HEMP TO HELLFIRES: ENVIRONMENTAL LAWFARE AS AN ASSET FOR NATIONAL SECURITY

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American lawmakers have expressed a fear of environmentalism stymying governmental progress and military readiness, labelling the issue as "environmental lawfare." This Article analyzes environmental lawfare to learn from these fears and turn such lawfare against American adversaries. The Article first compares traditional environmental legal and military planning paradigms and vocabularies to make the two more interoperable. It then defines "environmental lawfare" by drawing on past scholarship. Finally, the Article recommends applications of environmental lawfare and concludes with recommendations for military strategists to apply environmental lawfare to practice.

I. INTRODUCTION

Governments maintain arsenals to defend their sovereignty and enforce their foreign policy interests abroad.[1] Even so, military force is normally the last step in a series of escalations.[2] Nations will initially rely on diplomatic, informational, and economic tools (known as "DIME") to achieve their strategic goals.[3] There is also an interplay between these tools. The military's presence abroad, for example, is a facet of diplomacy (military diplomacy or "soft power" projection) that affects foreign relations without firing a single shot.[4]

The military must then have weapons at its disposal to project soft power, weapons that are very different from the tanks and bombs with which it is

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[1] *See* Amy Ebitz, *The Use of Military Diplomacy in Great Power Competition: Lessons Learned from the Marshall Plan*, BROOKINGS (Feb. 12, 2019), https://bit.ly/4exhQV2.

[2] *Id*.

[3] *Id*.

[4] *See* MATTHEW WALLIN, MILITARY PUBLIC DIPLOMACY: HOW THE MILITARY AFFECTS FOREIGN AUDIENCES 1–3 (Am. Sec. Project 2015).

normally associated. One of those weapons is the law. The military's use of the law to achieve objectives is known as *lawfare*. In his seminal work on the subject, Major General (Maj. Gen.) Charles Dunlap Jr., USAF (Ret.) defines lawfare as "the use of law as a means of accomplishing what might otherwise require the application of traditional military force."[5] Even though lawfare has only become a talking point in American policy circles in the last few decades, it has existed in China since at least the 1960s.[6]

One aspect of lawfare that has not been developed is environmental lawfare. This Article first examines the relationship between the federal government, military, and environmental groups to establish a jointly interoperable paradigmatic foundation for environmental lawfare operations. It then analyzes the scholarship on lawfare before positing a formal definition of the term "environmental lawfare." The Article concludes with a discussion of potential uses of environmental lawfare and recommendations, to include environmental lawfare principles in military planning.

II. INCREASING THE INTEROPERABILITY OF MILITARY AND ENVIRONMENTAL PARADIGMS

Warfighters and environmentalists must work together to develop environmental lawfare tactics. These groups have fundamentally different ways of pursuing objectives because the foundations of their thought processes, or paradigms, are different. Therefore, a hurdle to the advancement of environmental lawfare is interoperability. This section analyzes the foundations of military and environmental paradigms and makes recommendations to increase interoperability.

The divide between these paradigms can be stark, as was clear on a foggy Wednesday in April 2018. That morning, forty-three congressmen met in Washington, D.C. to discuss a threat to national security. The Committee on Natural Resources (CNR) meeting was titled "The Weaponization of the National Environmental Policy Act (NEPA) and the Implications of Environmental Lawfare."[7] The CNR's chairman, Rob Bishop (R-Utah), opened the hearing with a speech that used words like "bulletproof" to stress the committee's concerns over how NEPA was being "weaponized" to "paralyze" the Government.[8] His

[5] Major General Charles J. Dunlap Jr., *Lawfare 101: A Primer*, 97 MIL. REV. 8, 9 (2017), https://bit.ly/47TqWcc.
[6] Jill I. Goldenziel, *Law as a Battlefield: The U.S., China, and the Global Escalation of Lawfare*, 106 CORNELL L. REV. 1085, 1092–94 (2021), https://bit.ly/3YfHM0P.
[7] *The Weaponization of the National Environmental Policy Act and the Implications of Environmental Lawfare: Hearing Before the House Committee on Natural Resources*, 115th Cong. 115–44 (2018), https://bit.ly/4dC5Gcr [hereinafter CNR Hearing].
[8] *Id*. at 2 (statement of Rep. Rob Bishop, Chairman, H. Comm. on Nat. Res.).

