
OCEANIC IMPUNITY

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ABSTRACT

Ocean protection is essential to avoid climate disaster. Phytoplankton, seaweeds, and sea grasses produce more than half of Earth's oxygen—exceeding all terrestrial forests and plants combined—and absorb about ninety percent of the heat generated by rising emissions. Yet oceans continue to be sites for brazen environmental law violations, from illegal fishing to toxic dumping. International criminal law has largely ignored these crimes, even when they amount to offshore environmental atrocities. Meanwhile, legal structures for ocean governance tend to focus on regulatory compliance, self-policing, and dispute resolution, all of which have proved inadequate to protect oceans and coastal communities. Without more global enforcement, environmental criminals will continue to operate with impunity at sea, even as their crimes exacerbate existential climate threats.

Mare liberum or freedom of the seas has been a foundational principle of ocean law for centuries, dating back to the writings of Hugo Grotius. But unconditional free seas are no longer defensible in the Anthropocene. The idea of free seas falsely presumes an inexhaustible ocean too vast to govern. Consequently, governance models based solely on the principle of free seas continue to legitimate careless national policies, destructive relations with marine ecosystems, and exploitation of vulnerable ocean environments. Moving forward the international community must defend oceans as the heritage of all humankind and work together to protect seas against serious environmental harms.

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This Article develops a blueprint for targeted forms of international criminalization that would deter offshore ecological destruction. It defends international prosecutions for a range of oceanic environmental crimes, including marine pollution, illegal fishing, and seabed destruction caused by illegal trawling or deep-sea mining. Beyond theories of retribution or deterrence, global criminal prosecutions for environmental harms have expressive value during this time of climate crisis. International criminal convictions showcase humanity's shared concern for ocean life and marine environments. Criminalization of grave ocean harms would signal an ecocentric shift in international criminal law and aid multilateral efforts to protect marine environments and to promote new legal duties to nature.

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INTRODUCTION

Violence and insecurity are common at sea.¹ For centuries, seafarers have committed serious crimes and human rights abuses, often with the explicit backing of sovereign governments.² Oceans are also notorious sites for environmental crimes, including toxic dumping, illegal fishing, and unlawful seabed destruction. Notwithstanding this grim history of oceanic impunity, international criminal law has long neglected oceanic offenses.³ Offshore environmental atrocities, when acknowledged at all, have been prosecuted by domestic law enforcement agencies or adjudicated by federal and state administrative bodies.⁴ Accountability gaps persist for grave ocean crimes, especially those that occur beyond national jurisdictional waters.⁵

Oceans have never been entirely lawless places.⁶ For centuries, state leaders have engaged in various kinds of ocean governance with varying degrees of success.⁷ However, offshore environmental crimes present substantial enforcement challenges for national agencies and international courts, and state efforts to hold criminals accountable for environmental offenses at sea have regularly failed for several reasons.⁸

For example, vast open seas and limited ocean patrols often hamper criminal investigations and enforcement.⁹ Sovereignty claims and principles of noninterference create obstacles for criminal prosecutors that target defendants on foreign vessels.¹⁰ Conflicts over maritime boundaries and territorial seas also exacerbate interstate tensions over criminal jurisdictions,

1. See generally WILLIAM LANGEWIESCHE, *THE OUTLAW SEA* (2004); IAN URBINA, *THE OUTLAW OCEAN* (2019).

2. See LAUREN BENTON, *A SEARCH FOR SOVEREIGNTY* 158–61 (2010); Brian Wilson, *Human Rights and Maritime Law Enforcement*, 52 *STAN. J. INT'L L.* 243, 246 (2016); EMILY HASLAM, *THE SLAVE TRADE, ABOLITION AND THE LONG HISTORY OF INTERNATIONAL CRIMINAL LAW* 1–11 (2020).

3. This Article uses “ocean” and “sea” interchangeably to refer to all global seas and oceans. Geographically, there are five oceans: the Atlantic, Pacific, Indian, Arctic, and the Southern (Antarctic). There are approximately fifty seas throughout the world, from the Sargasso Sea in the Atlantic Ocean to the Arabian Sea in the Indian Ocean to the South China Sea in the Pacific Ocean.

4. See, e.g., Karen Bradshaw, *Settling for Natural Resource Damages*, 40 *HARV. ENV'T L. REV.* 211, 219 (2016); Itzhak E. Kornfeld, *Of Dead Pelicans, Turtles, and Marshes: Natural Resources Damages in the Wake of the BP Deepwater Horizon Spill*, 38 *B.C. ENV'T AFFS. L. REV.* 317, 333 (2011).

5. See Cymie R. Payne, *New Law for the High Seas*, 46 *ECOLOGY L.Q.* 191, 192–93 (2019).

6. See generally LAWRENCE JUDA, *INTERNATIONAL LAW AND OCEAN USE MANAGEMENT: THE EVOLUTION OF OCEAN GOVERNANCE* (1996).

7. See DAVID BOSCO, *THE POSEIDON PROJECT* 4–6 (2021).

8. Michael A. Becker, *The Shifting Public Order of the Oceans: Freedom of Navigation and the Interdiction of Ships at Sea*, 46 *HARV. INT'L L.J.* 131, 133 (2005).

9. See Ascensión García Ruiz, Nigel South & Avi Brisman, *Eco-Crimes and Ecocide at Sea: Toward a New Blue Criminology*, 66 *INT'L J. OFFENDER THERAPY & COMPAR. CRIMINOLOGY* 407, 410–11 (2022).

10. See Josh Martin, *A Transnational Law of the Sea*, 21 *CHI. J. INT'L L.* 419, 424 (2021).

particularly within contested territorial waters.¹¹ Additionally, international organizations tasked with ocean protection frequently lack effective enforcement mechanisms or adequate resources to address criminality.¹² Meanwhile, captains flying flags of convenience and corrupt officials at local ports often hide environmental crimes, thereby shielding criminal networks from the monitoring bodies designed to prevent marine pollution and illegal resource exploitation.¹³

Nevertheless, the need for criminal accountability to deter environmental harms and express collective commitments to ocean protection has never been greater. Phytoplankton, seaweeds, and sea grasses produce more than half of the world's oxygen—more than all forests and plants on land combined—and absorb approximately ninety percent of the heat generated by rising emissions.¹⁴ Without healthy seas, the global community is unlikely to achieve its climate goals or to mitigate ongoing environmental impacts of industrialization. Intense waves and storm surges now regularly devastate coastal communities. Lethal chemicals, sewage, and plastics threaten vital fisheries and marine environments worldwide. The climate crisis and marine deterioration are rapidly transforming ocean governance priorities and underscoring the need for enhanced monitoring and enforcement of environmental protections beyond national jurisdictions.

This Article lays the groundwork for international criminalization of ecological harms at sea. It describes the relational dynamics of oceanic impunity and discusses several options for improving accountability in coastal waters and on the high seas. Most important, international criminal prosecutions should express shared principles and concerns about the climate crisis, underscore global commitments to protect marine environments, and raise awareness about destructive consequences of serious ocean crimes.¹⁵

11. See Stephen Cody, *Dark Law on the South China Sea*, 23 CHI. J. INT'L L. 62, 68–69 (2022).

12. Desirée LeClercq, *Outsourcing Enforcement*, 62 VA. J. INT'L L. 271, 273–74 (2022).

13. Anastasia Telesetsky, *Laundering Fish in the Global Undercurrents: Illegal, Unreported, and Unregulated Fishing and Transnational Organized Crime*, 41 ECOLOGY L.Q. 939, 953–61 (2014).

14. DEBORAH ROWAN WRIGHT, *FUTURE SEA: HOW TO RESCUE AND PROTECT THE WORLD'S OCEANS* 26 (2020); see also Christopher L. Sabine, Richard A. Feely, Nicolas Gruber, Robert M. Key, Kitack Lee, John L. Bullister, Rik Wanninkhof, C. S. Wong, Douglas W. R. Wallace, Bronte Tillbrook, Frank J. Millero, Tsung-Hung Peng, Alexander Kozyr, Tsueno Ono & Aida F. Rios, *The Oceanic Sink for Anthropogenic CO₂*, 305 SCI. 367, 370 (2004); Nathaniel L. Bindoff, William W. L. Cheung, James G. Kairo, Javier Aristegui, Valeria A. Guinder, Robert Hallberg, Nathalie Hilmi, Nianzhi Jiao, Md saiful Karim, Lisa Levin, Sean O'Donoghue, Sara R. Purca Cuicapusa, Baruch Rinkevich, Toshio Suga, Alessandro Tagliabue & Phillip Williamson, *Changing Ocean, Marine Ecosystems, and Dependent Communities*, in SPECIAL REPORT ON THE OCEAN AND CRYOSPHERE IN A CHANGING CLIMATE 447, 450 (Working Grp. II Tech. Support Unit ed., 2019).

15. Stephen C. McCaffrey, *Criminalization of Environmental Protection*, in 1 INT'L CRIM. L. 1013, 1015–26 (M. Cherif Bassiouni ed., 3d ed. 2008).

International criminalization of activities that destroy ocean ecosystems would signal a common awareness of critical threats to marine environments and national leaders' willingness to situate humanity within the natural world, not above it.¹⁶ In contrast to the dominant anthropocentrism of international criminal law, international criminalization of ocean crimes could establish duties to nature independent of direct human victimization and recast international criminal accountability as including crimes against marine flora and fauna.¹⁷ Such an ecocentric shift holds promise for "greening" various aspects of international criminal law.¹⁸ Recognizing international crimes against nature, for example, could influence financial investment in the investigation of ocean crimes, tailor prosecutorial priorities, or improve case selection decisions to better reflect environmental concerns in communities worldwide.¹⁹

Part I of this Article conceptualizes oceanic impunity as the embodiment of relationships and interactions between criminal perpetrators and enforcement authorities. Drawing on relational sociology, Part I defines oceanic impunity as a series of unfolding processes and interactions rather than as a permanent state of criminality.²⁰ Attempting to circumvent both methodological individualism and methodological nationalism, this Article identifies seven transnational dynamics that perpetuate criminality on the world's oceans and advances a relational approach to study these dynamics.²¹ By documenting weak transnational and global enforcement practices, relational approaches to oceanic impunity reveal contemporary barriers to criminal accountability, particularly in seas beyond national jurisdictions.

16. Avi Brisman & Nigel South, *Green Criminology and Environmental Crimes and Harms*, SOCIO. COMPASS, Jan. 2019, at 1, 5.

17. See Rob White, *Ecocentrism and Criminal Justice*, 22 THEORETICAL CRIMINOLOGY 342, 358 (2018).

18. See, e.g., Rachel Killean, *From Ecocide to Eco-Sensitivity: "Greening" Reparations at the International Criminal Court*, 25 INT'L J. HUM. RTS. 323, 324–25 (2021).

19. See DAVID R. BOYD, *THE RIGHTS OF NATURE* 109–30 (2017); see generally Christopher D. Stone, *Should Trees Have Standing?—Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972); Vito De Lucia, *Competing Narratives and Complex Genealogies: The Ecosystem Approach in International Environmental Law*, 27 J. ENV'T L. 91 (2015).

20. For background on relational sociology, see generally THE PALGRAVE HANDBOOK OF RELATIONAL SOCIOLOGY (François Dépelteau ed., 2018); Mustafa Emirbayer, *Manifesto for a Relational Sociology*, 103 AM. J. SOCIO. 281 (1997); Ann Mische, *Relational Sociology, Culture, and Agency*, in THE SAGE HANDBOOK OF SOCIAL NETWORK ANALYSIS 80–97 (John Scott & Peter J. Carrington eds., 2011); Mustafa Emirbayer, *Relational Sociology as Fighting Words*, in CONCEPTUALIZING RELATIONAL SOCIOLOGY: ONTOLOGICAL AND THEORETICAL ISSUES 209 (Christopher Powell & François Dépelteau eds., 2013); OWEN ABBOTT, *THE SELF, RELATIONAL SOCIOLOGY, AND MORALITY IN PRACTICE* (2020); JOHN DEWEY AND THE NOTION OF TRANS-ACTION (Christian Morgner ed., 2020).

