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David M. Uhlmann

University of Michigan Law School, duhlmann@umich.edu

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INTRODUCTORY ESSAY

ENVIRONMENTAL LAW, PUBLIC HEALTH, AND THE VALUES CONUNDRUM

David M. Uhlmann*

In September 1996, when I was nearing the end of my sixth year as a Justice Department environmental crimes prosecutor, one of my colleagues sent me an email that there was a “good-sounding RCRA [Resource Conservation and Recovery Act] knowing endangerment case developing in Idaho.” A twenty-year-old man named Scott Dominguez had collapsed inside a storage tank at an Idaho fertilizer manufacturing facility called Evergreen Resources.1 Mr. Dominguez could not be rescued for nearly an hour, because firefighters who responded to the scene did not know what was in the tank and what safety precautions they needed to take before entering the tank.2 The owner, Allan Elias, insisted that there was nothing in the tank that could hurt anyone,3 but later investigation would reveal that Elias had used the tank to conduct a cyanide-leaching operation at another facility he owned.4 By the time Dominguez was rushed to an area hospital, he had suffered permanent brain damage from cyanide poisoning.5 There was enough cyanide remaining in the tank to kill tens of thousands of people, based on total cyanide levels.6

* David M. Uhlmann is the Jeffrey F. Liss Professor from Practice and the Director of the Environmental Law and Policy Program at the University of Michigan Law School. I would like to thank all of the speakers at our fall 2013 conference for their presentations, with a special thanks to EPA Administrator Gina McCarthy for delivering the keynote address and reserving time to meet with environmental students from throughout the University of Michigan. I also would like to express my appreciation to the members of the student symposium committee (Peter Drake, Jeff Jay, Liz Och, Lauren Reid, Stephen Scheele, Jamen Tyler, Sarah Wightman, and Megan Williams) and to the incomparable Jenny Rickard, the program administrator for the Environmental Law and Policy Program.

1. United States v. Elias, 269 F.3d 1003, 1007 (9th Cir. 2001).
2. Tim Jackson, Elias Set Scene for Disaster with Lies, IDAHO STATESMAN, Apr. 29, 2000, at 10A.
4. Elias, 269 F.3d at 1007.
5. Id. at 1008.
I jumped at the chance to work on the case, which, after a twenty-two-month investigation, resulted in knowing endangerment charges, a nearly four-week trial, and a seventeen-year prison sentence for Elias, until recently the longest ever for environmental crime. I never envisioned the outcome when I asked to be assigned to the case—at that time, the longest sentence for environmental crime was five years in prison—but I wanted to prosecute the case because of what had happened to Mr. Dominguez. Most environmental crimes are victimless crimes; this was the rare environmental crime where someone was badly injured.

Mr. Dominguez was in his first job out of high school and engaged to his high school sweetheart when he collapsed inside the storage tank at Evergreen Resources. In my closing argument to the jury during the Elias trial, I described his final morning working at Evergreen Resources:

So, on August 27, 1996, wearing just jeans and a T-shirt, 20-year-old Scott Dominguez descended into that tank on a ladder, with his whole life ahead of him. Two hours later, covered in sludge and barely breathing, Scott Dominguez came out of that tank on a stretcher, his life shattered because of the Defendant’s knowing disregard, blatant disregard for the health and safety of his workers. Scott Dominguez has severe and permanent brain damage from cyanide poisoning, his life will never be the same.

It was a tragic case, arguably the worst I handled during my seventeen years at the Justice Department; it was also a compelling case for a jury trial


8. There is no publicly available compilation of the longest sentences available for environmental crime, but the Environmental Crimes Section maintained a list of those cases (on file with author). After the Elias trial but before the sentencing, the longest sentence increased to nine years (United States v. Hansen, 262 F.3d 1217, 1232 (11th Cir. 2001)) and then to thirteen years (United States v. Benkovitz, No. 97-CR-331 (M.D. Fla. Aug. 16, 1999), aff’d, 229 F.3d 1168 (11th Cir. 2000)).

9. I recently completed an empirical study of criminal enforcement under the environmental laws that examined all pollution cases investigated by EPA that resulted in criminal charges from 2005–2010. There were 864 defendants charged during that time period; only seventeen (or approximately 2 percent) engaged in conduct that resulted in death or serious bodily injury. David M. Uhlmann, Prosecutorial Discretion and Environmental Crime, 38 Harv. Envtl. L. Rev. 159, 197 (2014).


and a landmark case for the environmental crimes program, because the prosecution highlighted the public health impacts of environmental crime.

