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The End Externalities Manifesto: Restatement, Loose Ends, and Unfinished Business

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ARTICLE

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INTRODUCTION

Don Elliott and Dan Esty were among the chief architects of Environmental Law 2.0—the shift that infused so-called command-and-control regulatory regimes with market-based tools in search of cost-effective solutions. The mix of incentives, trading, banking, reporting,

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bubbles, and other techniques revolutionized the way we think about how to attack environmental problems like pollution and habitat loss.[1]

In their *End Environmental Externalities Manifesto* ("*Manifesto*") they are at it again.[2] This time, however, their proposed revolution goes in a different direction. They argue that the guiding light of economic efficiency, which took environmental law far in improving environmental conditions, is not up to the task of finishing the job. In their view, the efficiency quest took a wrong turn in the 1980s, when benefit-cost analysis using the Kaldor-Hicks net social benefit standard became a dominant decision-making tool for pollution regulation.[3] The result was that we became comfortable with what could be called efficient pollution—we allow emissions if the cost of reducing them exceeds the value of the social benefits reducing them would produce. But those "residual emissions" aren't harmless. They are negative environmental externalities that injure people and degrade ecosystems.

The central thesis of *Manifesto* is that finishing the job of environmental law means ending these environmental externalities, and that an efficiency-based approach based on net social benefits won't get us there. Rather, to end all externalities will requiring incorporating an environmental rights model aimed at providing compensation to those harmed by residual emissions. *Manifesto* argues that this would fulfill the "polluter pays" principle, an idea touted as a bedrock of American environmental law, but which is often suspended under net social benefits analysis.[4]

My hunch is that there will be objections to *Manifesto*'s critique of benefit-cost analysis as it has played out in environmental law. For one thing, taking environmental law broadly, strict adherence to benefit-cost analysis does not play a large role outside of pollution control regulation. Nor does *Manifesto* abandon benefit-cost analysis by any means. Elliott and Esty acknowledge its value for measuring economic efficiency and in guiding some regulatory decisions. But maximizing economic efficiency, they argue, is not the right way to frame environmental law for ending all externalities, *if* that is our social goal.

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1. *See*, *e.g.*, THINKING ECOLOGICALLY: THE NEXT GENERATION OF ENVIRONMENTAL POLICY (Marian R. Chertow & Daniel C Esty eds., 1997); E. Donald Elliott et al., *Providing Economic Incentives in Environmental Regulation*, 8 YALE J. ON REG. 463, 466 (1991).

2. E. Donald Elliott & Daniel C. Esty, *The End Environmental Externalities Manifesto: A Rights-Based Foundation for Environmental Law*, 29 N.Y.U. ENV'T L.J. 505, 507 (2021).

3. *Id.* at 515–17.

4. *Id.* at 517.

I will leave the debate over social goals and economic efficiency to others.[5] There's plenty else in *Manifesto* to talk about! I am more interested in exploring what Elliott and Esty propose to do, and not do, with their new turn in environmental law and where it may lead. Part I of this essay synthesizes a restatement of the end all externalities principle to pin down its scope, mechanisms, and justifications. Part II deals with some of the significant loose ends *Manifesto* leaves dangling—details too large to be left for later. Part III identifies unfinished business in fulfilling *Manifesto*'s stated goal of ending *all* environmental externalities and "to reframe environmental law and policy on an intellectual foundation of environmental rights rather than economic efficiency."[6]

I. Restatement: What Is the Manifesto?

In the opening paragraphs of *Manifesto*, Elliott and Esty describe their principle as, "an added requirement that emitters pay compensation for any residual emissions that remain after technologically feasible pollution controls have been implemented."[7] Many elaborations follow here and there throughout the text and footnotes. Here I distill the proposal to its key features, describing some of the important add-ons and caveats, to pull together the working parts and justifications in concise form.[8] Parts II and III build off this descriptive baseline. Where needed for a complete assessment of their proposal, I incorporate their additional work in this volume, *Environmental Law for the 21st Century*, where appropriate in Parts II and III.[9]

A. Proposal

Manifesto drills down on pollution emissions "as the quintessential negative externality"[10] when it "expose[s] other people or ecological resources used by people to harm or the risk of harm."[11] Elliott and Esty

5. *See*, *e.g.*, SHI-LING HSU, CAPITALISM AND THE ENVIRONMENT: A PROPOSAL TO SAVE THE PLANET (2021).