21. See generally Andreas Wimmer & Nina Glick Schiller, *Methodological Nationalism, the Social Sciences, and the Study of Migration: An Essay in Historical Epistemology*, 37 INT'L MIGRATION REV. 576 (2003).

Part II discusses three ocean crimes—ocean pollution, illegal fishing, and seabed destruction—with consequential effects on marine environments. Part II advances the argument that targeted international criminalization can improve criminal enforcement and accountability for each crime category. International law has long sought to address offshore environmental crimes through treaties and regulatory agreements but monitoring and enforcement challenges have regularly undermined these efforts.

Part III makes the case for targeted international criminalization to supplement existing ocean governance frameworks. By individualizing culpability for offshore crimes against nature, international criminalization creates new modalities for deterrence and novel enforcement mechanisms to address environmental crimes perpetrated beyond national jurisdictions. Selective criminalization through multilateral agreements and international courts can outfit global prosecutors with new tools to address oceanic impunity and ensure protection of marine environments.

Part IV discusses the expanded use of suppression conventions and criminal prosecutions at the International Criminal Court (“ICC”) to combat offshore environmental criminality. Amendments and new protocols to incorporate crimes against nature, including the proposed crime of ecocide, can empower international criminal prosecutors to investigate suspected perpetrators of environmental atrocities at sea.

I. OCEANIC IMPUNITY

Relational approaches to “objects” of legal research require a different method of legal analysis. Relational scholars recognize the mutual constitution of law and social relations. Ocean crimes and oceanic impunity, therefore, cannot be studied as distinctive social facts independent of concrete relationships and social problems. Understanding oceanic impunity requires accounting for evolving personal and institutional interactions that shape both community perceptions and participants’ own identities and practices. In other words, perpetrators of ocean crimes do not operate independent of governance regimes and enforcement agencies that prohibit and police their offshore activities. They exist only in relation to each other. The study of ocean criminality requires empirical investigation of relations among lawmakers, ocean offenders, and law enforcement authorities whose entanglements construct criminality in complex social fields transcending maritime boundaries. A relational approach seeks to overcome an ontological model of law as something outside of social relations and to capture the full situation of meaning-making between the observer and the

observed.²² Oceanic impunity emerges through historically and geographically contingent transactions between legal regimes, law enforcement officials, and ocean outlaws. Offshore criminality, in this sense, is spontaneous, socially complex, and dynamic. It is rarely, if ever, the outcome of free will, rationality, or deeply considered social actions. Shifting oceanic relations are simultaneously constitutive of both lawlessness and order at sea. Study of oceanic impunity therefore requires reflexive empirical investigations and theoretical revision based on changing social practices within national jurisdictions and on the high seas.²³

Relational sociology also provides an alternative view of criminalization. Ocean crimes are not objective empirical facts to study. They are portals into a diverse set of interpersonal processes created and reproduced by social interactions. As an alternative explanatory framework, relational approaches to criminalization seek to move beyond conceptual antinomies—perpetrators and victims, state and non-state, legal and illegal—to focus analysis on evolving transnational practices, exchanges, and dialogues. Viewing oceanic impunity in this way means that targeted international criminalization does more than establish new crimes or empower prosecutors. It has symbolic effects that can transform social relations. Such expressive power in many cases exceeds the benefits of individualized retributive justice. International environmental criminalization under the right social conditions can encourage greater environmental protection by cultivating new social logics and institutional dynamics better aligned with ecocentrism.

A. GEOGRAPHY

Geography matters for ocean accountability. Oceans are massive, open spaces. They are difficult to navigate and made dangerous by high winds, changing currents, and inclement weather. Consequently, oceans are hard places for law enforcement to monitor vessels and activities aboard them.²⁴ Limited resources for patrols hamper maritime enforcement in territorial waters and on the high seas. Another enforcement challenge created by open water and nautical travel is the limited availability of logistical or medical support for routine maritime operations. Patrol boats may operate as solitary

22. JOHN DEWEY & ARTHUR F. BENTLEY, *KNOWING AND THE KNOWN* 203 (1976); François Dépelteau, *Relational Thinking: A Critique of Co-deterministic Theories of Structure and Agency*, 26 *SOCIOLOGICAL THEORY* 51, 70 (2008); François Dépelteau, *Relational Sociology, Pragmatism, Transactions and Social Fields*, 25 *INTERNATIONAL REVIEW OF SOCIOLOGY* 45, 51 (2015).

23. See PIERRE BOURDIEU & LOÏC WACQUANT, *AN INVITATION TO REFLEXIVE SOCIOLOGY* 35 (1992).

24. See, e.g., Yvonne M. Dutton, *Gunslingers on the High Seas: A Call for Regulation*, 24 *DUKE J. COMPAR. & INT'L L.* 107, 108 (2013).

vessels unless they are monitoring shipping lanes, busy harbors, or navigating close to shore. However, while geography certainly matters for oceanic impunity, vast ocean distances cannot completely explain the pervasiveness of offshore criminality.

Advanced satellite imaging and other surveillance technologies, including long-range reconnaissance drones and unmanned submersibles, have increased the visibility of ocean crimes in recent decades. Nonprofit organizations like Global Fishing Watch, Trygg Mat Tracking, and Oceana employ satellite technologies that increasingly make it possible to identify and track particular maritime vessels.²⁵ Vessel tracking technology, big data, algorithms, and artificial intelligence (“AI”) can now be used to estimate apparent fishing efforts and to identify illegal catches in many places.²⁶ While satellite technologies have not yet created an ocean panopticon, they do allow state enforcement agencies to detect a range of ocean crimes, tighten port surveillance, and exercise better control over transitory waterways and commercial shipping channels. New kinds of collaborations between states and nonprofit organizations hold promise for detection of serious ocean crimes. The United States Southern Command (“SOUTHCOM”), for example, has partnered with Global Fishing Watch in recent years to enhance detection of illegal fishing in the Caribbean and the Pacific.²⁷

Several monitoring firms now triangulate public and private data to provide unprecedented real-time surveillance of offshore activities, even across vast geographic areas. Windward, an Israeli based company, uses AI and predictive modeling to create operational profiles of individual vessels, which enables the company to monitor a wider range of private ships. The International Maritime Organization (“IMO”) has registered about 70 thousand maritime vessels worldwide, but Windward tracks more than five times that number using its digitized data.²⁸ The expansion of AI technologies such as these will likely aid maritime law enforcement in identifying suspect vessels and environmentally damaging activities across vast oceans in the coming years.

25. See Gwilym Rowlands, Judith Brown, Bradley Soule, Pablo Trueba Boluda & Alex D. Rogers, *Satellite Surveillance of Fishing Vessel Activity in the Ascension Island Exclusive Economic Zone and Marine Protected Area*, 101 MARINE POL’Y 39, 40 (2019).

26. See GLOB. FISHING WATCH, <https://globalfishingwatch.org> [<https://perma.cc/8WLX-BYZ7>].

27. Press Release, Sarah Bladen, Comm’ns & Int’l Affs. Dir., Glob. Fishing Watch, U.S. Southern Command Signs Partnership Agreement with Global Fishing Watch (June 5, 2021), https://globalfishingwatch.org/press-release/southcom_gfw_partnership [<https://perma.cc/LS4L-335U>].

28. Omer Benjakob, *This Startup Is Using AI to Investigate Crime on the High Seas*, WIRED (Oct. 3, 2020, 6:00 AM), <https://www.wired.co.uk/article/ship-tracking-winward-ai> [<https://perma.cc/2ZY3-N6VV>].

However, visual detection of criminality alone may not improve enforcement or impact overall levels of oceanic impunity. Ocean perpetrators increasingly avoid aerial surveillance by shifting operations to different kinds of marine vessels or simply turning off automated tracking systems. Private fishing vessels, for example, are frequently used to hide illicit trafficking activities, evade detection by enforcement agencies, and distribute the costs of interdiction.

B. TECHNOLOGY

Transforming technologies are another powerful dynamic that shapes oceanic impunity. While new technologies have enhanced states' capacity to monitor oceans and sometimes improved interdiction operations in coastal waters, they have also facilitated criminal enterprises.

Criminal syndicates increasingly use technology to conceal their offshore activities.²⁹ For example, vessel cloaking technologies formerly restricted to advanced naval powers have appeared on global black markets.³⁰ These new technologies enable ship captains to jam or modify data showing their navigational positions. The U.N. requires all large maritime ships to operate satellite transponders and transmit their geographic positions in real time.³¹ But ships using cloaking technologies can transmit false location data to avoid detection in contested waters or to violate international sanctions regimes.³²

Global fuel tankers, for example, disguise resupply locations to visit sanctioned oil ports in Venezuela, Iran, or Russia, and large container ships use new navigational cloaking technologies to hide shipments of commodities traveling to or from embargoed countries. In 2022, ocean monitoring groups discovered hundreds of ships manipulating onboard transmissions to camouflage their navigational location. Surveillance technologies can increase detection of environmental crimes and mitigate oceanic impunity in some cases. But emerging technologies can also fortify criminal networks and shadow economies that contribute to it.

29. Nilufer Oral, *Reflections on the Past, Present, and Future of IUU Fishing Under International Law*, 22 INT'L CMTY. L. REV. 368, 371 (2020).

30. Anatoly Kurmanaev, *How Fake GPS Coordinates Are Leading to Lawlessness on the High Seas*, N.Y. TIMES (Sept. 3, 2022), <https://www.nytimes.com/2022/09/03/world/americas/ships-gps-international-law.html> [<https://perma.cc/T75A-UPF3>].

31. Int'l Mar. Org. [IMO], A.1106(29) (Dec. 2, 2015), *Revised Guidelines for the Onboard Operational Use of Shipborne Automatic Identification Systems (AIS)*, [https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1106\(29\).pdf](https://wwwcdn.imo.org/localresources/en/KnowledgeCentre/IndexofIMOResolutions/AssemblyDocuments/A.1106(29).pdf) [<https://perma.cc/KX48-MCQ2>].

32. Kurmanaev, *supra* note 30.

C. SOVEREIGNTY

The Westphalian system also contributes to oceanic impunity. National maritime jurisdictions established under the 1982 United Nations Convention on the Law of the Sea (“UNCLOS”) prevent the investigation of many offshore environmental crimes.³³ States have criminal jurisdiction over their territorial sea and archipelagic waters, ordinarily the first twelve nautical miles from shore.³⁴ States can further prevent infringements to customs, fiscal, immigration, or sanitary laws and regulations for the next twelve nautical miles where a contiguous zone exists.³⁵ But beyond these waters, state authorities generally lack jurisdiction to investigate or prosecute criminality except on their own flagged vessels or with regard to foreign resource exploitation within their exclusive economic zone.³⁶ Consequently, most of the open ocean lies beyond any national criminal jurisdiction.³⁷

Moreover, even when environmental crimes amount to flagrant violations of domestic criminal law, state authorities routinely fail to enforce criminal laws in their own territorial seas.³⁸

National laws can also facilitate illicit ocean activities. Chinese fishing boats, for example, participate in civilian militia patrols in the South and East China seas. To prevent foreign states and international organizations from tracking these fishing vessels, Chinese national security laws forbid sharing data, including vessel tracking data, with international bodies.³⁹ Under the cover of domestic Chinese law, the fishing vessels go dark in contested waters.

D. FLAGS OF CONVENIENCE

Flags of convenience are yet another pervasive dynamic contributing to oceanic impunity. In 1927, the Permanent Court of International Justice (“ICJ”) held all ships subject to the laws of their flag state. Vessels registered to a national territory were required to operate under the domestic laws of that state. UNCLOS later required a vessel owner to have a “genuine link” to its flagged state, though generous interpretations of what constitutes such a link have been commonplace.⁴⁰ Flag state jurisdiction covers criminal

33. See U.N. Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 433 [hereinafter UNCLOS].

34. UNCLOS, Part II, art. 4.

35. UNCLOS, Part II, art. 33.

36. UNCLOS, Part VII & Part IV.

37. UNCLOS, Part VII.

38. See URBINA, *supra* note 1, at 47.

39. See Cody, *supra* note 11, at 72.

40. See UNCLOS, arts. 90, 91.

enforcement and typically includes oversight of labor and safety standards and international rules as well as maritime law standards.