The Elias case is not the only environmental crimes prosecution that involved significant public health impacts. In United States v. Salvagno, the defendants received even longer sentences—twenty-two and twenty-five years in prison—for illegal asbestos removal at hundreds of facilities in upstate New York. In United States v. W.R. Grace et al., the defendants were tried and acquitted on charges that they endangered the residents of the town of Libby, Montana, where nearly 200 people have died from asbestos-related cancers. In United States v. BP Exploration & Production, Inc., BP paid a record $4 billion to resolve criminal charges based on the Gulf oil spill, the worst environmental disaster in United States history; the lead charges were manslaughter counts for the deaths of eleven Transocean workers on the Deepwater Horizon drilling rig.

Environmental crimes prosecutors always have placed special emphasis on cases involving deaths or injuries, even if they are more the exception than the rule in most environmental prosecutions. The cases are more appealing to judges and juries, are more likely to result in convictions, and produce the longest sentences and the largest fines. Yet there may be a disconnect in the priority given to prosecutions with public health effects. After all, these are environmental crimes. Some might involve both significant environmental impacts and public health effects, as occurred in the Gulf oil spill, but many cases with public health impacts have only marginal environmental consequences. For example, in the Elias case, the sentencing judge ordered the defendant to pay restitution to the Environmental Protection Agency (EPA) and the State of Idaho to clean up the cyanide waste at Evergreen Resources, but no cleanup ever occurred, because the damage was not significant enough to warrant a government-funded Superfund.

12. See United States v. Salvagno, No. 06-4202-cr(L), 2009 WL 2634655, at *1 (2d Cir. Aug. 28, 2009) (sentencing Alexander Salvagno to 300 months imprisonment); United States v. Salvagno, No. 06-4201-cr(L), 2009 WL 2634647, at *1 (2d Cir. Aug. 28, 2009) (sentencing Raul Salvagno to 235 months imprisonment).


15. Id.

16. Uhlmann, supra note 13, at 1246–47.

17. Elias, 269 F.3d at 1009.
cleanup effort. The largest category of Clean Air Act criminal prosecutions involve asbestos violations, which are serious because workers and the public can be exposed to carcinogenic asbestos fibers, yet the cases rarely involve significant environmental degradation.  

If the goal of the environmental laws is to prevent pollution and, in the words of the National Environmental Policy Act (NEPA), to “encourage productive and enjoyable harmony between man and his environment,” one might reasonably expect that the most significant environmental enforcement actions would focus on cases involving environmental degradation. We could prioritize violations that threaten endangered species, destroy habitat, harm ecosystems, and threaten air and water quality. To be sure, those cases are brought too—particularly where pollution threatens public health—but we are decidedly human-centric in our approach.

Nor is our human-centric approach reflected solely in which cases are selected for criminal (and civil) enforcement. I would submit that the environmental laws themselves are human-centric, far more than they are biocentric or ecocentric. Our environmental laws focus on the need for pollution prevention to protect public health. We regulate hazardous waste, like the cyanide involved in the Elias case, when it has the substantial potential to be harmful to “human health and the environment” (in that order). We now regulate greenhouse gas emissions under the Clean Air Act because the EPA has determined that they “endanger public health or welfare.” Even our efforts to control water pollution, which seek to ensure that we meet state water quality standards for all waters of the United States, were undertaken to achieve fishable and swimmable waters by 1983

18. Uhlmann, supra note 9, at 416, 431.
20. I use the terms human-centric, biocentric, and ecocentric to describe whether the objective of the environmental laws is the protection of human beings, all living things, or ecosystems. In much the same way, the moral and ethical concerns underlying environmental protections efforts can be described as human-centric, biocentric, or ecocentric environmental values depending upon which concerns are recognized as valid. See generally Robert V. Percival, et al., Environmental Regulation: Law, Science, and Policy 9 (7th ed. 2013).
22. 42 U.S.C. § 6903(5)(B) (2006) (defining hazardous waste to include solid waste that may “pose a substantial present or potential hazard to human health or the environment”).
23. 42 U.S.C. § 7408(a)(1)(A) (2006) (requiring the listing of all air pollutants “emissions of which . . . cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare”).
more than to protect the health of aquatic life (except to the extent that it can be safely consumed by humans). 24

Mindful of the human-centric, public health approach adopted by our environmental laws, the University of Michigan Law School hosted a conference entitled “Environmental Law and Public Health” in September 2013. 25 Our goal was to explore the relationship between environmental protection and public health and how it should inform our efforts to become better environmental stewards. EPA Administrator Gina McCarthy delivered the keynote address at the conference, which is reproduced in this issue of the Michigan Journal of Environmental & Administrative Law (MJEAL). In her prepared remarks, Administrator McCarthy explained:

The link between the health of our planet and the health of our families is inextricable. The quality of our environment dictates the quality of our well-being, and our lives.