6. Elliott & Esty, *supra* note 2, at 507.

7. *Id.*

8. *Id*. at 534–35 (summarizing, to an extent, "governing principles" highlighted throughout the Article).

9. E. Donald Elliott & Daniel C. Esty, *Environmental Law for the 21st Century*, 40 PACE ENV'T L. REV. 454 (2023) [hereinafter *Environmental Law for the 21st Century*].

10. Elliott & Esty, *supra* note 2, at 508 n.7.

11. *Id.* at 508.

acknowledge other types of externalities, such as "consumption of shared non-renewable resources" in private ownership (e.g., pumping from a no-recharge groundwater aquifer) and from publicly owned lands (e.g., timber harvesting in a national forest), but put them outside the scope of their *Manifesto*.[12] They also recognize that some actions, such as clear-cutting a rainforest, terminate *positive* externalities (e.g., carbon sequestration),[13] but frame that as a problem of the beneficiaries of the positive effects failing to compensate the resource owner (more on this below).[14] Externalities that harm only nature also are not within the scope of their proposal.[15] The bottom line: in its present formulation *Manifesto*'s proposal is aimed only at ending negative externalities from pollution that harm people or ecological resources people use.

Manifesto's focused end-externalities principle "seeks to make zero harmful [pollution] emissions the presumptive goal of environmental law . . . ."[16] But, *Manifesto* recognizes that reducing all pollution emissions to zero is not a desirable social goal for some activities providing significant benefits, such as flying airplanes.[17] Rather than using a new social benefits analysis to define these lines, however, Elliott and Esty adopt a *technologically feasible* standard.[18] Environmental law is brimming with those, but theirs is different—they define feasibility not based simply on the familiar "best available" standard, but rather based on "what might be possible with an assiduous commitment to innovation."[19] Residual emissions requiring harm compensation, therefore, would be the existing emissions that would be eliminated by applying this supercharged feasibility standard. By implication, residual pollution that is beyond the reach of this form of technological feasibility is not subject to the compensation principle, but as innovation progresses the line would keep marching towards zero emissions, and the compensation duty would follow it. Elliott and Esty argue that this approach will spur technology innovation by deterring polluters from simply paying harm charges and not investing in expensive technology.

12. *Id*.
13. *Id.* at 508–09.
14. *See* discussion *infra* Part III.B (discussing these other types of externalities further).
15. Elliott & Esty, *supra* note 2, at 508 n.5.
16. *Id*. at 509.
17. *Id.*
18. *Id.* at 509–10.
19. *Id.*

Next, *Manifesto* imposes an obligation to pay "full compensation" for the harms caused by residual emissions.[20] Elliott and Esty define full compensation as, "a generous payment that is intended to be sufficient to eliminate the temptation for polluters to pay harm charges rather than reduce or eliminate pollution."[21] Presumably this could mean more than compensating for actual damages, which Elliott and Esty set as the minimum harm charge,[22] but *Manifesto* leaves how "harm charges would be set and assessed for another day."[23] Elliott and Esty also outline who will be compensated. If specific victims can be identified, they are entitled to "actual payments."[24] If they cannot be identified or it is not practical to do so, compensation could be paid to their communities, including by "supplemental environmental projects."[25] Also, for current activities that may harm future generations, Elliott and Esty propose payments into a trust fund to be used to respond to the problem in the future.[26]

The final component of the *Manifesto* principle deals with uncertainty and risk when significant emissions are occurring but it is not yet clear whether they are harmful, which would be especially the case for new chemicals. Polluters would be required to disclose the emissions and to conduct original research to determine whether any harm will be caused—i.e., to bear the burden of demonstrating "no harm."[27] Elliott and Esty include this kind of "risk of a risk" as within the scope of their end externalities goal and which environmental law should address.[28]

To summarize, *Manifesto* proposes that we bolt on to the existing pollution control regulatory framework an additional principle of environmental law focused on a category of harms the existing system has not prevented. As articulated, Elliott and Esty construct the principle with four core components:

- As a second best to eliminating pollution where reasonably practical, environmental law should include a compensation framework for ending negative externalities from residual pollution emissions—pollution the existing system has not eliminated—that harm people or ecological resources people use.

