PROTECTION OF THE ENVIRONMENT THROUGH CRIMINAL LAW: AN AMERICAN PERSPECTIVE

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Abstract

In this article, I consider how the United States approaches the question of what conduct is criminalized under the environmental laws and what entities should be held accountable for environmental crime. Part I of this article explains how the act and mental state requirements under American law do not impose significant limits on what conduct is criminalized. Part II of this article suggests that criminal enforcement should be reserved for cases where aggravating factors are present and summarizes my research regarding the extent to which prosecutors have focused on matters involving those aggravating factors. Part III argues that both corporations and individuals should be held accountable when criminal violations occur and asserts that criminal prosecution serves retributive, utilitarian, and expressive purposes, particularly for corporate environmental crime. I conclude that a robust criminal enforcement regime should be part of a multi-tiered enforcement scheme under the environmental laws with both corporate and individual liability.

Keywords: criminal law, corporate and individual liability, multi-tiered enforcement scheme.

More than two dozen environmental and natural resource statutes were enacted in the United States during the 1970s and 1980s.¹ The Clean Air Act amendments in 1970² and the Clean Water Act amendments in 1972³ brought dramatic changes in how the United States addressed air and water pollution. The Endangered Species Act of 1973⁴ provided unprecedented protection for the critical habitat of endangered and threatened species. The Resource Conservation

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² 42 U.S.C. §§ 7401 to 7671q.
³ 33 U.S.C. §§ 1251 to 1387.
⁴ 16 U.S.C. §§ 1531 to 1544.
and Recovery Act of 1976\textsuperscript{5} introduced “cradle-to-grave” regulation of hazardous waste in the United States, as well as provisions governing waste management more generally. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 created retroactive joint and several liability for the cleanup of hazardous waste sites.\textsuperscript{6}

Taken together, the laws enacted during the 1970s and 1980s fundamentally changed how the United States addresses pollution, stewards its natural resources, and protects biodiversity, culminating with the Clean Air Act amendments of 1990, which expanded the regulation of hazardous air pollutants,\textsuperscript{7} enacted controls for acid rain,\textsuperscript{8} and implemented the treaty obligations of the Montreal Protocols.\textsuperscript{9} Since 1990, the United States has not enacted any significant new environmental laws, even though the environmental and sustainability challenges facing America and the world have increased dramatically over the last 25 years.\textsuperscript{10}

The failure to enact new environmental laws in the United States reflects the increased partisanship and polarization of American politics. Environmental protection enjoyed broad bi-partisan support during the 1970s in the United States, with environmental laws passing with nearly unanimous support.\textsuperscript{11} Today, with some exceptions, support for new environmental protection laws—to include climate change mitigation efforts—is limited to the majority of Democrats and opposed by the majority of Republicans.\textsuperscript{12}

What has not changed in the United States, however, is our commitment to vigorous enforcement of the environmental laws. The United States utilizes a multi-tiered enforcement approach that includes criminal, civil, and administrative penalties.\textsuperscript{13} Egregious violations of the law, particularly those that cause harm to public health and the environment or involve deceptive conduct that undermines the effectiveness of the regulatory system, can result in criminal prosecution.\textsuperscript{14} Significant environmental protection measures that involve new or controversial

\textsuperscript{5} 42 U.S.C. §§ 6901 to 6992k.
\textsuperscript{6} 42 U.S.C. §§ 9601 to 9675.
\textsuperscript{7} 42 U.S.C. § 7412(b).
\textsuperscript{8} 42 U.S.C. §§ 7651 to 7651o.
\textsuperscript{9} 42 U.S.C. §§ 7671 to 7671q.
\textsuperscript{13} See generally David M. Uhlmann, Environmental Protection through Law: The Role of Corporate Criminal Prosecution, forthcoming Jus, 1 (2016).
\textsuperscript{14} See David M. Uhlmann, Prosecutorial Discretion and Environmental Crime, 38 Harv. Envt’l. L. Rev. 159, 164 (2014). I also argue that operating outside the regulatory system and repetitive violations of the environmental laws may warrant criminal enforcement, while more technical violations are more appropriate for civil or administrative enforcement.
legal requirements often are addressed by civil judicial enforcement. Less serious violations are the focus of administrative enforcement by either the federal Environmental Protection Agency or a state environmental agency; minor violations at facilities that have no history of environmental violations might be resolved by regulatory “compliance counseling” without the need for formal enforcement action.\textsuperscript{15}

In addition, when environmental violations occur in the United States that are not addressed by the federal and state governments, the environmental laws authorize citizen suits by environmental groups and other private parties to obtain penalties and injunctive relief.\textsuperscript{16} In essence, the citizen suit provisions of the environmental laws create a private attorney general model in cases where the government fails to act to address environmental violations. These citizen suit provisions ensure that political considerations, regulatory capture, and limited government resources do not limit environmental protection efforts in the United States.\textsuperscript{17}

A multi-tiered enforcement system that authorizes criminal, civil, and administrative remedies combined with citizen suit authority when the government does not address violations has helped increase air and water quality and decrease the number of hazardous waste sites in the United States.\textsuperscript{18} Even though the American environmental law system must be updated to address the environmental and sustainability challenges of the 21\textsuperscript{st} century, our multi-tiered enforcement system remains an optimal model for how to ensure compliance with environmental laws and the significant environmental and public health benefits those laws provide.