However, despite its legacy as a foundational principle of maritime law, there is no immediate consequence for a flag state that fails to monitor registered vessel conditions or to prosecute criminal activities aboard. Consequently, flag state enforcement varies considerably.⁴¹ Some states willfully ignore national and international law. Fictitious shell companies linked to the flag country only by a mailing address commonly appear in national vessel registries. Secondary shell companies often are used to further mask vessel ownership. This layered system of corporate ownership means that flag states seeking to enforce criminal codes or regulations may struggle to identify the relevant person or parties, making criminal accountability difficult. Shell companies not only protect secrecy and insulate owners from culpability but also often provide added financial advantages by allowing owners to transfer vessel profits to jurisdictions with lower tax rates. A 2018 study, for example, found that seventy percent of vessels engaged in illegal fishing were flagged in tax haven countries.⁴²

E. REGULATION

Reliance on regulatory compliance is another dynamic that contributes to oceanic impunity. Legal scholars have documented the regulatory turn in international law.⁴³ But less attention has been given to how this regulatory turn has undercut criminal accountability for environmental crimes.

Many state officials and environmental groups view ocean protection as a task for administrative agencies, not criminal prosecutors.⁴⁴ Consequently, environmental treaties typically define adjudication procedures for conflicts between parties but seldom include language that explicitly criminalizes treaty violations.⁴⁵ With this regulatory focus, law enforcement tends to respond to ocean crimes retroactively, which makes the

41. Camille Goodman, *The Regime for Flag State Responsibility in International Fisheries Law – Effective Fact, Creative Fiction, or Further Work Required?*, 23 AUSTL. & N.Z. MAR. L.J. 157, 159–60 (2009).

42. Victor Galaz, Beatrice Crona, Alice Dauriach, Jean-Baptiste Jouffray, Henrik Österblom & Jan Fichtner, *Tax Havens and Global Environmental Degradation*, 2 NATURE ECOLOGY & EVOLUTION 1352, 1352 (2018); see Gohar A. Petrossian, Monique Sosnowski, Dana Miller & Diba Rouzbahani, *Flags for Sale: An Empirical Assessment of Flag of Convenience Desirability to Foreign Vessels*, MARINE POL'Y, March 2020, at 1, 2.

43. Jacob Katz Cogan, *The Regulatory Turn in International Law*, 52 HARV. INT'L L.J. 321, 325 (2011).

44. *Id.* at 200.

45. See Frédéric Mégret, *The Problem of an International Criminal Law of the Environment*, 36 COLUM. J. ENV'T L. 195, 219–20 (2011).

collection of evidence challenging and criminal prosecutions less likely.⁴⁶

Further, regulatory approaches tend to place emphasis on guidelines, voluntary codes of conduct, and self-reporting. This often means that international authorities responsible for monitoring compliance shy away from questions of individual criminal culpability for environmental damage. Some fear that insisting on punishments for criminal wrongdoing will threaten regulatory alliances or jeopardize existing conformity to compliance regimes.

Even when domestic laws impose fines for environmental damage or censure offshore activities, authorities often do not seek legal judgments against vessel owners or crew. Individual accountability for environmental harms is rare. Diplomacy and economic policy remain the primary tools state officials use to encourage treaty compliance.

Ocean regulation, while expansive, is also fragmented among countries and within them. National laws governing ocean protection usually involve multiple agencies and complex jurisdictional questions. In the United States, for example, state agencies tend to regulate marine resources in territorial waters, and federal agencies regulate marine resources in the exclusive economic zone (“EEZ”) and continental shelf.⁴⁷ But even these jurisdictional lines are contested. At least twenty-four coastal states, five island territories, and four Native American tribes make claims to jurisdiction over marine resources in the United States’ ocean territories.⁴⁸ Moreover, even when only a single national law applies, management responsibilities for its regulations may involve various subnational and regional regulatory bodies that complicate lines of authority and enforcement efforts.⁴⁹ Regulatory compliance regimes also tend to adopt governance models that focus on specific resources, marine species, or geographic territories. This creates a patchwork of narrow, overlapping, and potentially competing interests and complicates enforcement more than a more wholistic, ecological approach that focuses generally on biodiversity protection and ecological sustainability.

46. *See id.* at 247.

47. Robin Kundis Craig, *Re-Valuing the Ocean in Law: Exploiting the Panarchy Paradox of a Complex System Approach*, 41 STAN. ENV’T L.J. 3, 23 (2022). The United States is not a party to UNCLOS, but recognizes the maritime boundaries established by the treaty.

48. *Id.*

49. *See id.* at 26.

F. JURISDICTION

Conflicts over maritime boundaries are another dynamic of oceanic impunity. Domestic criminal legal systems generally require a nexus between alleged perpetrators' criminal acts and state claims to maritime jurisdiction. Jurisdictional disputes in contested waters can lead judges to question this nexus and halt criminal investigations and prosecutions. Perpetrators of environmental crimes also purposefully exploit jurisdictional gaps and interstate disputes to avoid obligations under international law.

Although maritime jurisdictions are well defined under UNCLOS, major powers still ignore established maritime limitations. In 2016, for example, the Permanent Court of Arbitration ("PCA") unanimously rejected China's claims to historic rights over most of the South China Sea and found that China had violated the Philippines' sovereign rights by interfering with fishing and resource exploration.⁵⁰ The PCA award, however, did not change Beijing's territorial claims or dissuade the activities of its military and its civilian maritime militia in the contested waters.⁵¹ In brazen disregard of the PCA, China has continued to claim the disputed seas as its jurisdiction.⁵²

Universal jurisdiction might provide an alternative mechanism to combat serious ocean crimes in the future. Historically, states have relied on universal jurisdiction to prosecute pirates and slave traders as enemies of all humankind.⁵³ However, the international community has yet to apply the principle of universal jurisdiction to environmental crimes.⁵⁴

G. CORRUPTION

Corruption is yet another crucial dynamic that contributes to oceanic impunity. National and coastal economies regularly benefit from oceanic impunity, particularly from fisheries that are unlawfully exploitative.⁵⁵ Intentionally permissive state compliance regimes and local officials who act outside legal boundaries can generate windfall profits for local authorities. State leaders may neglect enforcement in exchange for direct payments. In

50. South China Sea Arbitration (Phil. v. China), PCA Case Repository No. 2013-19, 471–77 (Perm. Ct. Arb. 2016).

51. See Jill I. Goldenziel, *Law as a Battlefield: The U.S., China, and the Global Escalation of Lawfare*, 106 CORNELL L. REV. 1085, 1102–04 (2021).

52. See Lucy Reed & Kenneth Wong, *Marine Entitlements in the South China Sea: The Arbitration Between the Philippines and China*, 110 AM. J. INT'L L. 746, 747–48 (2016).

53. See generally M. Cherif Bassiouni, *Universal Jurisdiction for International Crimes: Historical Perspectives and Contemporary Practice*, 42 VA. J. INT'L L. 81 (2001).

54. UNEP, *Observations on The Scope and Application of The Principle of Universal Jurisdiction*, https://www.un.org/en/ga/sixth/75/universal_jurisdiction/unep_e.pdf [<https://perma.cc/747J-F52J>].

55. See Don Liddick, *The Dimensions of a Transnational Crime Problem: The Case of IUU Fishing*, 17 TRENDS ORG. CRIME 290, 293–95 (2014).

some cases, they build cottage industries to aid in the illegal collection of certain marine species, such as sharks and whales.⁵⁶ Rewards of such illegal resource exploitation pool with violating states, even as compliant states bear additional costs of attempted criminal enforcement.

Local officials in some countries also partner with organized crime syndicates, which generally diminishes prospects for criminal accountability.⁵⁷ Threats of violence from members of criminal organizations tend to suppress local complaints and severely restrict community cooperation with outside criminal investigations. Environmental crimes perpetrated by organized criminal groups may also be associated with other criminal activities, such as money laundering, trafficking, and forced labor.

II. OCEAN CRIMES

Environmental ocean crimes are not expressly defined under international law.⁵⁸ Despite overwhelming empirical evidence that offshore environmental harms are global problems with impacts far beyond any single national jurisdiction, no global framework defines normative principles or articulates national obligations to combat environmental sea crimes. Instead, criminalizing ocean destruction depends exclusively on national lawmaking and ratification of treaties or environmental agreements.

Several well-established multilateral environmental agreements (“MEAs”) incorporate provisions that criminalize environmental harms at sea.⁵⁹ The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes (“BASEL”), for example, states that “illegal traffic in hazardous wastes or other wastes is criminal.”⁶⁰ The International Convention for the Prevention of Pollution from Ships (“MARPOL”) also authorizes the use of criminal penalties “to discourage violations” of

56. See, e.g., David D. Caron, *The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AM. J. INT’L 154, 159 (1995); See generally, Keiko Hirata, *Japan’s Whaling Politics*, in NORMS, INTERESTS, AND POWER IN JAPANESE FOREIGN POLICY (Yoichiro Sato & Keiko Hirata eds., 2008).

57. See generally Emma Witbooi, Kamal-Deen Ali, Mas Achmad Santosa, Gail Hurley, Yunus Husein, Sarika Maharaj, Ifesinachi Okafor-Yarwood, Inés Arroyo Quiroz & Omar Salas, *Organized Crime in the Fisheries Sector Threatens a Sustainable Ocean Economy*, 588 NATURE 48 (2020).

58. Vasco Becker-Weinberg, *Recognition of Maritime Environmental Crimes Within International Law*, in *The Environmental Rule of Law for Oceans* (Froukje Maria Platjouw and Alla Pozdnakova Eds.) 207-209 (2023).

59. International Convention for the Prevention of Pollution from Ships art. 4, Feb. 17, 1978, 1340 U.N.T.S. 185–86 [hereinafter MARPOL Protocol].

60. Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal art. 3, Mar. 22, 1989, 1673 U.N.T.S. 132 [hereinafter Basel Convention].

Convention provisions.⁶¹ Countries often impose criminal penalties for trafficked illicit wildlife, including protected marine species, under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (“CITES”).

These and other MEA criminal provisions are useful in combating oceanic impunity. However, most international environmental agreements still focus on regulatory solutions to specific environmental problems and lack adequate monitoring and enforcement mechanisms. In other words, multilateral agreements may aspire to limit marine pollution, avoid fishery exploitation, or revise shipping regulations, but compliance with these agreements still primarily depends on self-policing and domestic administrative oversight. Even where international agreements contain criminal penalties, states often have wide latitude to interpret their legal obligations and broad discretion in enforcing—or not enforcing—criminal sanctions. Ocean governance continues to rely, ineffectively, on a mosaic of layered customs, treaties, and international environmental agreements that prioritize regulatory solutions and voluntary compliance.⁶²

A. OCEAN POLLUTION

In the Anthropocene, ocean pollution presents unprecedented threats to ocean health. According to the United Nations, ocean pollution constitutes at least eighty-five percent of all marine waste.⁶³ Waste disposal at sea dates to early maritime navigation, but the scale and toxicity of ocean pollution has changed over time. In 2021, for example, maritime enforcement agencies in 67 countries identified 1,600 marine pollution offences worldwide in single month.⁶⁴ Human activities are now responsible for fifty-three percent of petroleum discharges to marine environments.⁶⁵ Illegal oil discharges

61. MARPOL Protocol, *supra* note 59, at 186.

62. *See generally* International Convention for the Regulation of Whaling, Dec. 2, 1946, 161 U.N.T.S.; International Convention for the Prevention of Pollution of the Sea by Oil, May 12, 1954, 327 U.N.T.S.; Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, Dec. 29, 1972, 1046 U.N.T.S.; Convention on International Trade in Endangered Species of Wild Fauna and Flora (“CITES”), Mar. 3, 1973, 993 U.N.T.S.; UNCLOS, *supra* note 33; MARPOL Protocol, *supra* note 59; International Convention for the Safety of Life at Sea (“SOLAS”), Nov. 1, 1974, 1184 U.N.T.S.; International Convention on Oil Pollution Preparedness, Response and Cooperation (“OPRC”), Nov. 30, 1990, 1891 U.N.T.S.; Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Sept. 5, 2000, 2275 U.N.T.S.