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20. *Id.* at 510.
21. *Id*. at 510 n.13.
22. *Id*. at 510.
23. *Id*. at 510 n.13.
24. *Id.* at 519.
25. *Id*.
26. *Id.* at 520, 531–32.
27. *Id*. at 521, 537.
28. *Id*. at 528–29.

- Residual pollution that could be eliminated through technologically feasible innovation is subject to the compensation framework.
- Compensation to specifically identified victims, or to harmed communities where specific victims cannot practically be identified, as well as to future generations, should be sufficient to eliminate the temptation for polluters to pay harm charges rather than reduce or eliminate pollution.
- If it is uncertain whether residual pollution is causing or will cause harm, emission sources are obligated to disclose emissions and to conduct research on the potential for harm, especially when introducing new types of chemicals into the environment.

B. Justification

Elliott and Esty recognize that there is a strong basis in economic theory for much of what drives their proposal. Their critique of the existing regulatory system is aimed at its heavy reliance on benefit-cost analysis and net social benefit standards to set pollution limits. This, they argue, settles for too little. Instead, the more demanding goal of Pareto superiority—under which one is only allowed to be made better off if no others are made worse off—should be embraced to require that polluters internalize costs of their residual pollution.[29] Their proposal puts that theoretical position into play by requiring actual compensation as the internalization mechanism.

If economic theory can get us there—Pigouvian internalizing of negative externalities corrects market failures—why does *Manifesto* rest on environmental rights for its justification? Elliott and Esty offer several reasons. First, doing so elevates bodily integrity, a healthy environment, and public trust concepts to a higher standing within the factors driving environmental policy.[30] Also, shifting to a rights-based approach more firmly aligns with the building social concerns regarding environmental degradation[31] and environmental justice,[32] which have catalyzed changes in the corporate world (moving to a stakeholder responsibility model) and a reimagining of capitalism.[33] Dethroning economic efficiency as the organizing principle of environmental policy (but not abandoning it) has the added advantage of allowing much more to be done on those fronts without

29. *Id.* at 515.
30. *Id*. at 511.
31. *Id*. at 512–13.
32. *Id.* at 519–22.
33. *Id.* at 541.

always coming back to arguing over economic justifications for policies designed to advance deeply-held social norms. In short, *Manifesto* is a call "to reframe environmental law and policy on an intellectual foundation of environmental rights rather than economic efficiency."[34]

That, in a nutshell, is *Manifesto*'s proposal and justification. To distill it to one sentence: *People have a right to be compensated by polluters for harms to their health they suffer from pollution emissions the existing regulatory system has not eliminated but which feasible technological innovation would eliminate*. This alone is a big proposal—no jurisdiction, not even those (including some U.S. states) that have enshrined environmental rights in their constitutions, has established such a compensation scheme. That's why *Manifesto* rests on a reframing, not an extrapolation. For these purposes, I'll run with that and not get bogged down in what it would take to get the political and judicial stars aligned. Rather, I want to know more, more about some of the big ideas *Manifesto* uses to get to its core proposition, and more about where those big ideas could lead beyond *Manifesto*.

II. Loose Ends: Not Small Details

By loose ends I do not mean anything to do with granular implementation mechanics of their proposal, such as how to identify victims, assess harm, attribute harm, set the trust fund amount for future generations, and so on. Elliott and Esty recognize there are many such details to fill in. Rather, I refer to several relatively large concepts *Manifesto* introduces but does not fully develop and define. To fully grasp and assess *Manifesto*'s core proposal, I (and I suspect many other readers) need more on these topics.