That’s why—since the creation of the Environmental Protection Agency more than forty years ago—our mission has been to protect public health and the environment. 26

Administrator McCarthy then stated that climate change is a top priority for President Barack Obama and for the EPA and observed that “climate change is one of the most significant public health threats of our time.” 27 Administrator McCarthy also noted the ecological effects of climate change, explaining that “a changing climate threatens Great Lakes fish and wildlife.” 28 But in her very next sentence she returned to a more human-centric approach, stressing the economic effects of lost tourism and recreation. She discussed the economic dislocation that extreme weather will cause for cities and towns across America. She then emphasized the public health impacts of climate change and how the harmful effects of air pollution raise environmental justice concerns:

[C]limate change is about clean, healthy air for us to breathe. Carbon pollution and hotter weather can worsen levels of pollen and

27. Id.
28. Id. at 245.
smog, leading to longer allergy seasons, increased heat-related deaths, and direct threats to those who suffer from lung and heart illnesses. And it’s not just adults and the elderly that suffer from air pollution, so do children—especially children in lower income families and communities of color.29

Administrator McCarthy explained that “[a]cting on climate change is about fulfilling an obligation to safeguard the health and welfare of future generations—of your generation—and beyond.”30 Administrator McCarthy made a forceful case for the argument that environmental protection and public health are inextricably linked. She stated with her trademark bluntness that “[o]ur goals of protecting our environment and public health are not distinct—they’re joined at the hip.”31 There is no doubt that she is correct both in terms of the focus of our environmental laws, as well as how to best explain to the American people why action on climate change and broader environmental protection is in our collective human interest.

The Administrator’s remarks provided the perfect framing for a conference devoted to exploring the relationship between environmental protection and public health. In keeping with the Administrator’s focus, the conference highlighted the myriad ways that environmental protection promotes public health. We included panel discussions on the role of environmental protection in promoting children’s health and sustainable communities more generally, along with breakout sessions about how industrial siting, urban agriculture, and pesticide regulation all influence environmental health efforts.

A larger normative question lurks in the background, however, even as we acknowledge and consider the significance of the relationship between environmental protection and public health. Environmental protection laws have saved hundreds of thousands of lives in the United States and saved billions of dollars in health care costs.32 As a result, there is a powerful argument that can and should be made about why environmental protection is essential to public health.

Yet it is fair to ask whether we have the right balance in our environmental laws between public health concerns and our broader obligation to maintain a healthy planet. Perhaps the environmental laws should focus even more than they already do on public health benefits, so that we might

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29. Id. at 246.
30. Id. at 247.
31. Id. at 248.
reclaim broad-based support for environmental protection efforts. Or we might choose to expand the focus of our environmental laws to emphasize preserving biodiversity and healthy ecosystems, even if we cannot make a direct connection between those goals and more human-centric public health concerns.

The extent to which we emphasize public health, biodiversity, and ecological concerns has significant practical implications. We regulate toxic substances differently when our concern is human exposure rather than protecting other species. We set different water quality standards when our goal is fishable and swimmable streams rather than promoting healthy ecosystems for all aquatic life. We pursue different climate change mitigation efforts when our focus is safeguarding cities and towns from extreme weather rather than preventing the loss of habitat for polar bears in the Arctic Circle or the acidification of the oceans, although eventually the melting of polar ice and the loss of carbon sinks in the oceans will have dramatic public health ramifications.

Ultimately, how we make those choices may speak to our broader environmental values and the extent to which we are human-centric, biocentric, and/or ecocentric in our approach. I might argue that there is not a choice to be made; we are part of nature and cannot ignore how our behavior affects the natural world around us, even when there are no immediate public health effects. But to consider these values questions and their normative and practical implications, we began the Environmental Law and Public Health conference with a panel discussion with Professors Tracy Bach, Hari M. Osofsky, and Zygmunt J.B. Plater. As might be expected from such thoughtful and provocative panelists, we had a wide-ranging discussion that continues in the essays that follow the EPA Administrator’s remarks in this MJEAL symposium edition.