63. *A New Declaration to Help Save Our Oceans*, UNITED NATIONS ENV’T PROGRAMME (July 7, 2022), <https://www.unep.org/news-and-stories/story/new-declaration-help-save-our-oceans> [https://perma.cc/D2K8-SY89].

64. INTERPOL, Operation 30 Days at Sea 3.0 reveals 1,600 marine pollution offences worldwide, <https://www.interpol.int/en/News-and-Events/News/2021/Operation-30-Days-at-Sea-3.0-reveals-1-600-marine-pollution-offences-worldwide> [https://perma.cc/CDN9-6CC6].

65. Semion Polinov, Revital Bookman & Noam Levin, *Spatial and temporal assessment of oil*

from commercial vessels are a major source of this ocean pollution.⁶⁶ While several multilateral agreements prohibit ocean dumping, few countries invest significant resources to investigate or prosecute offenders, particularly when dumping occurs beyond national jurisdictions.

States agencies and national militaries also dump harmful waste into oceans. The United States, for example, began to dump radioactive waste into the Pacific Ocean after World War II. Between 1946 and 1970, U.S. vessels discarded more than 55,000 containers of radioactive waste.⁶⁷ The Russian navy adopted similar dumping practices and continued to dispose of nuclear waste in the Sea of Japan until 1993. Even today, countries are actively considering ocean dumping of nuclear waste. Japan, for example, plans to discard about 1.3 million tons of contaminated radioactive water from the Fukushima Daiichi nuclear power plant into the Pacific when storage runs out at the current facility.⁶⁸ Discarded poisons, such as DDT, and toxins leaking from spent military munitions pose similar global ecological and health risks.

Plastics pollution needs greater attention, too.⁶⁹ The rough equivalent of one garbage truck of plastic is dumped into the world's oceans every minute.⁷⁰ Slow plastic breakdown generates microplastics that ocean currents circulate throughout the world. Scientists now find microplastics in marine life from every kind of ocean habitat, from shallow coral reefs to deep-sea trenches.⁷¹ In May 2019, the Conference of the Parties to the Basel Convention amended Annexes II, VIII, and IX to define plastics as a hazardous waste and outlaw their disposal at sea.⁷² But international governance and oversight remains haphazard and unreliable.⁷³

spills in the Mediterranean Sea, 167 *Marine Pollution Bulletin* 1, 1 (2021).

66. Ben Vollaard, *Temporal Displacement of Environmental Crime: Evidence from Marine Oil Pollution*, 82 *J. ENV'T ECON. AND MGMT.*, 168, 169–172 (2017).

67. *Learn About Ocean Dumping*, U.S. EPA, <https://www.epa.gov/ocean-dumping/learn-about-ocean-dumping> [<https://perma.cc/2YQD-Z29C>].

68. *Fukushima: Japan Approves Releasing Wastewater into Ocean*, BBC (Apr. 13, 2021, 12:42 AM), <https://www.bbc.com/news/world-asia-56728068> [<https://perma.cc/6J23-ADWN>].

69. See Donald McRae, *Introduction to the Symposium on Global Plastic Pollution*, 114 *AM. J. INT'L L. UNBOUND* 192, 193 (2020); Gerry Nagtzaam, *A Fraying Patchwork Quilt: International Law and Plastic Pollution*, 34 *VILL. ENV'T L.J.* 133, 179 (2023).

70. *Fighting for Trash Free Seas*, OCEAN CONSERVANCY, <https://oceanconservancy.org/trash-free-seas/plastics-in-the-ocean> [<https://perma.cc/Y2ZY-7LVQ>].

71. Anthony L. Andrady, *Microplastics in the Marine Environment*, 62 *MARINE POLLUTION BULL.* 1596, 1596–1601 (2011).

72. See Adopted Decision BC-14/12 (2019), *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, Mar. 22, 1989 28 *I.L.M.* 657 (1989); 1673 *U.N.T.S.* 125.

73. McKayla McMahon, *Tides of Plastic: Using International Environmental Law to Reduce Marine Plastic Pollution*, 28 *HASTINGS ENV'T L.J.* 49, 70 (2022).

Ocean dumping is a quintessential global problem. It inevitably impacts waters beyond sovereign territorial boundaries.⁷⁴ Yet few perpetrators are prosecuted for illegal ocean dumping. Without eyewitnesses, investigators often struggle to identify conclusively the precise source of marine pollution. It can also be tricky at trial to prove causality and other elements of criminal offenses, including the perpetrators' intent or their subjective awareness of the potential for environmental harm. Scientists can detect and measure different types of ocean pollution, but building a case for criminal prosecution generally requires larger-scale investigations by environmental protection and law enforcement agencies.

International law has long struggled to combat toxic pollution. Several international agreements presently prohibit ocean dumping, including the MARPOL and the London Convention.⁷⁵ UNCLOS also requires states to control marine pollution.⁷⁶ Further, several regional agreements ban ocean dumping.⁷⁷ However, enforcement of anti-dumping laws is highly uneven. In some countries, waste disposal is tightly regulated with high penalties for violations of domestic environmental protections. In others, enforcement is non-existent. Reporting and compliance problems also persist at the domestic level, with few options to internationalize enforcement.

Selective international criminalization offers a path forward to hold ocean polluters accountable for harmful dumping on the high seas. Current agreements generally lack powers to punish individual violators, especially when dumping happens beyond a state's territorial waters. Enforcement depends almost entirely on the actions of domestic officials, who may lack resources or an interest in investigating ocean pollution.

Global courts and international prosecutors often have more autonomy than local officials or state agencies to investigate offshore crimes and bring criminal charges. They can also investigate ocean dumping as a crime of omission and prosecute state inaction to stop ocean dumping. If international investigations document ongoing ocean pollution, prosecutors can either charge polluters or threaten prosecution to encourage compliance with existing international prohibitions. The criminal investigations and option to prosecute, even when international prosecutors elect not to bring criminal charges, also expresses a shared global commitment to ocean protection.

74. See generally Sandrine Maljean-Dubois & Benoît Mayer, *Liability and Compensation for Marine Plastic Pollution: Conceptual Issues and Possible Ways Forward*, 114 AM. J. INT'L L. UNBOUND 206 (2020).

75. Gerard Peet, *The MARPOL Convention: Implementation and Effectiveness*, 7 INT'L J. ESTUARINE & COASTAL L. 277, 278 (1992).

76. UNCLOS, *supra* note 40, art. 194, at 478.

77. See Matiangai V.S. Sirleaf, *Not Your Dumping Ground: Criminalization of Trafficking in Hazardous Waste in Africa*, 35 WIS. INT'L L.J. 326, 365–66 (2018).

As with other international criminal investigations, state leaders may try to obstruct investigations, a practice that is sometimes effective at impeding the criminal process.⁷⁸ But this should not distract from the expressive power that targeted criminalization gives international prosecutors to bring global attention to serious environmental crimes at sea. The mere public threat of prosecution can deter some kinds of ocean destruction, even when criminal investigations or prosecutions never occur.

B. ILLEGAL, UNREPORTED AND UNREGULATED FISHING

Illegal, unreported, and unregulated (“IUU”) fishing operations are highly-profitable and annually generate between an estimated \$10 and \$23 billion worldwide.⁷⁹ However, the consequences of IUU fishing can be devastating. IUU fishing depletes fish stocks and inhibits long-term sustainability. It undermines domestic and regional fisheries management and, more universally, ocean conservation. A lack of accountability for IUU fishing can also undercut state governance regimes and disadvantage responsible fishers who abide by existing environmental regulations.⁸⁰

Whales, sharks, turtles, and other protected species have been hunted to near extinction in many regions. IUU fishing tends to target vulnerable marine stocks that are often subject to controls specifically created to prevent fishery collapse. Unreported catches often interfere with essential management plans designed to aid species recovery and to restore the ecological balance, biodiversity, and sustainability of marine environments. IUU fishing also generates food insecurity for coastal communities dependent on local hauls for protein.⁸¹ Absent effective fisheries enforcement, climate change will likely compound these issues.

Prosecuting IUU fishing offenses can be challenging for a variety of reasons. Fishery managers usually have few resources for patrols or boat inspections and depend on fishers’ self-reporting of their catches and fishing methods. At the same time, the absence of high seas patrols makes detection unlikely beyond coastal waters. Illicit operators can hide illegal catches in several ways. Captains can offload catches to bribed port authorities or others

78. See Tatiana E. Sainati, *Divided We Fall: How the International Criminal Court Can Promote Compliance with International Law by Working with Regional Courts*, 49 VAND. J. TRANSNAT’L L. 191, 200 (2016).

79. Telesetsky, *supra* note 13, at 951.

80. See generally *How to End Illegal Fishing*, PEW (Dec. 10, 2013), <https://www.pewtrusts.org/en/research-and-analysis/reports/2013/12/10/how-to-end-illegal-fishing> [https://perma.cc/N6EJ-CE7T].

81. See Cornelia E. Nauen & Simona T. Boschetti, *Fisheries Crimes, Poverty and Food Insecurity*, in ROUTLEDGE HANDBOOK OF MARITIME SECURITY 239, 239–41 (Ruxandra-Laura Boşilcă, Susana Ferreira & Barry J. Ryan eds., 1st ed. 2022).

complicit with their criminal enterprise. Fish can be processed offshore or relabeled to avoid detection. Crews from vessels employing illicit fishing methods, such as bottom trawling, can mix their catches with fish caught legally before returning to port.

Decentralized IUU fishing operations regularly cross jurisdictional lines, making it difficult to identify or track illegal boats or to target those most responsible for organizing criminal networks.⁸² Migrants and captive fishers may be forced to work on unregistered ghost ships where they engage in various forms of unregulated or illegal fishing. Those who attempt to leave can be shackled, sealed below deck, or even cast overboard.⁸³ State enforcement agencies also regularly ignore IUU fishing practices, which offer short-term benefits to coastal communities or provide supplemental income through patronage networks. Corruption and willful blindness to illegality continues to be a major obstacle to oceanic accountability for IUU fishing.

To be clear, there is no shortage of international agreements on fisheries.⁸⁴ But while UNCLOS and the UN Food and Agriculture Organization (“FAO”) are responsible for investigating IUU fishing, these bodies often hamper criminal accountability for perpetrators. Article 73(3) of UNCLOS, for example, authorizes coastal state penalties for fishing violations in EEZs but explicitly forbids imprisonment of offenders absent a bilateral agreement to the contrary.⁸⁵

State leaders must balance protection of fish stocks under current international and regional fisheries’ agreements against other state interests, including economic growth and national security. Consequently, many state governments take no notice of IUU fishing when other salient national interests are at stake. This partly explains why government IUU prosecutions are exceedingly rare. National law enforcement authorities often tolerate wrongdoing in their own civilian fishing fleets.

82. See Telesetsky, *supra* note 13, at 961.

83. Ian Urbina, “Sea Slaves”: *The Human Misery That Feeds Pets and Livestock*, N.Y. TIMES, (July 27, 2015), <https://www.nytimes.com/2015/07/27/world/outlaw-ocean-thailand-fishing-sea-slaves-pets.html> [<https://perma.cc/38SX-GQNF>].

84. See, e.g., G.A. Res. 44/225, at 147–48 (Dec. 22, 1989); Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, Nov. 24, 1993, 2221 U.N.T.S. 91; Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Aug. 4, 1995, 2167 U.N.T.S. 88; Food & Agric. Org. of the U.N., Code of Conduct for Responsible Fisheries, arts. 1.2, 1.3 (Oct. 31, 1995); Christopher J. Carr & Harry N. Scheiber, *Dealing with a Resource Crisis: Regulatory Regimes for Managing the World’s Marine Fisheries*, 21 STAN. ENV’T L.J. 45, 47 (2002).

85. UNCLOS, *supra* note 33, art. 73, at 427.

Efforts to combat IUU fishing generally focus on regulatory enforcement and treat illegal catches as management problems to be addressed by administrative state agencies rather than free-standing criminal offenses. State prosecutions and official public accounts of IUU fishing frequently attribute criminality to personal greed and rogue captains, even when sophisticated global criminal syndicates are known to run IUU fishing operations.⁸⁶ Targeted international criminalization of IUU fishing can empower international prosecutors to investigate global IUU criminal networks, which often extend beyond any single national jurisdiction.

