contrary, the effort of agency employees who kept records of settlements over the course of decades, despite funding and time constraints, is commendable.

The data were sometimes inconsistent, both within a single agency's records and between two agencies that independently reported the same case. For example, the Department of Justice settlement figures only sometimes include assessment amounts. This is significant, as assessment amounts are occasionally greater than restoration payments, especially when the potentially responsible party undertakes restoration work. These differences are likely caused by different employees or private contractors maintaining the record throughout the thirty-five year history.¹⁶⁰

^{158.} E-mail from John Carlucci, Assistant Solicitor, U.S. Dep't of the Interior, to author (Apr. 19, 2016) (on file with author).

^{159.} See LEE & BRIDGEN, supra note 10, at 165.

^{160.} Id. at 166.

Also, the settlement figures reported by NOAA and the Department of Justice on the same consent decree were frequently different. To gain insight into these differences, I reviewed each consent decree listed by NOAA and created a database differentiating various aspects of the settlement into assessment, restoration, and non-pecuniary restoration efforts that nevertheless are assigned a dollar value. Distinguishing various aspects of the settlement explains some inconsistencies; for example, the Department of Justice figures on settlement only sometimes include assessment amounts. In many cases of relatively negligible differences in reporting, it is possible that the NOAA figure reflects the settlement received after the Department of Justice took its fee for representing the agency.

Sometimes, the monetary value of the settlements was reported differently by the same consent decrees for different agencies. In such cases, I located the original consent decree, when possible, and entered the sum paid for assessment and restoration of natural resource damages, plus any dollar value ascribed in the consent decree to the non-pecuniary restoration undertaken by the responsible party. If the consent decree was unavailable, then I used the Department of Justice figures reported. I often observed that agencies did not include components of settlement (such as assessment), but I did not record an instance—across review of hundreds of consent decrees—in which an agency overstated the settlement amount.

APPENDIX II: SAMPLE FOIA REQUEST

KAREN BRADSHAW Associate Professor of Law (xxx)xxx-xxxx XXXX@asu.edu

July 14, 2015

Records Access Officer, National Park Service 12201 Sunset Valley Drive WASO-IR Room 2C404C, Mail Stop 242 Reston, VA 20192

Re: Freedom of Information Act Request

Dear FOIA Officer:

Pursuant to the Freedom of Information Act, I request access to and copies of all documents, including those that exist electronically, in possession of National Park Service or its agents, that were created on or after 1990, and pertain in whole or in part to the subject listed below.

The subject matter of this request is all documents pertaining to natural resource damages arising under the Park System Resource Protection Act (PSRPA), 16 U.S.C. § 19jj. I specifically request: each annual report to the Director of recovery and actions under PSRPA, damage assessment handbook, a summary of recovery funds, responsible party funding arrangements; injury assessments; demand letters and subsequent correspondence with responsible parties; consent decrees, settlements, and litigation positions; restoration determination, planning, and implementation; and guidance and technical assistance provided by the Environmental Quality Division/Environmental Response, Damage Assessment, and Restoration branch.

Additionally, I request a list of natural resource damages cases arising under the Oil Pollution Act or Comprehensive Environmental Response, Compensation, and Liability Act for which a formal administrative record exists.

I agree to pay reasonable duplication fees for the processing of this request in an amount not to exceed \$250. If you estimate that the fees will exceed this limit, please inform me. Please inform me of the procedures for administrative appeal. If my request is denied in whole or in part, I ask that you justify all deletion by reference to the specific exemptions of the Act, and that you provide any reasonably severable portions of the documents. I reserve the right to appeal your decision to withhold any information. If you have any questions about this request, please contact me by telephone, at (xxx)xxx-xxxx. Thank you for your assistance.

Sincerely, /s/ Karen Bradshaw