A. Right to a Healthy Environment

Manifesto argues that it is time to "reframe environmental law and policy on an intellectual foundation of environmental rights . . . ."[35] But what are the "environmental rights" upon which the new generation of environmental law and policy will be built? What is their scope? What are their sources? *Manifesto* offers some clues, but the boundaries are fuzzy.

Elliott and Esty have joined a growing choir of institutions and interests advocating a new era of environmental rights. For at least a decade, legal scholars around the world have charted an ambitious agenda of

34. *Id.* at 507.

35. Elliott & Esty, *supra* note 2, at 507.

environmental rights.[36] Prominently, acting on a United Nations Human Rights Council proposal (with the United States expressing opposition at the time)[37] the General Assembly (with the United States voting yes) in 2022 recognized "the human right to a clean, healthy and sustainable environment."[38] This framing—*clean*, *healthy*, and *sustainable*—is of value in assessing *Manifesto*, as it is not clear Elliott and Esty have as much as that covers in mind.

Manifesto claims that natural and positive law recognizes a right to be free from interferences with "bodily integrity," which in turn requires recognition of a "right to a *healthy* environment."[39] Elliott and Esty refine that to mean a right for a person to be "free from unhealthy environmental conditions"[40] and "to a healthy environment that does not harm his or her health."[41] These articulations seem carefully crafted to narrow the scope of the right to less than what the General Assembly has in mind. Rather, *Manifesto*'s justification appears based on only a right to *human* health, recognizing that pollution can harm human health directly (e.g., inhaling emissions) or indirectly by causing environmental conditions that threaten human health (e.g., depletion of the ozone layer).

As the source of such a right in the United States, Elliott and Esty point to the National Environmental Policy Act, which in its statement of policy proclaims that "Congress recognizes that each person should enjoy a healthful environment."[42] They argue that by "recognizing" the right, Congress acknowledged it pre-existed as a matter of natural law (in which case it exists globally).[43] NEPA recognized the right through positive law in the United States, but, they explain, it has sat there unfulfilled and now is the time to put it into action.

Is it plausible that recognition in the U.S. of such a weighty right would rest on a sentence out of NEPA's proclamations? Probably not, but taking

36. *See*, *e.g.*, ENVIRONMENTAL HUMAN RIGHTS IN THE ANTHROPOCENE: CONCEPTS, CONTEXTS, AND CHALLENGES (Walter F. Baber & James R. May eds., 2023); THE HUMAN RIGHT TO A HEALTHY ENVIRONMENT 2 (John H. Knox & Ramin Pejan eds., 2018); James R. May, *The Case for Environmental Human Rights: Recognition, Implementation, and Outcomes*, 42 CARDOZO L. REV. 983, 984 (2021).

37. Human Rights Council Res. 48/13, U.N. Doc. A/HRC/RES/48/13, at 3 (Oct. 18, 2021).

38. G.A. Res. 76/300, at 3 (Aug. 1, 2022); U.N. GAOR, 76th Sess., 97th plen. mtg. at 11, U.N. Doc. A/76/PV.97 (July 28, 2022) (memorializing the United States' vote).

39. Elliott & Esty, *supra* note 2, at 511 (emphasis added).

40. *Id.*

41. *Id.* at 528.

42. 42 U.S.C. § 4331(c).

43. Elliott & Esty, *supra* note 2, at 511.

the existence of some form of environmental right as a given, how far does it go in *Manifesto*?

Do natural law, NEPA, or *Manifesto* limit "environmental rights" to only those supporting a right to human health threatened by pollution, or do "clean" and "sustainable" also have rights standing? There are indications Elliott and Esty believe so. For example, *Manifesto* states that a "rights-based foundation for . . . environmental law . . . build[s] on the common law doctrine that natural resources are held as a public trust for the benefit of the nation as a whole."[44] Putting aside how far the public trust doctrine can carry the weight of environmental law, it's clear that the benefits it secures are not confined to those supporting human health. In fact, its common law formulation had little if anything to do with human health and more to do with utilitarian benefits such as fishing, swimming, and navigation.[45] Elliott and Esty also explain with respect to the rights they seek to vindicate that they "insist that policy-makers charge all polluters *or natural resource users* . . . fees to compensate the public for the fair value of their *use of resources* in common ownership."[46] Polluters use resources by dumping their pollution into them, which has health implications, but natural resource users' consumption of resources goes well beyond affecting human health. *Manifesto* thus makes gestures at environmental rights beyond those supporting human health.