chief concerns were civilian environmental groups stymying military readiness with lawsuits. Still, the bellicose language made it clear that weaponizing environmentalism could be a real threat to political stability and thus, national security. Congressman Raul Grijalva (D-Arizona) said during the hearing that environmental protection "is not a weapon, it is a shield."[9] If environmental groups really discovered a way of turning a shield into a weapon, then surely the military could wield that weapon against its enemies.

The military is primed to do this because environmental interests, especially climate change, are already part of America's National Security Strategy (NSS). The latest NSS, published in October 2022, contains several provisions incorporating environmental protections.[10] For example, the NSS began with an overall goal to "set our world firmly on a path toward a brighter and more hopeful tomorrow."[11] Part IV of the NSS, concerning the protection of sea, air, and space, also lists strategies to "support environmental protection."[12] As Secretary of Defense (SecDef) Lloyd Austin stated: "There is little about what the Department does to defend the American people that is not affected by climate change."[13] Executive Order 14008 also explicitly requires the SecDef to analyze the threats climate change presents and incorporate those threats into planning.[14] Department of Defense (DoD) climate risk analysis also states that "climate hazards can lead to impacts due to natural or social vulnerabilities, which have security implications for DoD."[15]

Whereas planning for climate change contingencies is reactive, responsive, and defensive, environmental lawfare could be used proactively to prosecute adversaries. Therefore, to use lawfare effectively as a tool of war, warfighters and military planners, not just specialists, need to understand environmental concepts, themes, and language. If the national security apparatus ignores these lessons, it might tragically, as The Wharton School of the University of Pennsylvania professor Sara Light put it, "be left with the impression that the military always stands opposed to environmental protection."[16]

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[9] *Id*. at 3 (statement of Rep. Raul M. Grijalva, Ranking Member, H. Comm. on Nat. Res.).
[10] *See generally* PRESIDENT OF THE U.S., NAT'L SEC. STRATEGY (2022).
[11] *Id*. at 2.
[12] *Id*. at 45.
[13] U.S. DEP'T OF DEF., OFF. OF THE UNDERSECRETARY FOR POL'Y (STRATEGY, PLANS & CAPABILITIES), DEPARTMENT OF DEFENSE CLIMATE RISK ANALYSIS: OCT. 2021 REPORT TO THE NATIONAL SECURITY COUNCIL 5 (2021) [hereinafter DoD Climate Risk Analysis].
[14] Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7619, 7621–22 (Jan. 27, 2021).
[15] DoD Climate Risk Analysis, *supra* note 13, at 8.
[16] Sarah E. Light, *The Military-Environmental Complex*, 55 B.C. L. REV. 879, 879 (2014).

A. The Language and Paradigms of National Defense

Environmental lawfare must be interoperable with the national security apparatus. Military culture is relatively insular and, like most government agencies, exhibits its own form of bureaucratic inertia and resistance to outside influence.[17] That culture is partly developed by the Chairman of the Joint Chiefs of Staff (CJCS), who is responsible for the NSS and enhancing joint service capabilities.[18] Joint service readiness includes a requirement that officers study Professional Military Education (PME),[19] including *Joint* PME (JPME). JPME is meant to instill officers with Desired Leadership Attributes (DLAs), one of which is to "Understand the security environment and contributions of all instruments of national power."[20] The result is that even though a member of the U.S. Army might refer to a helicopter as a "chopper" while a member of the U.S. Navy would say "helo," when the two services are conducting operations together they both have a baseline knowledge of each other's structure and capabilities.