The more difficult question is the role of criminal enforcement in the optimal multi-tiered environmental enforcement system. Each of the major environmental laws enacted in the United States during the 1970s includes criminal provisions, most of which were upgraded to felonies during the 1980s.\textsuperscript{19} Since that time, the United States has developed the most robust environmental crimes program in the world, with hundreds of corporate and individual defendants prosecuted. But it is a central tenet of a multi-tiered enforcement system, and a fundamental fairness principle, that not every violation of the environmental laws should be criminal.

\textsuperscript{15} Uhlmann, \textit{Environmental Protection through Law}, supra note 13 at 2.


\textsuperscript{17} Uhlmann, \textit{Environmental Protection through Law}, supra note 13 at 2.


Perhaps the distinction between criminal and non-criminal enforcement should be based upon the act requirement, with some violations treated as criminal and others only giving rise to civil and administrative enforcement. Or the distinction could depend upon the mental state requirement, with willful or knowing violations treated as criminal and negligent or strict liability violations only giving rise to civil and administrative enforcement. Still another approach would be to distinguish based on both the act requirement and the mental state requirement, in essence limiting criminal enforcement to certain kinds of violations that occur with what the law might consider a culpable mental state. Whatever the approach, there also is the role of prosecutorial discretion, which in all enforcement regimes limits what conduct is treated as criminal.

In this article, I consider how the United States approaches the question of what conduct is criminalized under the environmental laws and what entities should be held accountable for environmental crime. Part I of this article explains how the act and mental state requirements under American law do not impose significant limits on what conduct is criminalized. Part II of this article suggests that criminal enforcement should be reserved for cases where aggravating factors are present and summarizes my research regarding the extent to which prosecutors have focused on matters involving those aggravating factors. Part III argues that both corporations and individuals should be held accountable when criminal violations occur and asserts that criminal prosecution serves retributive, utilitarian, and expressive purposes, particularly for corporate environmental crime. I conclude that a robust criminal enforcement regime should be part of a multi-tiered enforcement scheme under the environmental laws with both corporate and individual liability.

1. The United States broadly defines what conduct constitutes environmental crime

Environmental crimes are no different than other crimes in the United States. They require proof that the defendant committed a prohibited act (the actus reus or act requirement) and did so with the requisite intent (the mens rea or mental state requirement). Congress therefore has two ways to define criminal conduct under the environmental laws, as it does in other areas of the law. First, Congress can specify the acts or violations that are egregious enough to warrant the moral and social opprobrium of criminal prosecution. Second, Congress can specify the mental state or intent that a defendant must possess to be held criminally responsible.

With regard to the act requirement, Congress identified some of the conduct that it viewed as criminal when it included criminal provisions in each of the major

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environmental laws. For example, Congress included language in the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and the Clean Air Act (CAA) making it a crime to knowingly make false statements in documents required under the relevant law and any implementing regulations. Congress included similar language that prohibited tampering with or rendering inaccurate required monitoring methods under the environmental laws.

Congress also made clear that failure to obtain permits for the disposal of hazardous waste, the discharge of pollutants into waters of the United States, and the construction of new stationary sources of air pollution could give rise to criminal liability, as could violations of permits issued pursuant to the environmental laws. Congress provided enhanced penalties for environmental violations that placed others in imminent danger of death or serious bodily injury. In each of these ways, Congress took meaningful steps to define which violations of the environmental laws are criminal.

In other ways, however, Congress did not distinguish criminal violations of the environmental laws from violations warranting only civil or administrative enforcement. Congress allowed all permit violations to satisfy the act requirement for criminal prosecution. As a result, Congress criminalized both substantive permit violations, such as discharging in excess of permit limits, and more technical permit infractions, such as failing to maintain documents for a specified period of time. Congress used similarly expansive language in the criminal provisions that apply to notification, recordkeeping, and filing.

21 33 U.S.C. § 1319(c)(4) (2012) (“knowingly make any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained [under the CWA] . . . .”); 42 U.S.C. § 6928(d)(3) (2012) (“knowingly omits material information or makes any false material statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained, or used for purposes of compliance [with RCRA] . . . .”); 42 U.S.C. § 7413(c)(2)(A) (2012) (“knowingly makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required [by the CWA] . . . .”).

22 33 U.S.C. § 1319(c)(4) (“knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under [the CWA] . . . .”); 42 U.S.C. § 7413(c)(2)(C) (“knowingly . . . falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under [the CWA] . . . .”).


24 42 U.S.C. § 6928(e); 42 U.S.C. § 7413(c)(5); 33 U.S.C. § 1319(c)(3).

25 Uhlmann, Environmental Crime Comes of Age, supra note 19, at 1242.

26 E.g., 33 U.S.C. §§ 1319(c)(1)–(2) (criminalizing the negligent or knowing violation of “any permit condition or limitation” under the CWA).
requirements. In the process, Congress made it possible for nearly any violation of the environmental laws to satisfy the act requirement, regardless of the seriousness of the violation.