A passage from late in *Manifesto* suggests that Elliott and Esty may be trying to reserve their rights about the scope of environmental rights. They observe that "pollution impinges upon every person's fundamental human right to . . . a healthy environment that does not harm his or her health."[47] They go on, however, to recognize that pollution causes other cognizable harms, including degrading visibility, threatening ecosystems and endangered species, and contributing to climate change.[48] By framing these as "other harms," do they mean to put them inside or outside the scope of the environmental rights *Manifesto* advocates protecting?

Manifesto is two articles in one on this score. Elliott and Esty lay out a bold plan for implementing a right to a healthy environment as one supporting a right to human bodily integrity and health, aiming their plan squarely (and almost exclusively) at pollution. Along the way, though, they drop numerous teasers, such as the public trust doctrine, natural resource

44. *Id.*

45. *See* J.B. Ruhl & Thomas A.J. McGinn, *The Roman Public Trust Doctrine: What Was It, and Does It Support an Atmospheric Trust?*, 47 ECOLOGY L.Q. 117, 136 (2020).

46. Elliott & Esty, *supra* note 2, at 512 (emphasis added).

47. *Id.* at 528.

48. *Id.*

users, common resources, ecosystems, and endangered species, suggesting they have something more in mind for the "new foundation in environmental rights."

B. Ecosystems People Use

Manifesto's principle applies to harms not only to people but also to "ecological resources used by people."[49] Elliott and Esty do not elaborate on this intriguing concept—it never surfaces again in *Manifesto*. What uses by people count, and what harms to those uses must be compensated? Is this simply another way of framing the right to a healthy environment they discuss throughout, whatever that means (see above), or is it intended to emphasize how ecosystems support that right? I will take the invitation to address the latter.

It is no secret that I have championed the concept of ecosystem services—the valuable benefits people derive from functioning ecosystems—as an organizing principle for market-based and rights-based environmental policy.[50] People use ecosystem services; harming the ecological resources providing those services thereby harms those people. Elliott and Esty recognize this in their brief reference to impaired visibility and degraded ecosystems as "other harms" of pollution, noted above. I leave for below their suggestion that a property owner who destroys natural capital providing benefits to others has not produced negative externalities within the scope of *Manifesto*'s framework. But I would propose to Elliott and Esty that the default rule for their compensation principle be that compensation is required for residual pollution that harms ecological resources used by other people and which thereby reduces the provision of ecosystem services to those people. Even if the environmental rights that *Manifesto* advocates are limited to those supporting human health, this ecosystem services framing leads to an expansive role for environmental law to protect environmental resources. Ecosystem services include pollination, nutrient cycling, photosynthesis, flood control, groundwater recharge, water purification, and a long list of other benefits supporting human health.[51] If a polluter interferes with the provision of such services,

49. *Id.* at 508.

50. *See*, *e.g.*, J.B. Ruhl, *In Defense of Ecosystem Services*, 32 PACE ENV'T L. REV. 306, 308 (2015); J.B. Ruhl & James Salzman, *The Law and Policy Beginnings of Ecosystem Services*, 22 J. LAND USE & ENV'T L. 157, 157 (2007).

51. *See* MILLENNIUM ECOSYSTEM ASSESSMENT, ECOSYSTEMS AND HUMAN WELL-BEING v-vi (José Sarukhán et al. eds., 2005); NATURE'S SERVICES: SOCIETAL DEPENDENCE ON NATURAL ECOSYSTEMS 3 (Gretchen C. Daily ed., 1997); Robert Costanza et al., *The Value of the World's Ecosystem Services and Natural Capital*, 387 NATURE 253, 254 (1997).

that is a threat to human health. Pollutants degrading the ozone layer, for example, threaten human health by diminishing the atmosphere's ecosystem services.