Some IUU-related crimes, including human trafficking and seafood slavery, are already investigated and prosecuted in national jurisdictions. But international criminalization potentially broadens the scope of criminal culpability to include criminal offenses against the environment. International prosecutors can bypass corrupt port officials and domestic agencies complicit in IUU activities and lead investigations of powerful individuals, including high-ranking corporate financiers, who are involved in global IUU fishing. International criminalization individualizes culpability for serious ecological damages that transgress national jurisdictions. It also facilitates accountability for perpetrators engaged in transnational criminal enterprises that destroy marine environments. Further, following criminal convictions, international courts can order criminal reparations to aid the defense and restoration of depleted fish stocks. Criminalization of grave ocean crimes empowers international courts to serve as sentinels of marine environments.

C. SEABED DESTRUCTION

Seabed ecosystems increasingly face threats from illegal trawling and deep-sea mining.⁸⁷ Despite grave and well-documented environmental costs, bottom trawling remains the most common seabed fishing method employed on the high seas.⁸⁸ Deep sea mining exploration and exploitation activities

86. See generally ROB WHITE, *TRANSNATIONAL ENVIRONMENTAL CRIME: TOWARD AN ECO-GLOBAL CRIMINOLOGY* (2011).

87. See, e.g., Charles R. Taylor, *Fishing with a Bulldozer: Options for Unilateral Action by the United States under Domestic and International Law to Halt Destructive Bottom Trawling Practices on the High Seas*, 34 *ENVIRONS: ENV'T L. & POL'Y J.* 121 (2010); Pål Buhl-Mortensen & Lene Buhl-Mortensen, *Impacts of Bottom Trawling and Litter on the Seabed in Norwegian Water*, 5 *FRONTIERS IN MARINE SCI* 42 (2018).

88. Kerry Tetzlaff, *Bottom Trawling on the High Seas - Protection under International Law from Negative Effects*, 9 *N.Z. J. ENV'T L.* 239, 241 (2005); Lissette Victorero et al., *Out of Sight, But Within Reach: A Global History of Bottom-Trawled Deep-Sea Fisheries From >400 m Depth*, *FRONTIERS IN MARINE SCI.* (2018); Keelin Bogart Ciccariello, *Bottom Trawling: A Goldilocks Approach to Evaluating the Right Level for Effective Regulation*, 46 *SUFFOLK TRANSNAT'L L. REV.* 35 (2023).

also increasingly threaten seabed environments.⁸⁹

The Clarion-Clipperton Zone (“CCZ”) in the Pacific Ocean is an area roughly the size of Europe, spanning more than 3,000 miles at depths of 12,000 to 18,000 feet.⁹⁰ The CCZ seabed is rich in polymetallic nodules, a potential source of metals needed for lithium-ion batteries and other green energy technologies.⁹¹ Deep-sea mining could begin there in the next few years.⁹² Because the area lies in international waters, the International Seabed Authority (“ISA”) governs mining in the CCZ.⁹³ Companies seeking to mine the area must partner with a UNCLOS member country and apply for authorization from the ISA—a UN agency with fifty employees, a modest annual budget, and a jurisdiction that covers half the world.⁹⁴ As it stands, more than a dozen international companies have exploration contracts for the CCZ.⁹⁵ A 2022 ocean trial conducted by The Metals Company, a Canadian-based mining company that has partnered with Nauru to start mining the CCZ, generated fierce debate and opposition from some UNCLOS member states, including several states that are now seeking a moratorium on deep-sea mining operations.⁹⁶

Understanding the environmental consequences of mining the CCZ is complicated by the depths of mining operations and the current lack of information about deep-sea ecology.⁹⁷ Marine scientists estimate that ninety

89. Stephen Cody & Jeffrey Feldmann, *Exploiting Seabed Law*, 45 U. PA. J. INT’L L. 181 (2024).

90. National Oceanic and Atmospheric Administration (NOAA) Ocean Explorer, Deep-sea Mining Interests in the Clarion-Clipperton Zone (last visited Feb. 15, 2024, 2:00PM), <https://oceanexplorer.noaa.gov/explorations/18ccz/background/mining/mining.html> [https://perma.cc/CSP5-QUNV].

91. Davide Castelvechi, *Electric Cars and Batteries: How Will the World Produce Enough?*, NATURE (Aug. 17, 2021), <https://www.nature.com/articles/d41586-021-02222-1> [https://perma.cc/H6KY-KNHZ].

92. Eric Lipton, *Secret Data, Tiny Islands and a Quest for Treasure on the Ocean Floor*, N.Y. TIMES (Aug. 29, 2022), <https://www.nytimes.com/2022/08/29/world/deep-sea-mining.html> [https://perma.cc/FHR4-KDY8].

93. *Exploration Contracts*, INT’L SEABED AUTH., <https://www.isa.org/jm/exploration-contracts> [https://perma.cc/J45E-YHMK].

94. Lipton, *supra* note 92.

95. Elizabeth Claire Alberts, *Deep-Sea Mining: An Environmental Solution or Impending Catastrophe?*, MONGABAY (June 16, 2020), <https://news.mongabay.com/2020/06/deep-sea-mining-an-environmental-solution-or-impending-catastrophe> [https://perma.cc/78WJ-BCJU].

96. Todd Woody, *France Puts Future of Deep Sea Mining in Doubt*, BLOOMBERG (Nov. 10, 2022, 3:00 PM), <https://www.bloomberg.com/news/articles/2022-11-10/france-puts-future-of-deep-sea-mining-in-doubt> [https://perma.cc/KZ92-UJW9].

97. See generally Diva J. Amon, Amanda F. Ziegler, Thomas G. Dahlgren, Adrian G. Glover, Aurélie Goineau, Andrew J. Gooday, Helena Wiklund & Craig R. Smith, *Insights into the Abundance and Diversity of Abyssal Megafauna in a Polymetallic-Nodule Region in the Eastern Clarion-Clipperton Zone*, SCI. REPS., July 2016, at 1; Rob Williams, Christine Erbe, Alec Duncan, Kimberly Nielsen, Travis Washburn & Craig Smith, *Noise from Deep-Sea Mining May Span Vast Ocean Areas*, 377 SCI. 157 (2022); Bernd Christiansen, Anneke Denda & Sabine Christiansen, *Potential Effects of Deep Seabed Mining on Pelagic and Benthopelagic Biota*, MARINE POL’Y, Apr. 2020, at 1.

percent of species living in the region earmarked for mining remain undescribed.⁹⁸ Mining advocates argue that environmental damage from seabed mining is minimal when compared to land-based operations, and underscore the need for manganese, iron, copper, nickel, cobalt, lead, zinc, lithium, and rare earth elements to transition to green energy.⁹⁹ Conservationists strongly disagree with mining advocates about the environmental harms of deep-sea mining. They argue that mining operations will gouge the seabed and cause plumes of sediment to enter the water column and resettle over delicate ecosystems.¹⁰⁰ They seek a moratorium on mining until more environmental assessments can be completed on the impact of mining operations.

Presently, the science on the impact of deep-sea mining is nascent.¹⁰¹ Scientists have limited access to such remote depths and insufficient data on deep-sea species, habitats, and ecosystems. Consequently, deep-sea research has neither produced clear baseline data nor determined how sediment plumes will impact marine life on the sea floor.¹⁰² Scientists continue to identify new marine species during expeditions to the ocean floor but still know little about how mining will impact these species. Many deep-sea species are uniquely adapted living thousands of feet below the surface, where they thrive in near-total blackness and under immense water pressure. At such depths, metabolism and evolution slow, and even minor alterations of the environment can have long-term impacts.

98. Muriel Rabone, Joris H. Wiethase, Erik Simon-Lledó, Aidan M. Emery, Daniel O. B. Jones, Thomas G. Dahlgren, Guadalupe Bribiesca-Contreras, Helena Wilklund, Tammy Horton & Adrian G. Glover, *How many metazoan species live in the world's largest mineral exploration region?* CURRENT BIOLOGY 33(12), 2383-2396 (2023).

99. PRIZMA, SCOPING DOCUMENT FOR A SOCIAL IMPACT ASSESSMENT FOR THE NORI-D POLYMETALLIC NODULE COLLECTION PROJECT 21–28 (2022), https://metals.co/wp-content/uploads/2022/12/NORI-D-SIA-Scoping-Dec_2022.pdf [<https://perma.cc/65TZ-XHPU>].

100. Holly J. Niner, Jeff A. Ardron, Elva G. Escobar, Matthew Gianni, Aline Jaeckel, Daniel O. B. Jones, Lisa A. Levin, Craig R. Smith, Torsten Thiele, Phillip J. Turner, Cindy L. Van Dover, Les Watling & Kristina M. Gjerde, *Deep-Sea Mining with No Net Loss of Biodiversity—An Impossible Aim*, 5 FRONTIERS MARINE SCI., Mar. 2018, at 1, 5.

101. See generally Malcolm R. Clark, Jennifer M. Durden & Sabine Christiansen, *Environmental Impact Assessments for Deep-Sea Mining: Can We Improve their Future Effectiveness?*, MARINE POL'Y, 2020, at 1.

102. See Jeffrey C. Drazen, Craig R. Smith, Kristina M. Gjerde, Steven H. D. Haddock, Glenn S. Carter, C. Anela Choy, Malcolm R. Clark, Pierre Dutrieux, Erica Goetze, Chris Hauton, Mariko Hatta, J. Anthony Koslow, Astrid B. Leitner, Aude Pacini, Jessica N. Perelman, Thomas Peacock, Tracey T. Sutton, Les Watling & Hiroyuki Yamamoto, *Midwater Ecosystems Must Be Considered when Evaluating Environmental Risks of Deep-Sea Mining*, 117 PROC. NAT'L ACAD. SCIENCES 17455, 17455–56 (2020); see also Jeremy Spearman, Jonathan Taylor, Neil Crossouard, Alan Cooper, Michael Turnbull, Andrew Manning, Mark Lee & Bramley Murton, *Measurement and Modelling of Deep Sea Sediment Plumes and Implications for Deep Sea Mining*, 10 SCI. REPS. 1, 9 (2020).

Despite the lack of knowledge about deep-sea species, dozens of countries have started to plan mining operations for the near future. In 2017, Japan was the first country to mine its seabed and chose a location off the coast of Okinawa.¹⁰³ Norway also recently discovered rich seabed deposits and authorized further seabed exploration.¹⁰⁴ Mining companies already have begun prospecting for nodules to assess their size, composition, and economic value.¹⁰⁵ Absent political support for a temporary moratorium on seabed exploitation, large-scale commercial operations will likely begin in the next few years.

In the 1960s, Maltese Ambassador Arvid Pardo declared the seabed “the common heritage of all (hu)mankind.”¹⁰⁶ He advocated for an international governance regime to ensure deep sea resources benefited all of humanity, emphasizing the needs of less developed countries to share in any benefits of seabed exploitation. His advocacy eventually resulted in the Law of Sea Convention and the establishment of the International Seabed Authority. His concern that seabed resources serve our common heritage, in particular, seem prescient today. Technological advances and increased demand for mineral resources have renewed interest in mining the sea floor, especially as land-based mineral deposits decline. But the environmental consequences of such offshore operations are still unknown, and perhaps unknowable in the coming decade.

As demand grows, mining pressures will continue to increase, and more countries will partner with large corporations to exploit the deep sea.¹⁰⁷ Lackluster supervision of deep-sea mining operations and no real threat of criminal prosecution from partner countries creates well-founded fears that mining companies will be able to operate with impunity.¹⁰⁸ Under ISA contractual arrangements, companies are required to undertake baseline studies and conduct annual environmental assessments.¹⁰⁹ The ISA is tasked

103. *Japan Successfully Undertakes Large-Scale Deep-Sea Mineral Extraction*, JAPAN TIMES (Sept. 26, 2017), <https://www.japantimes.co.jp/news/2017/09/26/national/japan-successfully-undertakes-large-scale-deep-sea-mineral-extraction> [https://perma.cc/CY6G-KBTT].