Perhaps Congress acted wisely when it broadly defined environmental crimes. After all, it is difficult for legislatures to anticipate the myriad ways that violations might occur in complex regulatory schemes. It may be better to provide broad enforcement tools to address violations and to rely upon the government to exercise its enforcement authorities in a reasonable way. If the government abuses its discretion in a particular case, the judge may use her authority to limit the evidence or direct a verdict for the defendant; if overreaching occurs on a more systemic basis, the legislature could restrict the government’s discretion.

On the other hand, many environmental violations, at least at their inception, were malum prohibitum (a prohibited wrong) as opposed to malum in se (inherently wrongful). Of course, legislatures are not required to limit criminal provisions to malum in se conduct. Nonetheless, Congress might have mitigated concerns about over-criminalization under the environmental laws if it had limited criminal prosecution to violations that already were or soon would become malum in se. Indeed, as noted above, Congress took exactly that approach when it focused on harmful pollution and deceptive conduct. But in many areas of the environmental enforcement regime, Congress abandoned a more rigorous definitional effort in favor of catch-all language that imposes few limits on the act requirement. As a result, the act requirement does not limit the role of criminal enforcement under the environmental laws in the United States as much as might be considered optimal.

The mental state requirement goes further than the act requirement in distinguishing criminal from civil and administrative violations, at least as a matter of statutory construction. For most felony violations of the CWA, CAA, and RCRA,

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27 E.g., 42 U.S.C. § 6928(d)(3) (criminalizing knowing omissions of “material information” and the making of “any false material statement or representation in any application, label, manifest, record, report, permit, or other document filed, maintained, or used for purposes of compliance with regulations promulgated by the Administrator [pursuant to RCRA]").


29 Uhlmann, Environmental Crime Comes of Age, supra note 19, at 1233.

30 Id. at 1244.

31 Id. at 1230.

32 Id. at 1229 (citing Erik Luna, The Overcriminalization Phenomenon, 54 Am. U. L. Rev. 703, 709 (2005)).
the government must show that the defendant acted knowingly.\textsuperscript{33} Criminal violations of the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA") also are limited to situations where the defendant acted knowingly.\textsuperscript{34} Similarly, the misdemeanor provisions of the CWA apply only when the defendant acted negligently.\textsuperscript{35} In contrast, civil and administrative violations of the environmental laws do not require the government to prove a culpable mental state; they are strict liability violations, so the government must prove only that the defendant committed the prohibited act.\textsuperscript{36}

Mental state often is a significant issue during criminal trials because of the difficulty of proving what a defendant knew. Nonetheless, mental state requirements may not distinguish criminal, civil, and administrative violations as much as the additional proof requirements suggest.\textsuperscript{37} Numerous appellate court decisions have construed “knowingly” under the environmental laws to require knowledge of the facts that make the charged conduct unlawful but not knowledge that the conduct was illegal.\textsuperscript{38} Those decisions have drawn support from the United States Supreme Court’s admonition in \textit{United States v. International Minerals and Chemical Corp.} that “ignorance of the law is no defense” and “where obnoxious waste materials are involved, the probability of regulation is so great that anyone who is aware that he is in possession of them or dealing with them must be presumed to be aware of the regulation.”\textsuperscript{39} Moreover, the mental state requirements for environmental crimes mirror the knowledge requirements for most federal crimes.\textsuperscript{40} As the Supreme Court explained in \textit{Bryan v. United States}, “unless the language of the statute dictates a different result, the term ‘knowingly’ merely requires proof of knowledge of the facts that constitute the offense.”\textsuperscript{41}

As a result, the government must prove the defendant’s knowledge of the discharges in a CWA case, but is not required to show that the defendant knew

\begin{itemize}
\item \textsuperscript{33} 33 U.S.C. § 1319(c); 42 U.S.C. § 6928(d) (2012); 42 U.S.C. § 7413(c) (2012).
\item \textsuperscript{34} 42 U.S.C. § 9603(b) (2012).
\item \textsuperscript{35} 33 U.S.C. § 1319(c).
\item \textsuperscript{36} See 33 U.S.C. § 1319(b); 42 U.S.C. § 6928(c); 42 U.S.C. § 7413(b).
\item \textsuperscript{40} Uhlmann, \textit{Environmental Crime Comes of Age}, supra note 19, at 1235.
\item \textsuperscript{41} \textit{Bryan v. United States}, 524 U.S. 184, 193 (1998) (footnote omitted). The Court thus distinguished a “knowing” act from a “willful” act, holding that a willful violation required the government to “prove that the defendant acted with knowledge that his conduct was unlawful.” \textit{Id.} at 192 (citing \textit{Ratzlaf v. United States}, 510 U.S. 135, 137 (1994)).
\end{itemize}
that the CWA requires permits for discharges.\textsuperscript{42} In a RCRA disposal case, the government must prove that the defendant intentionally disposed of waste and knew the waste had the substantial potential to be harmful to human health or the environment, but it would not need to show that the defendant knew the waste was hazardous under RCRA or that a permit was required for its disposal.\textsuperscript{43} In a CAA case, the government must show that the defendant knew the nature of the pollutant in question (i.e. the fact that it was asbestos), but it does not need to show that the defendant knew that the pollutant was regulated under the Act or the scope or requirements of those regulations.\textsuperscript{44}