Professor Bach provides a compelling defense of the public health emphasis of our environmental laws in her essay, Protecting Human Health and Stewarding the Environment: An Essay Exploring Values in U.S. Environmental Protection Law. She begins with an epigraph from Barbara Kingsolver’s Flight Behavior that concludes: “What if all human effort amounted basically to saving a place for ourselves to park?” Bach emphasizes the degree to which federal environmental protections over the last forty years have had a

34. BARBARA KINGSOLVER, FLIGHT BEHAVIOR 317 (2012).
profound and positive impact on human health.\textsuperscript{35} Citing the \textit{New England Journal of Medicine}, Bach argues that "environmental protection has clearly improved human health by limiting the amount of pollution that may enter our natural environment."\textsuperscript{36} Yet, while acknowledging tradeoffs inherent in environmental protection, Bach notes that improved air quality for humans has positive effects on the climate and therefore promotes ecosystem protection and biodiversity; our human interests do not exist outside those of our ecosystem.\textsuperscript{37}

Bach advocates for the continued use of human health-based standards to set environmental protection limits.\textsuperscript{38} She notes that health-based standards draw from a now-rich body of empirical research fostered by the environmental laws and enhance public understanding of the harms from pollution.\textsuperscript{39} She canvasses health-based research that emphasizes the role of the environment in nearly 85 percent of all diseases,\textsuperscript{40} the relationship between environmental contaminants and cancer,\textsuperscript{41} the risk to pregnant women from exposure to toxins,\textsuperscript{42} and the growing appreciation of climate change as a public health threat.\textsuperscript{43} The clear link between pollution and harmful public health effects—and the degree to which the public has a high regard for the medical community—can be harnessed to promote pollution prevention,\textsuperscript{44} according to Bach.

Bach draws further support for her emphasis on public health by reviewing empirical social science research showing that respondents were more willing to address climate change when it was framed as a public health issue, rather than as an environmental or national security problem.\textsuperscript{45} These findings are consistent with her view that it is environmental public health—the melding of environmental protection and public health concerns—which will provide the most effective path forward. We value human health within our ecosystem.\textsuperscript{46}

\begin{itemize}
  \item \textsuperscript{36} Id. at 250.
  \item \textsuperscript{37} Id. at 251.
  \item \textsuperscript{38} Id. at 251–252.
  \item \textsuperscript{39} Id. at 251.
  \item \textsuperscript{40} Id. at 253 (citing Susan Dentzer, \textit{Embarking on a New Course: Environmental Health Coverage}, 30 Health Affairs 811, 810 (2011)).
  \item \textsuperscript{41} Bach, supra note 35, at 253–254.
  \item \textsuperscript{42} Id. at 255.
  \item \textsuperscript{43} Id. at 256.
  \item \textsuperscript{44} Id. at 256–257.
  \item \textsuperscript{45} Id. at 258–259.
  \item \textsuperscript{46} Id. at 259–350.
\end{itemize}
Professor Osofsky tacks away from an emphasis on public health to examine the challenges raised by energy policy in her essay *Complex Value Choices at the Environment-Energy Interface*. She opens with a discussion of her experience in China during 2001–02 when the Three Gorges Dam was constructed. She notes how construction of the dam raised a host of environmental challenges, similar to those that dam construction has raised in the United States, but also offered environmental benefits by providing hydropower to replace coal use and the resulting greenhouse gas emissions. Osofsky argues that “environment-energy decisions that have major positives and negatives from either a health or ecosystem perspective pose[] an important ethical challenge” that may not be resolved even if we emphasize human-centric, biocentric, and ecocentric environmental values.

Osofsky considers the examples of deepwater drilling and hydraulic fracturing to highlight the ethical challenges of energy development. She observes how our reliance on fossil fuels and desire for energy independence has led the United States to engage in novel methods to develop domestic energy, which poses risks to ecosystems and public health. Compounding matters, Osofsky notes how regulation of new technologies may be inadequate, as it proved to be in the context of the Gulf oil spill, or uneven, as demonstrated by the patchwork of state and local rules to govern natural gas development in the United States. Osofsky explains that the “challenges of rapidly evolving technology” combine with “governance concerns” and “unequal distribution of environmental and energy benefits and harms” in a way that eludes “one size fits all” solutions.