The JPME curriculum teaches officers basic military strategy with readings from classical military strategists such as Sun Tzu and Carl von Clausewitz. The former's *The Art of War* espouses concepts like planning and interpreting the physical environs of battle and uses of energy to increase the momentum of an armed force.[21] The latter's *On War* defines war as "an act of violence intended to compel our enemies to our will," which "arms itself with the inventions of Art and Science to contend against violence. Self-imposed restrictions, almost imperceptible and hardly worth mentioning, termed usages of International Law, accompany it without essentially impairing its power."[22]

Warfighters and military planners, therefore, possess a vocabulary that emphasizes classical military concepts such as "the center of gravity," "lines of communication," and the difference between strategic and tactical objectives. Warfighters and military planners are also taught to consider diplomatic, informational, military, and economic powers to leverage against enemies to achieve strategic objectives.

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[17] *See* Antoine Faure-Grimaud & David Martimort, *Regulatory Inertia*, 34 RAND J. ECON. 413, 413–30 (2003) (asserting that the independence of a regulatory bureaucracy from political principals maintains stability and prevents dramatic changes to the institution according to the will of incumbent political principals).
[18] *See* 10 U.S.C. § 153(a) (2021).
[19] CHAIRMAN OF THE JOINT CHIEFS OF STAFF, INSTR. 1800.01F, OFFICER PROFESSIONAL MILITARY EDUCATION POLICY (May 15, 2020).
[20] *Id*. at encl. (A), para. (5).
[21] *See* SUN TZU, THE ART OF WAR (Lionel Giles trans., Allandale Online Pub. 2000) (6th cent. B.C.).
[22] 1 CARL VON CLAUSEWITZ, ON WAR 23 (J.J. Graham trans., Kegan Paul, Trench, Trubner & C. new & rev. ed. 3d impression in 3 vol. 1918).

JPME emphasizes joint planning, leveraging the strengths of the various branches of service to achieve tactical and strategic objectives. To that end, the military utilizes a joint planning process consisting of seven steps: (1) plan initiation, (2) mission analysis, (3) developing course of action, (4) wargaming and analysis, (5) comparing courses of action, (6) approving courses of action, and (7) developing orders to implement the course of action.[23] The end product of this process is a plan for subordinate units to understand the objectives and direction of military leaders. The planning process also emphasizes understanding the strategic environment, fostering civilian-military dialogues, and risk mitigation.[24] Environmental lawfare tactics must therefore subscribe to these processes, and the environmentalists who help develop those tactics must be familiar with them.

B. The Language and Paradigm of Environmentalism

Unlike military planners, environmentalists do not have a syllabus dictating the tools of their trade. Instead, an environmentalist's vocabulary is a creation of the literature, issues, laws, and legal opinions that shape the environmental policy status quo. "Environmentalism" encompasses everything from wildlife conservation to eco-terrorism, replete with diffuse goals and opinions, especially those shaped by politics. For example, while sixty-seven percent of the U.S. population believes the federal government is doing too little to reduce the effects of climate change, ninety percent of Democrats subscribe to that opinion but only thirty-nine percent of Republicans do.[25] Additionally, "[p]eople who self-identify as liberal were more likely to want to purchase renewable energy from their utility when they learned that the Department of Defense was actively using renewable energy technology."[26] These statistics imply that a person's political leanings influence their opinions towards the environment and the DoD. Conversely, military members by operation of law "should not engage in partisan political activity, and . . . avoid inferences that their political activities imply or appear to imply official sponsorship, approval, or endorsement."[27] Warfighters should therefore recognize the political leanings of environmentalists and environmentalists should recognize that warfighters must remain politically neutral. Successful interoperability in the regard depends on both parties practically assessing these realities and incorporating it into their planning.