104. Nerijus Adomaitis, *Norway Finds “Substantial” Mineral Resources on Its Seabed*, REUTERS (Jan. 27, 2023, 5:29 AM), <https://www.reuters.com/markets/commodities/norway-finds-substantial-mineral-resources-its-seabed-2023-01-27> [https://perma.cc/45KS-VW88].

105. *See Norway’s Approval of Sea-Bed Mining Undermines Efforts to Protect the Ocean*, 625 NATURE 424, 424 (2024).

106. Address by Arvid Pardo to the 22nd session of the General Assembly of the United Nations (1967), U.N. GAOR, 22nd sess., U.N. Doc. A/6695 (1967).

107. *See* Christiana Ochoa, *Contracts on the Seabed*, 46 YALE J. INT’L L. 103, 114–15 (2021).

108. *See* Jochen Halfar & Rodney M. Fujita, *Danger of Deep-Sea Mining*, 316 SCI. 987, 987 (2007).

109. Michael Lodge, David Johnson, Gwenaëlle Le Gurun, Markus Wengler, Phil Weaver & Vikki Gunn, *Seabed Mining: International Seabed Authority Environmental Management Plan for the Clarion-Clipperton Zone. A Partnership Approach*, 49 MARINE POL’Y 66, 67 (2014).

with judging these environmental assessment plans and determining the likelihood of compliance before they grant mining permits. However, once companies have permits in hand, the system relies on self-policing. Many conservationists believe this lack of mining operations oversight – combined with companies’ profit motive—will inevitably result in a tragedy of the deep-sea commons.¹¹⁰

International prosecutions, however, could help to ensure compliance with ISA regulations and deter companies from intentionally generating severe environmental harms. The possibility of individual criminal punishments for wanton acts of environmental destruction puts company officials on notice.

Further, the reparations processes that follow international criminal prosecutions could provide added resources to coastal communities and oversight agencies if company executives act illegally and conceal their criminal activities. Reparations decisions could also generate funds for the restoration and protection of marine life in the deep sea. Nature is resilient when provided the chance to recover. Criminal prosecutions and post-conviction reparations could help to ensure that environmental damage from mining violations stops with the first bad actor and that damaged sectors have time to recover before other operations can begin.

III. INTERNATIONAL CRIMINALIZATION

No global organization monitors environmental ocean crime or coordinates national enforcement efforts to protect marine environments. As a result, accountability for offshore environmental crimes depends on an incomplete jigsaw puzzle of enforcement regimes. State agencies and international organizations tasked with combatting transnational organized crime or protecting the marine environment from illegal fishing and toxic dumping often lack the capacity to address even the most egregious and visible ocean violations. Few offshore environmental crimes are ever investigated or prosecuted, even when marine scientists and conservation groups document permanent and extensive environmental harms.

Human rights scholars have rightfully criticized the punitive focus of international law, especially when the focus on criminal accountability and retributive punishment eclipses more reparative approaches to human rights and transitional justice. Some scholars argue that the turn to criminal law in international justice distracts from less visible forms of state violence and

110. Scott J. Shackelford, *The Tragedy of the Common Heritage of Mankind*, 28 STAN. ENV'T L.J. 109, 111 (2009).

global efforts to grapple with persistent structures of social inequality.¹¹¹ Under this view, criminalization diverts attention and resources from endeavors to combat poverty, racial discrimination, and enduring forms of colonial domination.

Uncritical criminalization is a disturbing problem, and that is not what I suggest here. However, any serious global effort to address the climate crisis will need enforcement mechanisms to provide greater accountability for environmental harms beyond national jurisdictions. Rapid climate changes and environmental degradation demand innovations to improve ocean governance and ensure ocean protection. Targeted international criminalization of serious ocean crimes can provide critical tools to investigate environmental destruction at sea and to deter future harms.¹¹² Criminalizing environmental atrocities can also reinforce the legal status of oceans as the common heritage of humankind and encourage a shift toward greater ecocentrism in international justice.

International criminalization could also facilitate the investigation and prosecution of transnational criminal networks and other groups acting in concert to circumvent environmental protections even when national officials oppose accountability efforts. Organized criminal syndicates engage in various types of illegal fishing and toxic dumping that pose significant threats to marine environments. International criminalization could enable criminal cases against syndicate members independent of domestic interest or capacity to bring criminal charges.

International criminalization could further authorize criminal charges in cases where state officials fail to undertake obligatory actions to protect marine environments. Willful inaction, at least under certain conditions, amounts to a crime of omission. National environmental laws routinely fail to protect marine environments because state authorities are unwilling to enforce the rule of law. International criminalization could help to outlaw official inaction that results in serious ocean destruction and advance efforts to establish an international environmental duty of care.¹¹³ Even when the international criminal investigation of a state official's failure to protect the marine environment does not result in criminal charges, it could still encourage greater compliance with existing environmental regulations and improve regional cooperation on ocean governance. International criminalization communicates a global concern for ocean protection that

111. Karen Engle, *Anti-Impunity and the Turn to Criminal Law in Human Rights*, 100 CORNELL L. REV. 1069, 1120–26 (2015).

112. See McCaffrey, *supra* note 15, at 1015–18.

113. See, e.g., Rob White, *Ecocide and the Carbon Crimes of the Powerful*, 37 U. TAS. L. REV. 95, 114 (2018).

promotes dialogue and cooperation even in the absence of criminal prosecutions. Criminalization of environmental offenses on the high seas could also direct international attention toward invisible ocean harms often neglected by international criminal courts.¹¹⁴

The present incapacity of the international community to hold perpetrators accountable for ocean crimes abandons nearly all maritime enforcement to state and local officials, who often have vested interests in ongoing practices of oceanic impunity. International criminalization, in contrast, offers a potential solution to the problem of state corruption and complicity. Inadequate domestic enforcement of environmental law frequently results in environmental harms that cross borders and warrant international concern. *Mare liberum* or *freedom of the seas* has been a foundational principle of ocean law for centuries, dating back to the writings of Hugo Grotius.¹¹⁵ This idea of free seas has remained the backbone of ocean governance. But unconditional free seas are no longer defensible in the Anthropocene. Governance models based solely on the principle of free seas often legitimate careless national policies and encourage exploitation and destruction of vulnerable ocean environments.

Accountability is a primary aim of international justice.¹¹⁶ Yet, no single state institution or solitary judicial body can respond to the complex challenges posed by oceanic impunity. Various organizations, law enforcement agencies, and courts play complementary roles in collective responses to transnational criminality and environmental degradation at sea. International criminalization offers a useful, if limited, means to improve accountability for ocean criminality and better coordinate global responses to offshore environmental destruction.

The following section discusses two options for targeted forms of international criminalization. First, the Article discusses the expanded use of suppression conventions to encourage multilateral criminalization of ocean crimes. Criminalization, under the right conditions, enhances environmental compliance and supports international cooperation. Second, the Article discusses Rome Statute amendments that would allow the ICC to investigate certain oceanic crimes of ecocide. Amending the Rome Statute to include the crime of ecocide could transform the ICC into an environmental court of last

114. See generally RANDLE C. DEFALCO, INVISIBLE ATROCITIES: THE AESTHETIC BIASES OF INTERNATIONAL CRIMINAL JUSTICE 22–23 (2022).

115. John T. Parry, *What Is the Grotian Tradition in International Law?*, 35 U. PA. J. INT'L L. 299, 361 (2013); Scott J. Shackelford, *Was Selden Right: The Expansion of Closed Seas and Its Consequences*, 47 STAN. J. INT'L L. 1, 46–50 (2011).

116. See Mirjan Damaška, *What Is the Point of International Criminal Justice?*, 83 CHI.-KENT L. REV. 329, 330–31 (2008).

resort. However, despite the potential benefits of internationally prosecuting ocean crimes, international criminalization should still be viewed as a limited tool for seeking justice and improving environmental ocean protection.

A. SUPPRESSION CONVENTIONS AND VOLUNTARY INSTRUMENTS

Suppression conventions are an alternative mechanism for targeted international criminalization. Suppression conventions are multilateral agreements that require signatories to criminalize certain kinds of activities.¹¹⁷ The threshold for criminalization depends upon the objectives of the sovereign states signing the agreement, but the promise of criminalization signals a mutual commitment to transnational enforcement. Suppression conventions, therefore, help coordinate law enforcement responses by defining substantive legal prohibitions, establishing jurisdictional boundaries, and authorizing procedures for cooperation and investigative methods. Historically, suppression conventions have addressed a range of criminal activities from slavery and human trafficking to serious violations of international and customary law.

Suppression conventions that criminalize environmental harms are particularly salient in the context of oceanic impunity because of shortfalls in environmental monitoring and enforcement in EEZs and on the high seas. The *freedom of the seas* principle generally sanctions unencumbered maritime navigation and unrestricted resource exploitation beyond national jurisdictions, which disincentivizes the monitoring of oceanic harms and often precludes enforcement actions.

Suppression conventions provide two distinct paths for international criminalization. First, state officials can negotiate new stand-alone suppression conventions. These novel agreements could address a broad range of ocean crimes or be tailored to address a specific category of offshore criminality. For example, like-minded states could establish a suppression convention to address biodiversity loss in designated marine protected areas and as part of the convention members states could collectively criminalize specific activities that result in species or habitat destruction. Alternatively, states concerned about protecting migratory routes for pelagic species could negotiate a suppression convention to criminalize fisheries exploitation near migratory seamounts or agree to collectively police important migratory territories.

Because suppression conventions generally require the incorporation of crimes into national criminal codes, the enactment of suppression

117. Neil Boister, *Human Rights Protections in the Suppression Conventions*, 2 HUMAN RIGHTS L. REV. 199, 199 (2002); Roger S. Clark, *Some Aspects of the Concept of International Criminal Law: Suppression Conventions, Jurisdiction, Submarine Cables and the Lotus*, 22 CRIM. L. F. 519, 523 (2011).

conventions could also improve monitoring and enforcement within national jurisdictions, thus improving accountability for oceanic impunity in domestic waters. The domestication of environmental crimes in suppression conventions in some instances could also permit investigations and prosecutions of corporate actors, thereby extending corporate liability for offshore environmental crimes. The utility of these stand-alone suppression conventions would be illustrated if and when a smaller group of interested states developed independent suppression conventions and thereby encouraged a larger community of states to recognize specific ocean crimes.

The second path that suppression conventions offer for international criminalization is that lawmakers already bound by an existing convention could seek to amend it or to enact new protocols that expand its scope. For example, States' parties to the United Nations Convention against Transnational Organized Crime ("UNTOC") could file a resolution at the UNTOC Conference of the Parties to categorize certain ocean crimes as serious crimes under the existing framework agreement and, thereby, establish mutual obligations to investigate and prosecute those ocean crimes. States' parties could also otherwise develop a new protocol outside of the existing framework to supplement the UNTOC. Supplemental protocols have the advantage of cultivating new forms of cooperation among treaty members while also preserving general procedural rules and provisions.

Amendments or additional protocols that incorporate new ocean crimes or binding enforcement provisions could strengthen a range of existing international conventions without scrapping or undermining established agreements. For example, the International Convention for the Regulation of Whaling requires member states to take appropriate measures to punish violators of the convention.¹¹⁸ Present provisions, however, do not include any criminal penalties. Likewise, the Convention for the Prevention of Marine Pollution from Land-Based Sources requires member states to ensure compliance and to punish conduct that contravenes the agreement. But again, the present provisions do not explicitly authorize any criminal punishments. Amendments or additional protocols to established conventions could strengthen enforcement regimes by authorizing some criminal punishments.

Voluntary instruments are an alternative to suppression conventions for criminalization of environmentally destructive activities at sea. They generally operate independent of binding commitments negotiated by participating states. These voluntary instruments, for example, might be simple declarations that define a new ocean crime or articulate a shared

118. See art. 9, International Convention for the Regulation of Whaling, Dec. 2, 1946, 62 Stat. 1716, 161 U.N.T.S. 72.

commitment to investigate and prosecute a specific environmental harm. While such non-binding instruments often depend on implementation agreements and generally function more as regulatory compliance regimes, they can still accelerate multilateral enforcement coordination and legal harmonization in ocean governance. The adoption of voluntary instruments can further express states' shared commitment to environmental conservation and communicate a more ecocentric approach to international law.