To address these challenges, Osofsky urges that we adopt “principles for crafting innovative institutional structures that can help key stakeholders navigate . . . hard governance and value problems better at the intersection of energy, environment, and health.” She recommends that we utilize hybrid governance structures that “combine multiple institutions or actors . . . across levels of governance and the public/private divide.” This approach, she suggests, will help overcome fragmentation, involve all stakeholders, and provide more meaningful interactions to address governance challenges, while also remaining nimble enough to be responsive to

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48. Id.
49. Id. at 262.
50. Id.
51. Id. at 265–266.
52. Id. at 269.
53. Id. at 270.
54. Id.
change.  From a values perspective, Osofsky’s approach eschews a reliance on any particular focus, which she suggests would be inadequate to resolve the “hard choices” that we face at the critical energy-environment interface.

In the title to his essay, Professor Plater asks playfully Human-Centered Environmental Values Versus Nature-Centric Environmental Values—Is This the Question? He notes at the outset that “a lively flow of literature and scholarship has plumbed the spectrum of moral reasons how and why humans should care for fellow species on the planet” and later observes “[t]here exists a wide array of significant societal values potentially undergirding policies of environmental protection[,] . . . [a]nd it is important that these values be explored, weighed, nurtured, and cherished in the academy and in ongoing civil discourse among citizens who are concerned about how we manage our lives and collective existence.” Such lofty principles invariably yield, however, to what Plater terms “human-centered utility” so that even the invocation of what he terms “nature-centric values” is with regard to “human repercussions.”

Plater would prefer that we take a more holistic approach, recognizing that our welfare is inextricably linked to the fate of species other than our own. He reminds us on more than one occasion that “[t]he First Law of Ecology holds that everything is connected to everything else, so to make a distinction between human-centric and nature-centric values is fundamentally impractical.” But Plater laments what he terms “[p]olitico-centricism,” or the “sobering reality” that “it is all too often internal tribalistic politics rather than the public merits of an issue that dominate and determine policies and outcomes.” In such a dysfunctional political context, “even inherently utilitarian justifications for public health and environmental protection can be minimized and ignored.”

Plater presents what he terms “a small parable” of the snail darter case, which is the subject of his book The Snail Darter and the Dam: How Pork-Barrel Politics Endangered a Little Fish and Killed a River. He argues that, despite characterizations of the snail darter case as the paradigmatic example of environmental extremism, it was “equally strong in nature-centric and

55. Id. at 270–272.
57. Id. at 277.
58. Id. Professor Plater’s definition of “nature-centric” values includes both biocentric and eco-centric values as I have described them in note 20 supra and throughout this essay.
59. Id. at 276 (citations omitted).
60. Id. at 277–278.
61. Id. at 278.
human-centric terms.” The Little Tennessee River deserved protection both as the habitat for an endangered species and for the surrounding farming communities that relied upon it. The snail darter, according to Plater, was like a canary in a coal mine: “threats to its existence . . . served as an indicator warning to human society that human welfare too was threatened with harm.” The case also provided “a vivid refutation of a familiar false truism, the assertion that a human society must repeatedly make an intrinsic pragmatic choice between environmental protection or economic progress.” As it turned out, what was good for the snail darter made economic sense as well.

Eventually, the “pork-barrel” politics of the Tellico dam project would trump the biocentric and human-centric considerations in the snail darter case, much as today “the actual public merits of issues get lost in the internecine maneuvers of the powerful blocs of inside players.” The snail darter thus serves as a parable both for the First Law of Ecology and the interrelationship between nature-centric and human-centric interests, and also for the extent to which even human-centric environmental health objectives are ill served by our dysfunctional and increasingly partisan national politics.

So the question that lingers in the pages that follow, as we confront the challenges of a new millennium, is how to reclaim an environmental ethos that acknowledges how our collective fate is inextricably linked with the health of the ecosystem and the biodiversity of all species that inhabit the Earth. Perhaps it should not trouble us that we will be human-centric in our approach to environmental protection and most compelled to act, as Bach suggests, when the public health consequences are most apparent. After all, at a time of such partisan division, we must seek what common ground exists for environmental protection, particularly when the stakes are so high. It also is plausible that we will make better decisions among competing choices when we are able to assimilate multiple perspectives—and value systems—as Osofsky argues. But ultimately, as Plater counsels, we cannot escape the reality that the fate of our environment, whether viewed through a nature-centric or human-centric lens, will determine our fate on the planet too. In our pursuit of a sustainable future, we may find greater success if we broaden our perspective to include species other than our own and show greater respect for the natural world that is our habitat.

63. Plater, supra note 56, at 281.
64. Id. at 284.
65. Id. at 285–286.
66. Id. at 286.
67. Id. at 288.