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[23] CHAIRMAN, JOINT CHIEFS OF STAFF, JOINT PUB. 5-0: JOINT PLANNING, at III-10-11 (Dec. 1, 2020).
[24] See *id*. at xiii–xiv.
[25] CARY FUNK & MEG HEFFERSON, PEW RSCH. CTR., U.S. PUBLIC VIEWS ON CLIMATE AND ENERGY 2 (Nov. 25, 2019).
[26] Sarah Light, *The Surprising Role the Military Plays in Environmental Protection*, KNOWLEDGE AT WHARTON (Jul. 29, 2014), https://whr.tn/3XUAizP.
[27] U.S. DEP'T OF DEF., DIRECTIVE 1344.10, POLITICAL ACTIVITIES BY MEMBERS OF THE ARMED FORCES para. 4 (Feb. 19, 2008).

Environmental law practitioners are adept at this. They recognize the value of risk assessment and the use of control technologies to provide scientifically supportable proposals in line with their political objectives. This is because the long-standing tension between environmental and economic requirements results in legal structures that balance those requirements, manage risk, and seek to develop technology that helps both the environment and the economy.[28] The Clean Air Act, for example, differentiates between different levels of scientific and technological pollution control technologies depending on which pollutant is involved and how polluted an area is.[29] Environmentalists' ability to recognize risk, adapt responses to economic and environmental factors, and apply appropriate solutions through careful consideration of scientific data is one of their greatest strengths. A similar paradigm, applied to environmental lawfare, could also shape the way warfighters see problems and apply solutions. An example might be a use of force question where there are collateral damage considerations. Incorporating environmentalist paradigms can help make balanced decisions for a particular response's distinction, proportionality, and necessity assessment.[30] In this regard the DoD's Law of War manual provides warfighters with direction for certain environmental aspects of warfighting (such as destruction of cultural property and the weaponization of herbicides).[31] However, an environmentalist would take the analysis further, assessing law of war concepts like necessity, proportionality, etc., through a comprehensive lens, applying risk mitigation and best available science.

Environmentalists will be familiar with the seminal writings on environmental themes. These may include Rachel Carson's *Silent Spring*, Garrett Hardin's *The Tragedy of the Commons*, Henry David Thoreau's *Walden*, Upton Sinclair's *The Jungle*, and even children's books like Maurice Sendak's *Where the Wild Things Are*.[32] Common thematic elements of these writings include the conflict between capitalistic economic ideals and environmental conservation, the importance of biological diversity, the preservation of the natural environment, and humanity's role in conserving natural resources.

Major environmental laws, such as NEPA and the Clean Water Act (CWA), provide the legal framework for environmental planning. NEPA, like other environmental laws, requires the assessment, ex ante, of the risk a project

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[28] *See generally* Nadezhda M. Mityakina et al., *The Modern Paradigm of Rational Environmental Use as a Trend of Environmental Legal Regulation*, 34 NEXO REVISTA CIENTIFICA 1250 (2021).
[29] *See* 42 U.S.C. §§ 7521–7651o (1990).
[30] *See generally* U.S. DEP'T OF DEF, LAW OF WAR MANUAL (2023).
[31] *Id*. §§ 5.18, 6.17.
[32] *See* RACHEL CARSON, SILENT SPRING (Houghton Mifflin 1962); Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968); HENRY DAVID THOREAU, WALDEN (1854); UPTON SINCLAIR, THE JUNGLE (1905); MAURICE SENDAK, WHERE THE WILD THINGS ARE (Harper & Row 1963).

poses to the environment.[33] While many scholars adopt a "worst-case scenario" approach to that analysis, the law provides flexibility and reasoned responses that would be useful for military planners.[34] This again highlights the environmentalist paradigm of risk assessment, cooperative and creative thinking, and thoughtful application of policy solutions. The situations those paradigms address are similar to those in war that have serious implications for public health and the environment.

Landmark environmental cases such as *Massachusetts v. EPA* [35] (establishing the Environmental Protection Agency's (EPA) authority to regulate greenhouse gases) and *Sackett v. EPA*[36] (defining "waters of the United States" for the purposes of the CWA) also influence environmentalist paradigms. The political leanings of the members of the Supreme Court who write these opinions, the presidential administrations in power when the decisions are made, and the cultural zeitgeist surrounding environmental politics at the time of these decisions all influence how environmentalists discuss these cases and incorporate them into their work. The judicial treatment of environmental laws and its sensitivity to political change also means that environmentalists are used to dynamic political environments and "playing the long game" in terms of science and policy. This makes their tactics especially useful in a military whose priorities may shift with different ideological changes in political leadership and whose members must remain politically neutral.