Suppression conventions and voluntary instruments are no panacea for oceanic impunity. However, they are adaptable instruments of multilateralism and, as such, provide alternative pathways for states concerned with ongoing environmental crimes to strengthen environmental monitoring and enforcement at sea.

B. INTERNATIONAL CRIMINAL COURTS

International criminal courts are possible mechanisms to investigate and prosecute oceanic impunity. International criminal law has long acknowledged environmental destruction—from aerial bombing campaigns during the Second World War to Agent Orange defoliation programs in the Vietnam War. However, international prosecutors have not traditionally focused on environmental harms in case selection or charging decisions.¹¹⁹ Most acts that cause serious environmental damage are not defined as international crimes whether perpetrated on land or at sea.

1. Rome Statute

As ratified, only one article in the Rome Statute, the ICC's legal foundation, addresses environmental crimes. Article 8(2)(b)(iv) defines "war crimes" to include the following:

Intentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects *or widespread, long-term and severe damage to the natural environment* which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.¹²⁰

Article 8(2)(b)(iv) creates possibilities for environmental war crime prosecutions and expands individualized criminal accountability for

119. See Peter Sharp, *Prospects for Environmental Liability in the International Criminal Court*, 18 VA. ENV'T J. 217, 218 (1999); Payal Patel, *Expanding Past Genocide, Crimes Against Humanity, and War Crimes: Can an ICC Policy Paper Expand the Court's Mandate to Prosecuting Environmental Crimes?*, 14 LOY. U. CHI. INT'L L. REV. 175, 188 (2016).

120. Rome Statute of the International Criminal Court art. 8(2)(b)(iv), July 17, 1998, U.N. Doc. A/CONF. 183/9 (emphasis added) [hereinafter Rome Statute].

environmental offenses committed during armed conflicts.¹²¹ The Article also recognizes environmental damage as a stand-alone offense that need not relate directly to human injuries. In this way, Article 8(2)(b)(iv) moves away from traditional anthropocentrism in international criminal law and closer to an ecocentric vision of international justice.¹²²

However, Article 8(2)(b)(iv) has significant limitations. The definition of environmental destruction requires that harms be “widespread, long-term and severe” but these terms are undefined. As a result, the ICC Office of the Prosecutor (“OTP”) has wide discretion to interpret the language and to decide what kinds of environmental damage fall under the Article’s purview. The exercise of such discretion can irregularly prioritize environmental crimes and raise questions about both fair notice and equitable enforcement.

Article 8(2)(b)(iv) also includes a proportionality requirement that restricts its applicability during armed conflict.¹²³ Acts causing environmental damage must be “clearly excessive” in relation to any anticipated military advantage.¹²⁴ This threshold for disproportionate violations gives military officials significant leeway to defend strategic strikes, even when military actions result in severe environmental harms.¹²⁵ Further, to satisfy the *mens rea* requirement for the offense international prosecutors must establish the defendant’s subjective knowledge of the attack’s disproportionality, which creates a high threshold that must be crossed to secure convictions for environmental destruction.

Finally, and most concerning, Article 8(2)(b)(iv) only covers environmental damage inflicted during armed conflict.¹²⁶ Environmental crimes that happen in times of peace, therefore, fall outside the scope of the Article.

121. Ryan Gilman, *Expanding Environmental Justice After War: The Need for Universal Jurisdiction over Environmental War Crimes*, 22 COLO. J. INT’L ENV’T L. & POL’Y 447, 453–57 (2011).

122. See Jessica C. Lawrence & Kevin Jon Heller, *The First Ecocentric Environmental War Crime: The Limits of Article 8(2)(b)(iv) of the Rome Statute*, 20 GEO. INT’L ENV’T L. REV. 61, 70–71 (2007).

123. Rome Statute, *supra* note 120, art. 8(2)(b)(iv). Article 8(2)(b)(iv) inherits the requirement from Protocol I, which requires that attacks be “excessive in relation to the concrete and direct overall military advantage anticipated.” Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, Dec. 12, 1977, 1125 U.N.T.S. 26 [hereinafter Protocol I].

124. Rome Statute, *supra* note 120, art. 8(2)(b)(iv).

125. See Aurelie Lopez, *Criminal Liability for Environmental Damage Occurring in Times of Non-International Armed Conflict: Rights and Remedies*, 18 FORDHAM ENV’T L. REV. 231, 261, 268 (2007).

126. Tara Weinstein, *Prosecuting Attacks that Destroy the Environment: Environmental Crimes or Humanitarian Atrocities?*, 17 GEO. INT’L ENV’T L. REV. 697, 699 (2005).

2. Ecocide

The crime of ecocide could provide a pathway to prosecute serious ocean crimes perpetrated outside of armed conflicts. Campaigns to criminalize ecocide as an international crime began in the 1970s but for decades failed to gain widespread public support.¹²⁷ But growing awareness about environmental degradation and the climate crisis have resurrected past ecocide debates. In February, the European Union Parliament became the first international body to criminalize serious environmental damage as “cases comparable to ecocide.”¹²⁸ Advocates for criminalization now include a range of world leaders from environmentalist Greta Thunberg to Pope Francis.¹²⁹ Viewed amid their concerns about accelerating environmental degradation, supporters emphasize ecocide’s moral force and expressive power.¹³⁰ They argue that ecocide prosecutions would raise the global profile of environmental crimes, which are too often treated as second order crimes.

In 2021, an independent panel of international criminal law experts published a definition of “ecocide” for consideration as an amendment to the Rome Statute.¹³¹ Subsequent debate on the definition evidences burgeoning interest in the criminalization of ecocide.¹³² The panel definition reads:

127. For discussions on the crime of ecocide, see Richard A. Falk, *Environmental Warfare and Ecocide – Facts, Appraisal and Proposal*, BULLETIN OF PEACE PROPOSALS 4, no. 1 (1973): 80–96; Mark Allan Gray, *The International Crime of Ecocide*, CAL. W. INT’L L.J. 26, no. 2 (1996): 215–271; POLLY HIGGINS, ERADICATING ECOCIDE 61–71 (2015); Polly Higgins, Damien Short & Nigel South, *Protecting the Planet: A Proposal for a Law of Ecocide*, 59 CRIME, L. & SOC. CHANGE 251 (2013); Anastacia Greene, *The Campaign to Make Ecocide an International Crime: Quixotic Quest or Moral Imperative?*, 30 FORDHAM ENV’T L. REV. 1, 1–7 (2019); Peter Sharp, *Prospects for Environmental Liability in the International Criminal Court*, 18 VA. ENV’T L.J. 217, 240–42 (1999); Mégret, *supra* note 45, at 202–03; Darryl Robinson, *Ecocide – Puzzles and Possibilities*, 20 J. OF INT’L CRIM. JUST. 313 (2022).

128. Mette Mølgaard Henriksen, ‘Revolutionary’: EU Parliament votes to criminalise most serious cases of ecosystem destruction, EURONEWS., Feb. 27, 2024, <https://www.euronews.com/green/2024/02/27/revolutionary-eu-criminalises-the-most-serious-cases-of-ecosystem-destruction> [https://perma.cc/FBW2-XDCP].

129. See Sophie Yeo, *Ecocide: Should Killing Nature be a Crime?*, BBC (Nov. 5, 2020), <https://www.bbc.com/future/article/20201105-what-is-ecocide> [https://perma.cc/38XE-XRLM] (“Pope Francis has also called for ecocide to be recognised as a crime by the international community, and Greta Thunberg has backed the cause too, donating €100,000 (£90,000) in personal prize winnings to the Stop Ecocide Foundation.”).

130. See generally CARSTEN STAHN, JUSTICE AS MESSAGE: EXPRESSIVIST FOUNDATIONS OF INTERNATIONAL CRIMINAL JUSTICE (2020).

131. STOP ECOCIDE FOUND., INDEPENDENT EXPERT PANEL FOR THE LEGAL DEFINITION OF ECOCIDE 5 (2021), <https://static1.squarespace.com/static/5ca2608ab914493c64ef1f6d/t/60d7479cf8e7e5461534dd071624721314430/SE+Foundation+Commentary+and+core+text+revised+%281%29.pdf> [https://perma.cc/WE4E-T3WM].

132. See also UCLA Promise Institute for Human Rights Group of Experts, Proposed Definition of Ecocide (2021), <https://ecocidelaw.com/wp-content/uploads/2022/02/Proposed-Definition-of-Ecocide-Promise-Group-April-9-2021-final.pdf> [https://perma.cc/RF7R-QRCA].

“‘[E]cocide’ means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts.”¹³³

The proposed definition would significantly broaden the scope of criminal culpability for environmental destruction and clarifies some critical statutory terms. As described above, although ICC prosecutors must establish that international crimes are “severe,” “widespread,” and “long-term,” the Rome Statute does not explicitly define these essential terms.¹³⁴ This lack of statutory clarity would make it difficult for OTP to determine whether specific environmental harms would satisfy the legal threshold for ecocide. The new draft definition solves this problem by clarifying the terms as follows:

“Severe” means damage which involves very serious adverse changes, disruption or harm to any element of the environment, including grave impacts on human life or natural, cultural or economic resources;

“Widespread” means damage which extends beyond a limited geographic area, crosses state boundaries, or is suffered by an entire ecosystem or species or a large number of human beings;

“Long-term” means damage which is irreversible or which cannot be redressed through natural recovery within a reasonable period of time.¹³⁵

In addition to clarification of the legal elements, the independent panel definition enables crimes to be prosecuted during peacetime, discarding the previous requirement to show a nexus between the environmental harm and an armed international conflict. This change recognizes that environmental atrocities frequently happen outside of war. The new definition also criminalizes acts irrespective of their connection to a civilian population or the boundaries of state territories. Individuals can be prosecuted for ecocide even when environmental damage does no harm to people. This change potentially brings corporate officials under the scope of criminal culpability if they engage in unlawful or wanton acts when they are aware of the substantial likelihood of severe and long-term environmental damage.

The proposed definition of ecocide further criminalizes acts of omission under some circumstances. With environmental harms, the failure to act—whether to prevent damage or to stop its continuance—can be as devastating as affirmative acts of destruction. Under the draft definition, global prosecutors would have the ability to investigate perpetrators responsible for serious and ongoing environmental dumping, illegal fishing, or unlawful

133. *Id.*

134. Rome Statute, *supra* note 120, art. 8(2)(b)(iv).

135. STOP ECOCIDE FOUND., *supra* note 131.

mining operations. In some cases, even gross failures to prevent greenhouse gas emissions could result in potential criminal liability. Expanded international criminal culpability could help to safeguard domestic environmental protections and encourage criminal investigations of state officials complicit in serious oceanic crimes or other significant crimes against nature. Enlarging the scope of criminal culpability could also improve state compliance with environmental treaties, conventions, and voluntary instruments if the threat of international criminal investigation deters violations by state officials and corporate leaders.¹³⁶

Support for a more ecocentric approach to international criminal justice has not been limited to forces outside the ICC. In recent years, the OTP has gestured toward greater engagement with environmental concerns. In 2016, the OTP issued new guidance requiring international prosecutors to consider environmental consequences in evaluating the gravity of crimes and giving particular weight to crimes that result in environmental destruction, illegal exploitation of natural resources, or illegal dispossession of land.¹³⁷ New guidelines also explicitly recognize environmental destruction as a factor in decisions to launch preliminary investigations and select cases for prosecution.¹³⁸ The OTP customarily selects investigations and prosecutions based on the gravity of alleged crimes and on the degree of responsibility of the alleged perpetrators. In the gravity analysis, prosecutors normally consider the scale, nature, manner of commission, and impact of the alleged crimes on human victims.¹³⁹ Harms to the environment are now also weighed as significant factors in the gravity analysis.