The knowledge requirements under American law are appropriate, since they make clear that companies are obligated to know their legal obligations and cannot plead ignorance of the law as a defense. Since most pollution involves intentional conduct, however, mental state requirements may not differentiate criminal enforcement from civil and administrative enforcement, other than foreclosing felony prosecution in cases of accidental pollution. Civil enforcement cases also often involve conduct that would satisfy the “knowingly” requirement under the environmental laws. For example, a facility that does not have pollution controls required under the CAA, almost certainly is acting knowingly in the sense that management knows that the facility does not have a “scrubber” or whatever pollution control device is required. Yet, until recently, the government largely has pursued civil or administrative remedies in CAA cases involving the lack of pollution controls, particularly if the facilities involved are otherwise complying with the Act, because of uncertainty about the scope and meaning of the underlying regulatory requirements.\textsuperscript{45}

Of course, there are environmental violations that clearly occur unintentionally and would be beyond the reach of the criminal provisions of the environmental laws, at least for statutes that only allow prosecution for knowing conduct. For example, a facility that has a CWA permit would not commit a knowing violation of its permit if it experienced a mechanical failure or some other unforeseen circumstance that caused a permit exceedance. Such violations would likely be subject only to civil or administrative enforcement, unless the company involved did not promptly and accurately report the resulting permit violations to EPA or the State.

\textsuperscript{42} See, e.g., Hopkins, 53 F.3d at 541.
\textsuperscript{43} See, e.g., United States v. Self, 2 F.3d 1071, 1089-92 (10th Cir. 1993).
\textsuperscript{44} See, e.g., United States v. Buckley, 934 F.2d 84, 88 (6th Cir. 1991).
But even where accidental pollution is involved, criminal prosecution still might be possible for CWA and CAA violations. Those statutes authorize prosecution for negligent discharges (CWA) and negligent endangerment (CAA). In addition, misdemeanor prosecutions under the Refuse Act and the Migratory Bird Treaty Act are strict liability offenses that, according to some courts, do not require proof of mental state. Criminal violations of those statutes require the same proof as civil or administrative claims.

In sum, mental state requirements impose an additional burden of proof on criminal prosecutors in the United States that their civil counterparts are not required to meet. In addition, since mental state often is difficult to prove and must be shown circumstantially, the additional burden may be significant in some cases (particularly since criminal prosecutors in the United States must prove each element beyond a reasonable doubt rather than by the civil standard of a preponderance of the evidence). Nonetheless, while proving mental state is an additional legal requirement, as a practical matter it would be wrong to conclude that criminal cases are distinguished from civil cases by the presence or absence of knowing conduct. The bottom line therefore is that the environmental laws in the United States do not differentiate between criminal and civil or administrative violations as much as might be expected—not as much as might be normatively desirable.

2. Prosecutors in the United States reserve criminal charges for conduct with aggravating factors

If the same violation could give rise to criminal, civil, or administrative enforcement—and if mental state requirements only preclude criminal enforcement for a small subset of violations—what determines which environmental violations result in criminal prosecution? The answer is the exercise of prosecutorial discretion, which exists in all areas of the criminal law, but assumes a particularly critical role in environmental cases in the United States because so much conduct falls within the criminal provisions of the environmental laws.

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50 See United States v. Apollo Energies Inc., 611 F.3d 679, 684–86 (10th Cir. 2010) (finding no mental state requirement for prosecution under the Migratory Bird Treaty Act); United States v. White Fuel Corp., 498 F.3d 619, 622 (1st Cir. 1974) (finding no mental state requirement for prosecution under the Refuse Act). But see United States v. Citgo Petroleum Corp., ___ F.3d. ___ (5th Cir. 2015) (finding that the Migratory Bird Treaty Act does not extend to the unintentional taking or killing of migratory birds).
51 See United States v. Williams, 195 F.3d 823, 826 (6th Cir. 1999).
Critics of environmental criminal enforcement argue that Congress gave too much discretion to prosecutors or, even worse from their perspective, to agency enforcement officials. They argue that whether a case is criminal may be determined by nothing more substantive than whether the case originates with a criminal investigator or with one of their civil or administrative counterparts within the regulatory agency. Even supporters of criminal enforcement acknowledge that prosecutorial discretion is broad under the environmental laws. But they insist that it is no greater than in other areas of economic or regulatory crime and that Congress properly relied on the good sense of prosecutors, the wisdom of judges, and the judgment of juries to determine when violators of the environmental laws should be convicted of criminal activity.

I see no merit in debating whether prosecutorial discretion is broad under the environmental laws in the United States— it clearly is — and I concede that it may be disquieting in a nation predicated on the rule of law that so much discretion is given to individual prosecutors to determine what conduct should be criminally prosecuted. I also acknowledge that the extent of prosecutorial discretion under the environmental laws may raise uncertainty in the regulated community about which environmental violations will result in criminal prosecution. On the other hand, the American criminal justice system always relies to some degree upon the exercise of prosecutorial discretion to determine which violations will be prosecuted criminally. To evaluate whether prosecutors have too much discretion — and to address claims that the environmental laws criminalize too much conduct — we need to know more about the circumstances under which environmental prosecutors exercise their discretion to seek criminal charges for violations.