Environmental legal theory also focuses on coalition building. For example, enforcement mechanisms in the major environmental statutes usually include a citizen's suit provision allowing citizen groups to enforce a law or policy when the government is unwilling or unable to do so.[37] Consent decrees and cooperative enforcement are other examples of this.[38] An environmentalist's ability to look at problems holistically and shape both the narrative and political impetus behind an issue is a valuable skills for a warfighter who may want to apply soft power solutions to a conflict.

Environmentalists therefore think in terms of economics, politics, ecology, conservation, and preservation. They are more likely to incorporate

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[33] National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321–47 (1969) [hereinafter NEPA]; Clean Water Act of 1972, 33 U.S.C. §§ 1251–1387 (1972).
[34] *See* Todd S. Aagaard, *A Functional Approach to Risks and Uncertainties Under NEPA*, 1 MICH. J. ENV'T & ADMIN. L. 87, 88–91 (2012).
[35] 549 U.S. 497 (2007).
[36] 598 U.S. 651 (2023).
[37] *See* 33 U.S.C. § 1365 (2018).
[38] The EPA website lists examples of various consent decrees and decrees currently in negotiation with the EPA. *See* U.S. ENV'T PROT. AGENCY, *Enforcement: Civil and Cleanup Enforcement Cases and Settlements*, https://bit.ly/3zXBZod.

politically partisan interests into their discourse and have a range of environmental concerns, ranging from climate change affecting global weather patterns, to the impact runoff from a neighbor's home renovation will have on a local stream. As a paradigm, environmentalism has diverse foundations that require advanced insights into various disciplines in order to assess risk, gauge political palatability, and apply constrained resources towards major problems in the most efficient means possible.

C. Translating the Paradigms of Warfighting and Environmentalists to Increase Interoperability

In synthesizing environmental and military policymaking environmental lawfare practitioners should focus on the desired end state. The U.S. Constitution, to which all military officers take an oath to support and defend, serves to "provide for the common defence [sic]" and "promote the general welfare" of the American people.[39] Likewise, NEPA exists to "stimulate the health and welfare of man."[40] Both national security strategists and environmentalists want the same thing: a safe, healthy, and prosperous homeland. Prosperous countries are less likely to go to war than poor ones, so enhancing the relative labor productivity of a population by providing a healthy environment prevents the types of conflicts the NSS seeks to counter.[41]

Environmental lawfare tacticians should take a lesson from environmental law in conducting risk analysis. Doing so can improve military activities such as lethal use of force analysis and operational risk management (ORM). When advocating for policies that have national security implications, environmentalists, military planners, and warfighters should look at the ultimate goal of their proposal. They should advocate for why that proposal pursues a defined objective. They should avoid or restrain ulterior political arguments. Despite such restraint, they should be able to provide insight into the political implications of a course of action. Working together, environmentalists and warfighters should also "plan backward" from their desired end state: identifying each step (or tactic) that must be achieved before their end state (strategic objective) can be accomplished. Those tactical decisions are discrete planning elements that will be more familiar to the defense establishment and will be easier for the military planner to integrate into a mission.

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[39] U.S. CONST. pmbl.; *see also* Ebitz, *supra* note 1 (discussing how the State Department and U.S. military strive to advance U.S. policy and security).
[40] NEPA, *supra* note 33, § 4321.
[41] *See generally* Jonas Vestby, Halvard Buhaug, & Nina von Uexkull, *Why Do Some Poor Countries See Armed Conflict While Others Do Not?: A Dual Sector Approach*, 138 WORLD DEV. 105272, 105272–73 (2021).