In their contribution to this volume, Elliott and Esty express openness to this approach but leave the details for later,[52] which is reasonable—they have taken on enough as it is! But when they or anyone else gets around to it, using an ecosystem services framework is the appropriate starting point for defining the scope of compensable "harms to ecological resources used by people." And this would be more than about, say, people swimming in polluted lake and swallowing the water. Rather, even if limited to human health, *Manifesto* pushes us to think deeply and broadly about how ecological degradations from pollution threaten human health. The ecosystem services framework connects those dots.

C. Retroactive Liability

Elliott and Esty build out their "risk of a risk" emission reporting and "no harm" proof burden requirements by pointing to testing requirements for new chemicals and products put into commerce.[53] They point to lead in gasoline as an example of a chemical in a product thought at the time to be beneficial, but later understood to be direly harmful. But they use this and other examples only to support their testing requirement for a "producer of pollution." It is not clear in *Manifesto* how the compensation framework will treat harms from chemicals in products and emissions that comply with the testing/reporting element but only later are determined to be harmful. Lead, asbestos, and PCBs were examples from the past, and nano-plastic and PFAS are today's versions. If people have a right to a healthy environment (an environment that does not threaten their health), that has to extend to harms caused by these harmful chemicals once they are known to be harmful. But what does that mean in terms of liability for those harms?

It is one thing to apply the compensation requirement to residual emissions known at the time to be causing harm, but quite another to apply it retroactively to chemicals that pass the proposed testing requirement but are much later deemed harmful. Yet the Superfund regime imposed a statutory site remediation cost liability retroactively, albeit leaving the scope of compensation for personal and property injuries to be sorted out through state tort remedies.[54] Having taken the step of requiring

52. *See Environmental Law for the 21st Century*, *supra* note 9, at 473.

53. Elliott & Esty, *supra* note 2, at 536–38.

54. *See Superfund Liability*, EPA (July 25, 2022), https://www.epa.gov/enforcement/superfund-liability [https://perma.cc/JV8F-KY52].

compensation for residual pollution as part of the administrative state of environmental law, and basing that on a human right to a healthy environment, how will *Manifesto*'s framework apply to the asbestos of the future and interact with state tort law? In their contribution to this volume, Elliott and Esty have refined their proposal to include "[t]he obligation to pay financial compensation to those subject to residual risks after the application of the maximum technology reasonably practical if it turns out that the no harm conclusion was incorrect[.]"[55] This seems consistent with a rights-based approach, as well as consistent with the precedent provided in Superfund. Like Superfund, it would not be without complexities and controversies.

D. Climate Change

The big surprise for me when working through *Manifesto* was how little direct attention it gives to climate change. The word climate appears 20 times, mostly in reference titles in footnotes. Elliott and Esty recognize climate change as a cognizable harm of residual pollution, but lump it in with "other harms" outside the scope of a person's "right . . . to a healthy environment that does not harm his or her health" (see above).[56] Elsewhere, however, they do include it within the duty to pay for environmental harms or risks, suggesting that its broad-based harms might make such compensation more workable if the funds go to the government on behalf of the affected public.[57] They also suggest that their proposal for reframing American environmental law is all the more important given the failure of tort-based litigation against sources of greenhouse gases thus far to gain any traction in U.S. courts.[58] Beyond that, *Manifesto* does not have much to say about how it applies to the harms resulting from climate change.

To be sure, it would be unreasonable to expect *Manifesto* to lay out the full details of any compensation plan for harms from climate change. It is a classic "super wicked" problem that has thus far defied effective public and private law responses and is fraught with political complexity at all scales.[59] Be that as it may, I would have to think that most readers of

55. *Environmental Law for the 21st Century*, *supra* note 9, at 462.

56. Elliott & Esty, *supra* note 2, at 528 (describing it as among "other cognizable harms" from pollution).

57. *Id.* at 531.

58. *Id.* at 533 n.100.