For environmental crimes, I have argued that prosecutors should exercise their discretion to reserve criminal enforcement for cases with one or more of the following aggravating factors: (1) significant environmental harm or public health effects; (2) deceptive or misleading conduct; (3) operating outside the regulatory system; or (4) repetitive violations. Limiting criminal enforcement to cases with...
one or more of these aggravating factors would preclude prosecution for technical or *de minimis* violations and provide greater clarity about which environmental violations might result in criminal charges. The presence of one or more of these factors also would delineate an appropriate role for criminal prosecution in the environmental regulatory scheme by limiting criminal prosecution to cases involving substantial harm or risk of harm or to cases in which the conduct involves the type of deliberate misconduct we consider criminal in other contexts as well.

To determine whether the aggravating factors I identified as normatively desirable were present in recent prosecutions, I reviewed all cases investigated by EPA from 2005-2010 that involved pollution crime and were charged in federal court (EPA also investigates some wildlife crimes, as well as cases charged in state court, which I did not review). Over a three-year period, with assistance from 120 Michigan Law students, I reviewed court documents for over 600 cases involving nearly 900 corporate and individuals defendants.

For the first aggravating factor, significant environmental harm or public health effects, our study focused on five types of harm: (1) serious bodily injury or death; (2) knowing or negligent endangerment; (3) animal deaths; (4) cleanup costs; and (5) evacuations and emergency responses. Cases involving these harms often receive attention from investigators and prosecutors because they are more compelling for judges and juries.

For the second aggravating factor, deceptive or misleading conduct, our study analyzed whether deceptive or misleading conduct occurred during (1) the commission of the underlying offense (*e.g.*, by using a bypass line to circumvent pollution control equipment); (2) reporting or recordkeeping (*e.g.*, falsifying documents to conceal pollution control activity); or (3) a cover-up after the violations occurred (*e.g.*, lying to investigators and destroying evidence of a crime). Deceptive or misleading conduct undermines the effectiveness of environmental protection because it allows illegal pollution to go undetected, undermines the self-policing required under the environmental laws in the United States, and deprives regulators of accurate information about overall levels of pollution, which they need to make informed decisions about what pollution to permit.

For the third aggravating factor, operating outside the regulatory system, our study identified companies and individuals that completely and deliberately avoided regulatory compliance, thereby gaining an unfair competitive advantage and undermining the effectiveness of the regulatory system. We did not include defendants who complied with most, but not all, of their environmental regulatory requirements.
For the fourth aggravating factor, repetitive violations, our study focused on the duration of non-compliance. Environmental violations can involve isolated events – which may be more suitable for civil or administrative enforcement unless they cause substantial harm – or they can be repeated over a longer period of time. Our goal was to identify how often the behavior was repetitive and the duration of the misconduct.

Based on our research, we determined that 96% of the defendants (828 out of 864 defendants) engaged in conduct involving at least one of the four aggravating factors. The most prevalent aggravating factors were repetitive violations (78% or 679 defendants) and deceptive or misleading conduct (63% or 545 defendants). The third most common factor was operating outside the regulatory scheme (33% or 287 defendants), followed by defendants who caused significant harm (17% or 144 defendants).

These findings are shown in Figure 1:

![Figure 1. Prosecutorial Discretion Factors](image)

These results support two significant conclusions, both of which suggest that criminal enforcement was reserved for culpable conduct under the environmental laws in the United States from 2005-2010.
First, one or more aggravating factors are present for nearly all defendants prosecuted under the environmental laws in the United States. This is a significant finding in light of over-criminalization claims, since it suggests that criminal enforcement is reserved for conduct involving the aggravating factors that, under my normative model, might warrant criminal prosecution. It also may help address randomness claims about criminal enforcement, since it suggests that prosecutorial discretion may follow a distinctive pattern by focusing on defendants who engage in conduct involving one or more aggravating factors.

Second, it is unlikely that there will be a criminal prosecution in the United States if no aggravating factor is present. We identified only a small number of defendants (36) who engaged in conduct that did not involve one of the aggravating factors. This finding suggests that prosecutors are unlikely to pursue criminal charges for violations of the environmental laws that do not involve significant harm, deceptive or misleading conduct, facilities operating outside the regulatory system, or repetitive violations. It also may help mitigate concerns that prosecutors are targeting technical violations and defendants who acted in good faith.

I also analyzed how often multiple aggravating factors were present and considered the relationship between factors. Two or more aggravating factors were present for 74% of the defendants (638 out of 864 defendants). The fact that such a high percentage of defendants had multiple aggravating factors suggests a higher level of egregiousness than would be present if most defendants had only a single aggravating factor.

Our data regarding the number of aggravating factors is presented in Figure 2:

![Figure 2. Defendants Charged by Number of Aggravating Factors](image-url)
An analysis of these data supports three additional findings regarding the aggravating factors in environmental crimes.

First, one of the first three factors (all factors other than repetitiveness) was present for 88% of the defendants (761 out of 864 defendants). In other words, most defendants were charged for violations that involved harm, deceptive or misleading conduct, or operating outside the regulatory scheme. These findings may suggest a further refinement of my overall conclusions: (1) in most instances, prosecutors have reserved criminal prosecution for defendants with one of the first three aggravating factors; and (2) defendants who engage in conduct that does not involve one of the first three factors are unlikely to face criminal charges.