Warfighters, when working with environmentalists, should use the diplomatic element of the DIME model. Interoperability requires an understanding that all parties want the same strategic objective, although the tactics to achieve it may differ. Warfighters should also understand that an environmentalist's position will likely have a political component and that environmentalists may have a personal or community interest in the environmental justice implications of a planned military undertaking.

Warfighters should understand the information element of the DIME model. Environmentalists as a community usually have deep ties to an issue and a thorough understanding of technical intricacies inherent in a given ecological system. They will likely have a better understanding of economics, ecology, etc. They will also have a better understanding of the political reactions that a proposed military action will have on a given community. Warfighters can leverage lessons learned from soft power "hearts and minds" campaigns, regularly used to support civilian populations to enhance cooperation and mutually beneficial objectives.[42]

In short, even though these groups sometimes may seem to be at an impasse, a common understanding of each other's paradigms can help solve problems. They differ in the tools they use, but many times they have advantages to offer each other in achieving their respective endstates. Cooperating on risk analysis and review processes, similar to the Joint Planning Process and environmental risk assessments, will help both sides reach consensus. Learning from and respecting the vocabularies and paradigms of these positions allows the two groups to speak to each other more easily and thus become more interoperable. For a military seeking to leverage the power of environmentalism in a lawfare context, allies and additional tools are essential. Therefore, a better understanding of environmentalism's context and vocabulary is the first step in leveraging environmental lawfare as a means of national security in the arsenal for democracy.

III. DEFINING ENVIRONMENTAL LAWFARE

Warfighters cannot wield environmental lawfare if it is not defined. This section draws on lawfare scholarship to assess the characteristics of environmental lawfare. It concludes with a recommended formal definition of military environmental lawfare.

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[42] *See* Christoph Mikulaschek, Saurabh Pant, & Beza Tesfaye, *Winning Hearts and Minds in Civil Wars: Governance, Leadership Change, and Support for Violent Groups in Iraq*, 64 AM. J. POL. SCI. 773, 773 (2020).

Bellicose language like "courtroom battle" and "the war over an issue" is not new in the civilian legal sphere. However, "lawfare" is not a term used for dramatic effect to describe what are, in actuality, usually very boring courtroom proceedings. Civilian lawfare is normally used to describe domestic legal disputes and tactics for achieving civilian political objectives. For example, the 2018 CNR meeting mentioned earlier concerned American groups using domestic institutions.[43] While empirical evidence does not support the notion that environmental groups are actually "waging environmental war" on the government, the idea that they could creates political instability.[44] Civilian environmental lawfare in this sense describes tactics used to advance political or policy goals around environmental issues like climate change.[45] *Military* environmental lawfare must therefore be distinct and specifically defined so that it is not conflated with civilian lawfare activities.

Maj. Gen. Charles Dunlap, currently a professor at Duke University School of Law, states that lawfare:

> is best understood as the use of law as a means of accomplishing what might otherwise require the application of traditional military force. It is something of an example of what Chinese strategist Sun Tzu might say is the "supreme excellence" of war, which aims to subdue "the enemy's resistance without fighting.[46]

General Dunlap's examples of lawfare include, among other things; buying the contract rights to commercial satellite imagery to prevent it from being used by insurgents in Afghanistan; using sanctions to limit the Iraqi Air Force's ability to maintain combat aircraft; suing banks to gain access to funds kept in America by adversarial entities; and Al Qaeda's manipulation of the Geneva Convention by using civilians as human shields inside religious buildings.[47]

Lawfare is actively used by the American military today, and environmental lawfare should draw from this status quo to increase its interoperability. One of lawfare's most common applications is the "Freedom of Navigation" (FON) program. For the United States, the FON program is a two-