59. *See* Kelly Levin et al., *Overcoming the Tragedy of Super Wicked Problems: Constraining Our Future Selves to Ameliorate Global Climate Change*, 45 POL'Y SCI. 123, 124

Manifesto will want more, especially given the Elliott-Esty team is a brain trust when it comes to climate law and policy. In particular, in what ways is climate change categorically different—e.g., the globally ambient properties of greenhouse gasses may confound identifying residual emissions in the U.S.—perhaps making it less suitable for the *Manifesto* compensation scheme. And would *Manifesto* swallow all climate law and policy? For example, if feasible technological innovations for a greenhouse gas emission source include carbon capture and alternative fuel sources, then most or all of current emissions are residual and subject to the compensation obligation for the harms caused. Also, how would the *Manifesto* program work with other policies? For example, how would the concept of compensation for residual greenhouse gas emissions apply if an effective carbon tax were adopted? I acknowledge that *Manifesto* could easily have been bogged down by climate change, and that not everything about environmental law is about climate change, but I was hoping for more than the few morsels *Manifesto* offers on the theme.

III. Unfinished Business: Think Big Or Go Home

Elliott and Esty are careful to cabin *Manifesto*'s scope—they are not trying to boil the ocean. But in so doing they spotlight some of the major challenges ahead for environmental law and policy, challenges which, like residual emissions, will require creative thinking. *Manifesto* urges that the creative thinking will come through a shift from efficiency-based approaches to rights-based approaches that drive us to "a more just system of environmental law and policy dedicated to internalizing all environmental externalities."[60] Emphasizing the *all* in their goal statement, this section points to just a few of many themes for further thinking.

A. Baseline Ecosystem Services

The discussion of ecosystem services above focuses on how *Manifesto* applies when a polluter degrades natural capital on property owned by someone else, or a common resources (e.g., the ozone layer), which in turn threatens the health of others. That is different from the situation in which a property owner degrades natural capital on that property and thereby reduces the provision of beneficial services to others. In *Manifesto*, Elliott and Esty argue that one way to think about that situation is that those

(2012); Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1158–60 (2009).

60. Elliott & Esty, *supra* note 2, at 542.

beneficiaries should have been fairly compensating the property owner, not that the property owner owes any compensation to the beneficiaries who now are deprived of those services.[61] That perspective makes certain assumptions about the property rights associated with natural capital and ecosystem services, namely that the property owner is in complete control under a property rule of destruction rights. In other words, "they're my ecosystem services and I can do what I want with them, including destroy them." But owning property comes with all sorts of baseline "background principles" baggage, like nuisance doctrine, the doctrine of waste, public and private necessity, and the public trust doctrine. And these baseline principles may be altered through "changed circumstances or new knowledge."[62] Given the new knowledge science has revealed about ecosystem services over the past thirty years,[63] I have argued that the background principles of property law can cogently recognize a baseline duty of property owners not to cause significant harm to others by destroying natural capital supplying important ecosystem services.[64] Entertaining such a proposal strikes me as well within the scope and spirit of *Manifesto*'s turn to a rights-based approach to environmental law. In their contribution to this volume, Elliott and Esty agree in principle,[65] and I agree with them that the theme is complex and there are no obvious answers. I would be happy to accept their invitation to help unravel the muddle![66]

B. Common Resources

Elliott and Esty recognize that consumption of shared private non-renewable resources (e.g., groundwater pumping) imposes environmental externalities,[67] as can consumption of public resources, such as timber

61. *Id.* at 509.

62. Lucas v. South Carolina Coastal Council, 505 U.S. 1003, 1031 (1992) (regarding nuisance doctrine); *see* Michael C. Blumm & J.B. Ruhl, *Background Principles, Takings, and Libertarian Property: A Reply to Professor Huffman*, 37 ECOLOGY L.Q. 805, 832–36 (2010) (detailing numerous doctrinal examples).

63. Robert Costanza et al., *Twenty Years of Ecosystem Services: How Far Have We Come and How Far Do We Still Need to Go?*, 28 ECOSYSTEM SERV. 1, 2 (2017).