Second, repetitiveness often is present when criminal charges are brought but rarely is the sole aggravating factor. Repetitiveness was the most prevalent of the four factors, accounting for 79% of the defendants (679 out of 864 defendants). Repetitiveness was the sole aggravating factor, however, for only 10% of the defendants who committed repetitive violations (67 out of 679 defendants), which is the lowest for any aggravating factor. Stated differently, 90% of the defendants who committed repetitive violations (612 out of 679 defendants) also had at least one other aggravating factor. These findings suggest that, while prosecutors may prefer to charge repetitive violations, repetitiveness alone may not be driving charging decisions.

Third, more than 71% of defendants (612 out of 864 defendants) engaged in conduct that involved one of the first three factors (significant harm, deceptive conduct, operating outside the regulatory system) and repetitiveness. Since most environmental crimes involve one of the first three aggravating factors (88% of all defendants) and most environmental crimes involve repetitive violations (79% of all defendants), we would expect to see one of the first three factors present along with repetitiveness in a high percentage of cases. But the relationship was even stronger when we looked at multi-factor defendants. Repetitiveness was present for 96% of the defendants with two or more aggravating factors (612 out of 638 defendants). For defendants with two factors, repetitiveness was present for 94% of the defendants (443 out of 469 defendants). The pairing of repetitiveness with one or more of the other aggravating factors was the most dominant multi-factor relationship when

57 Operating outside the regulatory system also is the sole aggravating factor in only 11% of the cases where it is present (30 out of 281 defendants). In contrast, deceptive or misleading conduct is the sole aggravating factor for 36% of the defendants who engaged in deceptive or misleading conduct (136 out of 547 defendants).

58 Of course, most defendants in our dataset committed repetitive violations, so I would expect to see a significant overlap between repetitive violations and other factors. Still, it is revealing that the other three factors were present so often and that repetitiveness appeared by itself so infrequently.
calculated as a percentage of all defendants (71% of all defendants). This finding suggests that prosecutors often reserve criminal prosecution for violations that involve both one of the first three factors and repetitiveness and are less likely to bring criminal charges if that relationship is absent.

Our research does not mean that the aggravating factors I have identified will trigger criminal prosecution. Declined cases are not public, so we do not have a control group of cases where prosecutors decided not to pursue criminal charges. Nor could we create a comparison group of civil matters, because civil cases involve notice pleading and most are resolved by consent decrees that do not identify whether there were aggravating factors. Indeed, I would expect that civil and administrative cases also involve at least significant harm and repetitive violations (deceptive or misleading conduct, in my experience, is likely to result in a referral for criminal enforcement). Nonetheless, my findings that criminal enforcement is reserved for cases involving at least one of these aggravating factors helps clarify the role of environmental criminal enforcement and reduces uncertainty in the regulated community about which environmental violations might lead to criminal charges.

3. Both corporations and individuals should be held accountable for environmental crime

Criminal enforcement of the environmental laws in the United States largely focuses on corporate wrongdoing—and with it the prosecution of corporations and responsible individuals within those companies. As explained in more detail below, the most effective way to combat environmental crime is to prosecute both the corporations and the individuals involved. Environmental crime has pernicious effects in our communities that warrant the use of all available tools to address egregious violations of the environmental laws.

Corporations in the United States are criminally liable for the acts of their employees or agents, committed within the scope of the employment or agency, for the benefit of the corporation. The corporation must act with the mental state

59 The combination of one of the first three factors and repetitiveness also is the most dominant relationship as a percentage of all cases, accounting for 68% of all cases in the dataset (450 out of 664 cases).

60 N.Y. Cent. & Hudson River R.R. v. United States, 212 U.S. 481, 494 (1909). New York Central requires the first two elements: (1) acts of employees or agents; and (2) committed within the scope of the employment or agency. Subsequent decisions have added for the benefit of the corporation as a way of ensuring that the conduct is within the scope of the employment or agency. See, e.g., United States v. Potter, 463 F.3d 9, 25 (1st Cir. 2006). The employee or agent acts for the benefit of the corporation even if the employee or agent acts for her own benefit, as long as the employee or agent acts at least in part to benefit the corporation. United States v. Automated Med. Labs, Inc., 770 F.2d 399, 407 (4th Cir. 1985).
required by the statute in question, which involves imputing the mental state of
individual employees or agents to the corporation. In cases where no corporate
employee or agent possesses the requisite mental state, however, criminal liability
may be imposed based on the collective knowledge of the corporate employees or
agents. It is not a defense for a corporation to argue that the conduct was not
authorized by the board or officers of the corporation. Nor is it a defense to argue
that the conduct was prohibited by official policies of the corporation or
instructions of supervisors.

From a theoretical perspective, there are retributive and utilitarian
justifications for imposing criminal liability on corporations for environmental
crime. I argue that corporations are moral actors, with the capacity to act
intentionally and to do good or evil, despite the fact that they do not have
consciences, beliefs, or desires like individuals. Environmental crimes betray our
moral obligation to be stewards of the habitat that sustains all life and, in the
process, can cause ecological harm and jeopardize public health. From a utilitarian
perspective, companies that break the environmental laws must be deterred and
cannot have a competitive advantage over companies that comply with the law.
Companies do not want to be labelled corporate criminals and therefore will have
more incentives to avoid criminal sanctions than civil sanctions.