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[43] *See* CNR Hearing, *supra* note 7, at 1–2.
[44] *See* Annika Reynolds, Andrew Ray, & Shelby O'Connor, *Green Lawfare: Does the Evidence Match the Allegations?—An Empirical Evaluation of Public Interest Litigation under the EPBC Act from 2009 to 2019*, 37 ENV'T & PLAN. L.J. 497, 497–510 (2020).
[45] *See, e.g.*, Siri Gloppen & Asuncion Lera St. Clair, *Climate Change Lawfare*, 79 SOC. RSCH. 899 (2012).
[46] Dunlap, *supra* note 5, at 9 (quoting SUN TZU, THE ART OF WAR 17 (Lionel Giles trans., Puppet Press 1910) (6th cent. B.C.)).
[47] *Id*. at 9–11.

pronged challenge to a coastal state's excessive maritime claim. The first prong is diplomatic protest, and the second prong is a military operational challenge, known as a FONOP.[48] The objective of this program is to demonstrate non-acquiescence to a coastal state's excessive claims and thereby help "preserve for all states the legal balance of interests established in customary international law."[49]

Lawfare is also not a uniquely American concept, as it has been part of Chinese military strategy since the 1960s as a means of "shaping the legal context for Chinese actions using both domestic and international law. Lawfare seeks to gain 'legal principle superiority' . . . and delegitimize an adversary."[50] Chinese lawfare is exemplified by its excessive maritime claims in the South China Sea. American military legal scholarship has already assessed the viability of using informational lawfare to counter China in this context, specifically highlighting environmental degradation and the use of powerful imagery like dead sea turtles, to delegitimize China's expansion and commensurate military advantages.[51]

Military lawyers have also posited several interpretations of law that have environmental aspects and might be deemed environmental lawfare. In one example, the United States conducts military operations within an adversary's Exclusive Economic Zone (EEZ) to prevent a future claim that EEZ's are closed to foreign warships.[52] In another, the United States engages with foreign partners to legitimize international agreements concerning Arctic boundaries to encourage activity in that space and create a legal framework to resolve future conflict.[53] Scholarship has also analyzed the impacts U.S. environmental policies have on foreign relations, the U.S. ability to maintain foreign installations, and the effects foreign military activity has on the interpretation of domestic environmental law.[54]

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[48] DEP'T OF DEF., ANNUAL FREEDOM OF NAVIGATION REPORT FISCAL YEAR 2023, at 2.
[49] *Id*.; *see also* Lieutenant Commander Jeanine B. Womble, *Freedom of Navigation, Environmental Protection, and Compulsory Pilotage in Straits Used for International Navigation*, 61 NAVAL L. REV. 134, 134–38 (2012).
[50] Goldenziel, *supra* note 6, at 1093 (internal quotation marks and citation omitted).
[51] *See, e.g.*, Captain Sean M. Sullivan, *Fighting Destructive Dragons with Sea Turtles: Going on the Legal Offensive using "Info-Lawfare" Against the People's Republic of China,* 68 NAVAL L. REV. 213, 219–20 (2022).
[52] *See* Lieutenant Commander Parker S. Carlisle, *Military Activity in the Exclusive Economic Zone: Preventing Creeping Sovereignty*, 67 NAVAL. L. REV. 247, 262–64 (2021).
[53] *See* Lieutenant Commander Joan M. Malik, *United States Environmental Law Applied in the Arctic Ocean: Frustrating the Balance of the Law of the Sea, National Sovereignty, and National Collaboration Efforts*, 60 NAVAL L. REV. 41, 55–57 (2010).
[54] *See* Adam G. Province, *You Don't Have to Go Home But You Can't Stay Here: Recent Environmental Violations Lead to Wearing Out Our Welcome in Japan,* 59 NAVAL L. REV. 21 (2010); *see also* Lieutenant Commander Keith S. Gibel, *Defined by the Law of the Sea: "High Seas" in the Marine Mammal Protection Act and the Endangered Species Act*, 54 NAVAL L. REV. 1 (2007).

Using the above scholarship as a foundation, environmental lawfare tactics should (1) legitimize America's interpretation of the international legal order; (2) reinforce the delineation of international borders and sea space to prevent excessive claims; (3) protect and strengthen foreign relations by analyzing domestic environmental legal policy; and (4) build international coalitions around environmental issues with global strategic implications.