ICC member states have also started to lobby for the crime of ecocide and requested investigations into serious environmental crimes. In 2019, for example, several island nations, including Vanuatu and the Maldives, called for ICC member states to consider the addition of ecocide as a core crime at the annual Assembly of States' Parties Conference. The ICC has also received at least five formal complaints alleging serious environmental crimes in the Brazilian Amazon, opening a preliminary evaluation of its jurisdiction in one of the cases in 2020.¹⁴⁰ In June 2023, Ukraine officials

136. See Beth A. Simmons & Allison Danner, *Credible Commitments and the International Criminal Court*, 64 INT'L ORG. 225, 232–34 (2010).

137. INT'L CRIM. CT. [ICC], OFF. OF THE PROSECUTOR, POLICY PAPER ON CASE SELECTION AND PRIORITISATION 13–14 (2016), https://www.icc-cpi.int/sites/default/files/itemsDocuments/20160915_OTP-Policy_Case-Selection_Eng.pdf [<https://perma.cc/DH2Q-Z3G7>].

138. *Id.*

139. These elements are generally defined by provisions in the Rome Statute language and ICC Rules of Procedure and Evidence.

140. Isabella Kaminski, *Calls for international criminal court to end 'impunity' for environmental crimes*, Mar. 6, 2024, <https://www.theguardian.com/environment/2024/mar/26/international-criminal->

accused Russia of committing environmental war crimes and ecocide by destroying the Kakhovka dam, which caused severe flooding and environmental damage.¹⁴¹ In February 2024, the ICC Chief Prosecutor, Mr. Karim A.A. Khan KC, announced a new policy initiative to advance accountability for environmental crimes. He stated:

“Damage to the environment poses an existential threat to all life on the planet. For that reason, I am firmly committed to ensuring that my Office systematically addresses environmental crimes in all stages of its work, from preliminary examinations to prosecutions. This latest policy initiative is another commitment to this necessary objective.”¹⁴²

3. Ecocide and Oceanic Impunity

Amending the Rome Statute to include ecocide as a core international crime would likely advance efforts to combat oceanic impunity for several reasons.¹⁴³ Ecocide prosecutions would facilitate ICC investigations of environmental violations committed in the territorial seas of ICC member states and also violations committed by member state nationals. The ICC could claim jurisdiction over ocean crimes committed on ships sailing under member state flags, even when law enforcement authorities in those member states are unwilling or unable to investigate the crimes. While ICC jurisdiction in the EEZs of member states and on the high seas remains in question, ICC investigations would likely avoid some jurisdictional challenges associated with flags of convenience as the most notorious flag states, including Panama and Liberia, are current parties to the Rome Statute.¹⁴⁴

Making ecocide an international crime could also empower international prosecutors to take on a larger role in environmental protection at sea.¹⁴⁵ The ICC operates as an independent judicial institution authorized by the Rome Statute to investigate international crimes and seek accountability even when state officials are complicit in the criminal acts or

court-end-impunity-environmental-crimes [https://perma.cc/J72A-UH8Y].

141. Radina Gigova, *Russia Is Accused of Ecocide in Ukraine. But What Does That Mean?*, CNN (July 3, 2023) <https://www.cnn.com/2023/07/02/world/ukraine-ecocide-dam-collapse-crime-climate-intl-cmd/index.html> [https://perma.cc/QZ2N-8APC].

142. INT'L CRIM. C.T., THE OFFICE OF THE PROSECUTOR LAUNCHES PUBLIC CONSULTATION ON A NEW POLICY INITIATIVE TO ADVANCE ACCOUNTABILITY FOR ENVIRONMENTAL CRIMES UNDER THE ROME STATUTE (Feb. 16, 2024), <https://www.icc-cpi.int/news/office-prosecutor-launches-public-consultation-new-policy-initiative-advance-accountability-0> [https://perma.cc/474F-M3LH].

143. See generally Ruiz et al., *supra* note 9, at 407.

144. Many vessels accused of environmental crimes are flagged in countries that are signatories of the Rome Statute.

145. See Patrick J. Keenan, *Doctrinal Innovation in International Criminal Law: Harms, Victims, and the Evolution of the Law*, 42 U. PA. J. INT'L L. 407, 437–42 (2020).

oppose ICC investigations. As a permanent court of last resort, the ICC has the legal authority to prosecute international crimes when state agencies are unable or unwilling to do so.¹⁴⁶ Arguably, a global court insulated from domestic political pressures and interest groups could more effectively monitor criminality at sea and perhaps intervene before severe and long-term ocean violations arise, thereby preventing future environmental harms.¹⁴⁷

Amending the Rome Statute to include the crime of ecocide could lead to major institutional changes for the ICC.¹⁴⁸ The new crime would broaden the scope of criminal liability to include a range of environmental harms and promote a more ecocentric approach to international justice. For the first time in the history of international criminal law, serious crimes against nature could be prosecuted during peacetime independent of injuries to human beings. Ecocide investigations could also explore forms of “slow violence” that impact the environment.¹⁴⁹ Tasked with a duty to protect nature, the ICC could consider scientific indicators of environmental decline and climate impacts in the gravity analysis of alleged crimes. Ecocide prosecutions might also contribute to public dialogues about justice and accountability for coastal communities impacted by extreme environmental changes.¹⁵⁰ The ICC Chief Prosecutor could take a leading role in shaping the field of international environmental law and global sustainability through preliminary investigations and case selection. Meanwhile, ICC judges could contribute to the development of jurisprudence on international environmental crimes.

Ecocide also potentially expands the significance of the ICC Chief Prosecutor’s *proprio motu* power and encourages individual informants and nongovernmental sources to report serious environmental crimes directly to the OTP. Under the Rome Statute, ICC inquiries start in one of three ways: member states can refer a situation to the ICC; the UN Security Council, acting under its Chapter VII powers, can refer a situation to the ICC; or the ICC Chief Prosecutor can exercise *proprio motu* power and independently

146. Art. 17, Rome Statute.

147. See Leila Nadya Sadat, *Crimes Against Humanity in the Modern Age*, 107 AM. J. INT’L L. 334, 334 (2013).

148. See, e.g., Ammar Bustami & Marie-Christine Hecken, *Perspectives for a New International Crime against the Environment: International Criminal Responsibility for Environmental Degradation under the Rome Statute*, 11 GOETTINGEN J. OF INT’L L. 145, 170–84 (2021).

149. See generally ROB NIXON, *SLOW VIOLENCE AND THE ENVIRONMENTALISM OF THE POOR* (2011).

150. See Martha Minow, *Do Alternative Justice Mechanisms Deserve Recognition in International Criminal Law?: Truth Commissions, Amnesties, and Complementarity at the International Criminal Court*, 60 HARV. INT’L L.J. 1, 44 (2019).

start an investigation.¹⁵¹ Because the ICC Chief Prosecutor has the power to initiate criminal investigations independent of states, informants with information or evidence about serious environmental crimes would have a direct channel to provide information to the court without involving state officials or domestic law enforcement. Informants might likewise report information about global criminal syndicates to the ICC even when they fear retaliation from syndicate members or domestic authorities. The ICC Chief Prosecutor might also properly exercise *proprio motu* power to express shared normative commitments to environmental protection.¹⁵²

Ecocide prosecutions over time might also establish ocean crimes as *jus cogens* offenses and thereby prevent state derogations from obligations to protect the marine environment in future international agreements. International state practice continues to evolve rapidly in response to divergent forms of ocean criminality. Customary law will also need to adapt to new priorities in ocean governance and environmental protection.¹⁵³

International ecocide prosecutions would signal an ecocentric shift in international criminal justice. Ecocide would be the first international crime to address non-human violations outside of armed conflict. In contrast to previous international crimes, a criminal conviction for ecocide would be possible without any evidence of human injury or suffering. By holding out crimes against nature as the moral equivalents of other atrocity crimes, ecocide prosecutions could advance a vision of international justice that recognizes both our ecological interdependence and the intrinsic value of nature.¹⁵⁴ The activities of humanity at sea will likely accelerate in the coming decades and continue to impact climate change.¹⁵⁵ If empowered by the global community to prosecute environmental crimes, the ICC could help to moderate offshore environmental harms by prosecuting those people most responsible for illegal destruction of marine environments and expressing a global commitment to ocean protection.¹⁵⁶

151. Rome Statute, *supra* note 120, arts. 13(b), 14, 15.

152. Margaret M. deGuzman, *Choosing to Prosecute: Expressive Selection at the International Criminal Court*, 33 MICH. J. INT'L L. 265, 268–71 (2012).

153. See Michael P. Scharf, *Seizing the "Grotian Moment": Accelerated Formation of Customary International Law in Times of Fundamental Change*, 43 CORNELL INT'L L.J. 439, 467–68 (2010).

154. Rosemary Mwanza, *Enhancing Accountability for Environmental Damage Under International Law: Ecocide as a Legal Fulfilment of Ecological Integrity*, 19 MELBOURNE J. INT'L L. 586, 593–95 (2018).

155. Jean-Baptiste Jouffray Robert Blasiak, Albert V. Norström, Henrik Österblom & Magnus Nyström, *The Blue Acceleration: The Trajectory of Human Expansion Into The Ocean*, 2 ONE EARTH 43, 46 (2020).

156. Tom Carocchia, *Rescuing the International Criminal Court: Crimes Against Humanity and Environmental Destruction*, 70 RUTGERS UNIV. L. REV. 1167, 1183–88 (2018).

The idea of an environmentalist ICC presently seems utopian. But the climate crisis will transform priorities for criminal accountability and international criminal justice in the next decade. In the meantime, the international community can no longer afford to abdicate responsibility for ocean governance to national authorities. The next generation of international prosecutors must merge international environmental law and international criminal law to respond to the urgent and existential environmental threats to oceans and the planet.¹⁵⁷

CONCLUSION

This Article advances a relational approach to the study of oceanic impunity. Building on scholarship in international criminal law, marine ecology, and relational sociology, the Article proposes targeted international criminalization to increase offshore accountability for severe environmental harms.

National law enforcement has mostly failed to protect marine environments or to combat widespread oceanic impunity. State agencies tasked with investigating offshore criminality routinely have insufficient resources to patrol waters under their jurisdiction. Beyond national jurisdictions, no single organization monitors environmental ocean crimes or coordinates law enforcement efforts.

This Article describes three critical ocean crimes—ocean pollution, illegal fishing, and seabed destruction—and suggests two international options for improving accountability at sea. First, suppression conventions could establish compulsory obligations to criminalize certain ocean crimes and encourage the development of multilateral enforcement regimes. Second, international criminal courts could investigate and prosecute serious environmental crimes. Amending the Rome Statute to include ecocide, for example, could empower ICC prosecutors to investigate serious ocean crimes and allow the ICC to operate as an environmental court of last resort. Targeted forms of international criminalization could also help to harmonize definitions of environmental ocean crimes and improve intelligence sharing and evidence gathering in criminal investigations and prosecutions.

In the Anthropocene, international cooperation to end oceanic impunity is essential to confront the climate crisis. Beyond theories of criminal retribution or deterrence, international criminalization and the investigation of serious environmental harms has expressive value. Environmental

157. Darryl Robinson, *Your Guide to Ecocide: Part 1*, OPINIOJURIS (July 16, 2021), <http://opiniojuris.org/2021/07/16/your-guide-to-ecocide-part-1/> [https://perma.cc/92Z6-LPWZ].

prosecutions signal an ecocentric shift in international criminal justice and promote a shared global commitment to ocean protection. Recognizing our inextricable relations with nature, ecocentrism presents an ontological challenge to the traditional anthropocentrism of international criminal law.¹⁵⁸

Healthy oceans and seas will ultimately depend on more than criminalization, however. International criminal prosecutions are insufficient instruments to achieve comprehensive ocean governance, and criminal punishments alone cannot address the most pressing problems facing oceans or coastal communities. Combatting oceanic impunity and ecological disaster requires deeper commitments to international cooperation. In addition to targeted criminalization, state lawmakers must make oceans a priority and collaborate to protect marine biodiversity beyond national jurisdictions, fund international organizations tasked with ocean governance, and establish more marine protected areas.

158. See generally BOYD, *supra* note 19; Stone, *supra* note 19; De Lucia, *supra* note 19.