Moreover, the expressive value of criminal prosecution—the statement that
society makes, the condemnation it conveys, and the differentiation between
lawful and unlawful conduct—is essential to upholding the rule of law and to
environmental protection efforts, even though the criminal penalties that are
imposed against corporations (fines, restitution, and compliance requirements)
also could be imposed in civil cases. The law confers significant benefits on
corporations with the expectation — indeed, the mandate — that corporations exist
for legal purposes alone. When a corporation exploits those benefits and violates
the public trust by engaging in illegal conduct, society must make clear that its
behavior is unacceptable and condemn its conduct as criminal. Second,
corporations have outsized power and influence in our society. When a
corporation abuses that power and influence by committing crimes, society must

61 United States v. Bank of New England, 821 F.2d 844, 856 (1st Cir. 1987) (citing Steere Tank Lines, Inc. v. United States, 330 F.2d 719, 722 (5th Cir. 1964)).
62 United States v. Hilton Hotels, 467 F.2d 1000, 1004 (9th Cir. 1972) (citations omitted).
63 Id. at 856.
64 Id.
66 Uhlmann, Erosion of Corporate Criminal Liability, supra note 65, at 1333.
impose blame, require accountability, and insist upon acceptance of responsibility. Third, corporations can neither be jailed nor have their individual liberties restricted when they commit crimes. The distinctive feature of corporate criminal prosecution is its ability to label corporate lawlessness as criminal, which is qualitatively different than labeling misconduct as a civil or administrative violation and critical to bringing corporate criminals to justice.

At the same time, the prosecution of corporations is not a substitute for the prosecution of culpable individuals. When corporations commit environmental crimes, prosecutors should make every effort to identify culpable individuals and, if supported by the law and the facts, bring criminal charges against those individuals. The possibility that corporate officials could be jailed for their wrongdoing is the strongest deterrent for environmental crime. Corporate officials will be reluctant to commit violations of the environmental laws if they believe that they may be incarcerated for their wrongdoing, which involves a more personal calculus than the abstract possibility that the corporation may be fined for its misconduct.

Given the potential harm and lawless conduct inherent in environmental crime, both corporations and individuals should be held accountable when environmental crime occurs. At a minimum, prosecutors and investigators should have the ability to consider charges against both corporations and individuals, so that the full range of enforcement options are available to address egregious environmental violations. The United States Department of Justice recognizes this principle, making clear in its guidance for prosecutors that there is no binary choice to be made between prosecuting corporations and prosecuting individuals for environmental crime and other corporate misconduct. “Prosecution of a corporation is not a substitute for the prosecution of criminally culpable individuals within or without the corporation.” There is no reason that we should limit societal tools to fight environmental crime, in essence taking on the task with one hand tied behind our backs.

The prosecution of both corporations and individuals offers benefits beyond those conferred by using all available resources to combat environmental crime. The prosecution of corporations addresses the wrongdoing of the corporation as a whole; the prosecution of individuals addresses her contribution to the larger corporate problem. The prosecution of the corporation seeks to change corporate behavior in the future; the prosecution of the individual is directed at the

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67 See David M. Uhlmann, After the Spill Is Gone: The Gulf of Mexico, Environmental Crime, and the Criminal Law, 109 Mich. L. Rev. 1413, 1443 (2011) (“[c]orporate officials are more likely to comply with the law when they fear that they may go to jail if their violations are discovered”).

employee’s behavior in the future. The prosecution of the corporation condemns and assigns blame to the corporate culture and the misplaced corporate priorities that led to criminal conduct by the employee; the prosecution of the individual addresses the poor choices made by the individual corporate employee.

The only circumstance where I would suggest that prosecutors might be expected to choose between the prosecution of a corporation and the prosecution of an individual are cases involving small proprietorships. In those prosecutions, where there is effectively an identity between the corporation and the individual, I would prosecute the individual and decline to prosecute the corporation.69 I say so because there is nothing to be gained in cases involving so-called “Mom and Pop” companies and sole proprietorships — no retributive, utilitarian, or expressive purpose — that is not already achieved by prosecuting the owner of the company.70

In cases involving larger corporations, the calculus shifts, because there is a corporate entity that is larger and distinct from its individual members, with influence over the conduct of corporate affairs that even a senior management official is unlikely to possess. In the rare case where a larger corporation is the alter ego of its board chairman or its chief executive officer — and where that person carried out unlawful activity on behalf of the corporation — it theoretically might be possible to satisfy the goals of criminal prosecution by charging only the chairman or chief executive officer. In all other cases, however, I would argue that charges must be brought against the corporation and responsible individuals.

Where senior officials are involved in environmental crime, it is appropriate to charge both the company and the culpable individuals, because the culpability of the corporation qua corporation is greatest; it would be incongruous to decline criminal prosecution of the corporation when misconduct reached senior management. The need for corporate prosecution may be even greater in cases where only lower-level supervisors can be charged with wrongdoing. In cases where the only individuals who can be charged are at low levels within the corporate hierarchy, the weight of criminal prosecution falls on individuals who, while culpable, had no control over the corporate policies that led to criminal activity.