64. J.B. Ruhl, *Making Nuisance Ecological*, 58 CASE W. RSRV. L. REV. 753, 758 (2008); J.B. Ruhl, *The "Background Principles" of Natural Capital and Ecosystem Services—Did* Lucas *Open Pandora's Box?*, 22 J. LAND USE & ENVTL. L. 525 (2007).

65. *See Environmental Law for the 21st Century*, *supra* note 9, at 473.

66. *See id*. For thoughts on the theme, see Kalyani Robbins, *Allocating Property Interests in Ecosystem Services: From Chaos to Flowing Rivers*, 42 HARV. ENV'T L. REV. 197, 203 (2018).

67. Elliott & Esty, *supra* note 2, at 508.

harvesting on national forests.[68] They are spot on in treating these as categorically different from residual pollution. In the case of shared private resources, for example, vast legal regimes such as water law and oil and gas law define relative property rights, making the concept of residual harm difficult to integrate. Under a strict groundwater rule of capture, for example, the law specifically allows one property owner to pump as a matter of right.[69] There is no such protected right to cause harm through residual pollutant emissions. Similarly, moving the context to publicly-owned lands and resources introduces an entirely different policy realm.

That said, *Manifesto* is correct in describing the current American system for management of private and public common resources as a negative externalities problem crying out for more effective cost internalization. And this is only going to grow more pressing with climate change. Elliott and Esty offer their proposed "fair value" public compensation obligation as a solution for *publicly*-owned common resources,[70] but do not go beyond observing the potential for harm when applied to *privately*-owned common resources.

Climate change has fueled a surge of attention to the problem of private common resources, especially Western groundwater resources.[71] Most solutions go straight to doctrinal and regulatory reform, and gently so when protected property rights loom.[72] Where would the *Manifesto* principle lead in this frontier of environmental law? Could it spur reformulation of the underlying rights to access and extract natural resources by introducing the right to compensation for negative externalities that could be avoided through feasible technological (or other) innovation?

C. The Rest of Environmental Law

Manifesto is a call to "reframe environmental law." Yet, one could remove a handful of sentences (mostly about common resources, above) and *Manifesto* would be about only pollution control law. Not that reframing pollution control law isn't big, but *environmental* law is bigger

68. *Id*. at 508 n.7.

69. *See* GABRIEL COLLINS, RICE UNIV. BAKER INST. FOR PUB. POL'Y: CTR FOR ENERGY STUD. & TEX. STATE UNIV: MEADOWS CTR. FOR WATER & THE ENV'T, OVERRULING THE RULE OF CAPTURE: WHAT CAN TEXAS LEARN FROM 10 OTHER STATES' GROUNDWATER LAW UPDATES? 3 (2021).

70. Elliott & Esty, *supra* note 2, at 512.

71. *See* Warigia M. Bowman, *Dustbowl Waters: Doctrinal and Legislative Solutions to Save the Ogallala Aquifer Before Both Time and Water Run Out*, 91 U. COLO. L. REV. 1081, 1131 (2020).

72. *See, e.g.*, *id.* at 1091.

than pollution control law. Species protection laws like the Endangered Species Act; resource protection laws like Section 404 of the Clean Water Act; public lands management laws like the National Forest Management Act—these are all in the wheelhouse of what environmental lawyers do, albeit few practitioners or scholars span all these practice dimensions. Does *Manifesto* point towards a rights-based reframing of these realms of environmental law, and if so, how?

CONCLUSION

The core principle of *Manifesto* is a right to be compensated for harms to human health the existing environmental law system has not eliminated but which could be avoided through feasible technological innovation. That is a logical fit with harms from pollution, but more difficult to map directly onto the other contexts I discuss above. The environmental rights in play would need to move beyond a healthy environment to one that is also clean and sustainable. The innovation feasibility concept would need to grow beyond technology to include other realms of innovation relevant to environmental quality, such as resource management practices and land use planning. At most, *Manifesto* dips its toes into these waters. I am curious to see what Elliott and Esty would have to say if they dove in.