69 Samuel W. Buell, The Blaming Function of Entity Criminal Liability, 81 IND. L.J. 473, 535 n.263 (2006) (“It is hard to see the justification for entity criminal liability in cases of sole or near-sole proprietorships. Assuming that entity liability is implicated because of the owner’s crime, the entity effectively represents just another personal asset of the offender.”).

70 Accord Gerard E. Lynch, The Role of Criminal Law in Policing Corporate Misconduct, 60 Law & Contemp. Probs. 23, 51 (19970 (small and closely-held corporations are “unlikely to be perceived by the public as having any separate personality” from their individual owners and managers). Stated differently, in Mom and Pop companies there is no corporate culture independent of the owners nor corporate blameworthiness independent of the owners.
The need for corporate prosecution may be greatest in the most criticized — and most misunderstood — cases: prosecutions where no individuals are charged. Prosecutors should not pursue corporate-only prosecutions in exchange for not prosecuting individuals,\textsuperscript{71} which is a misuse of prosecutorial discretion and creates the appearance that corporations can buy-off charges against corporate officials. Nor should prosecutors resolve cases with corporate-only prosecutions because they are unwilling to invest the time and effort required to prosecute individuals. Likewise, prosecutors should not bring corporate-only charges based on weak evidence that corporations might not contest because of the difficulty of defending corporate cases or to avoid the scrutiny of a trial.

In my experience, however, most corporate-only prosecutions occur because, while individuals could be charged, prosecution of those individuals is not appropriate as a matter of prosecutorial discretion. As a threshold matter, prosecutors only should consider criminal charges if there is sufficient evidence to prove guilt beyond a reasonable doubt, and if they are confident that they can address any legal issues and defenses that may be raised by the defendant.\textsuperscript{72} But the decision to charge does not end with an evaluation of the evidence and possible defenses. Prosecutors also must consider principles of fairness and justice to ensure that charges are reserved for the conduct and defendants that are culpable.\textsuperscript{73}

In the environmental crime context, significant violations could occur at a company where the only individuals with sufficient knowledge to be charged criminally are low-level employees — not even supervisors — who never received sufficient training or the resources necessary to comply with the law. Their supervisors, who might make better targets based on their higher status within the company, may have had no better training and no more resources. Yet higher up the corporate ladder, where responsibility for poor training and inadequate resources resides, management officials may not have enough knowledge to be charged with

\textsuperscript{71} See Memorandum from Sally Q. Yates, Deputy Attorney Gen., U.S. Dep’t of Justice, Individual Accountability for Corporate Wrongdoing (Sept. 9, 2015) at 5, available at http://www.justice.gov/dag/file/769036.download (“Absent extraordinary circumstances, no corporate resolution will provide protection from criminal or civil liability for any individuals.”). But see Brandon L. Garrett, The Corporate Criminal as Scapegoat, 101 Va. L. Rev. 1789, 1795 (2015) (finding that, between 2001 and 2014, charges were brought against individuals in only 34 percent of deferred and non-prosecution agreements).

\textsuperscript{72} See United States Attorneys’ Manual§ 9-27.220 (2008) (advising a prosecutor to initiate charges only if “the admissible evidence will probably be sufficient to obtain and sustain a conviction”); Uhlmann, Prosecutorial Discretion and Environmental Crime, supra note 14, at 164 (arguing that “prosecutors should only bring charges if there is sufficient evidence to prove each element of the offense beyond a reasonable doubt”).

\textsuperscript{73} Uhlmann, Prosecutorial Discretion, supra note 14, at 215 (“Prosecutors thus have reserved criminal prosecution for culpable conduct and avoided charges based on technical violations or when defendants acted in good faith.”).
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crimes. In those cases, where crimes occurred and there is a need for accountability, it may not be fair or just to charge the employees or even their immediate supervisors.74 Instead, charges should be brought against the corporation that did not provide the training or the resources that its employees needed.

Other corporate-only prosecutions occur because it is not possible to develop sufficient evidence against individuals to charge them with wrongdoing. Corporations compartmentalize knowledge and subdivide operational duties to promote corporate efficiency.75 Where the corporate structure makes it impossible to charge individuals, there still is a societal need to address the wrongdoing and ensure accountability. In those cases, the only potential defendant is the corporation.76 Prosecutors must choose between prosecuting the offending corporation and refusing to bring criminal charges despite clear evidence of corporate wrongdoing.

4. Conclusion

Criminal enforcement of environmental violations is an essential tool for ensuring compliance with the environmental laws. In an optimal enforcement scheme, regulators also have the option of pursuing civil or administrative sanctions, so that criminal prosecution is reserved for violations that involve aggravating factors that make the underlying conduct more egregious. Not every environmental violation should be criminal but when criminal violations occur, both corporations and individuals should be held accountable to protect the environment and public health, uphold the rule of law, and bring environmental criminal to justice.

74 Lynch, supra note 70, at 52 (stating that a corporate prosecution is appropriate “where the individuals who can be punished are insufficiently important to bear the weight of stigma appropriately attaching to the harmfulness or offensiveness of the wrong”).

75 United States v. Bank of New England, 821 F.3d 844, 856 (1987) (“Since the Bank had the compartmentalized structure common to all large corporations, the court's collective knowledge instruction was not only proper but necessary.”).

76 Lynch, supra note 70, at 52 (stating that a corporate prosecution is appropriate “when no individual can be proven culpable”).