While these theories focus on the moral authority gained by international consensus building, environmental lawfare must be effective in kinetic warfare. Therefore, it should also be able to (1) limit a foreign adversary's ability to expand their control over excessive amounts of sea space; (2) protect America's ability to maintain foreign installations and thus result in an increased ability to respond to conflict; and (3) maintain the foreign relations necessary to operate abroad efficiently in a time of conflict.

Some scholars assess that America's failure to participate in international legal regimes like UNCLOS weakens its ability to wage lawfare. Indeed, commentators assess that China is leveraging this vacuum to manipulate American environmental organizations.[55] These claims even extend to allegations against the Natural Resources Defense Council (NRDC):

> [t]he political activism of the Natural Resources Defense Council continues to coincide with China's geopolitical interests, while it regularly files lawsuits against the Pentagon aimed at constraining military exercises vital to national security . . . The organization "collaborates with Chinese government entities deeply involved in Chinese efforts to assert sovereignty over the South China Sea in contravention of international law[.]"[56]

The NRDC denies this claim. [57] However, foreign adversaries influencing domestic groups and using the legal system to limit military operations falls squarely into a conception of environmental lawfare. The elegance of this tactic is that it does not matter if it is true. Even if a foreign

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See generally Lieutenant James E. Landis, *The Domestic Implications of Environmental Stewardship at Overseas Installations: A Look at Domestic Questions Raised by the United States' Overseas Environmental Policies,* 49 NAVAL L. REV. 94 (2002).

[55] *See generally* Commander Robert C. "Rock" DeTolve, *At What Cost? America's UNCLOS Allergy in the Time of "Lawfare*,*"* 61 NAVAL L. REV. 1, 8 (2012).

[56] Kevin Mooney, *Lawmakers Suggest Lawsuit-Happy Environmentalists Help China, Hurt National Security*, DAILY SIGNAL (Jul. 20, 2018), https://dailysign.al/3XUAJtX (citation omitted).

[57] Press Release, Nat. Res. Def. Council, The Facts on NRDC's Work in China (Sep. 13, 2023).

adversary is not directly influencing an environmental group, the mere speculation that it is can sow political dissent and destabilize governments.[58]

From the above, we can attempt a definition of environmental lawfare. Military environmental lawfare is first distinct from domestic civilian lawfare because it does not relate to domestic groups trying to achieve domestic objectives. Second, environmental lawfare is a tactic within the strategic framework of lawfare generally and therefore draws on many of its broader themes. Third, environmental lawfare is expansive and incorporates aspects of political, economic, and informational influence to strengthen its effectiveness. Considering these elements, I propose the following definition:

> *Environmental Lawfare: The use of environmental legal theories, instruments, and institutions to achieve a strategic advantage over a foreign adversary, usually incorporating informational, economic, and political tactics.*

In conclusion, environmental lawfare is not about environmental groups blocking development (unless of course the group is being influenced by a foreign adversary). It is a way to leverage additional tools to engage in asymmetric warfare against a foreign adversary to achieve a strategic objective.

IV. POTENTIAL MILITARY USES OF ENVIRONMENTAL LAWFARE

This section applies the paradigms and definitions discussed above to hypothetical applications of environmental lawfare. Applications are bound to invoke international, military, humanitarian, trade, and other legal issues that will require balancing diverse legal requirements. This section does not advocate for blind application; it seeks to illuminate potential applications that may warrant further consideration and research.

A. Tactic 1: Supporting Environmentally Sympathetic Groups Abroad

Military strategists could identify foreign environmental groups whose strategic aims align with America's. Distrust and political discord drain adversarial resources. As Sun Tzu put it, "All warfare is based on deception."[59] Because environmental groups seek to influence the perception of an issue or a government policy, the United States could fund these groups directly, engage in informational campaigns to support their cause, or encourage domestic civil society to support their efforts.

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[58] Letter from Rep. Rob Bishop, Chairman, H. Comm. On Nat. Res., to Rhea Suh, President, Nat. Res. Def. Council (Jun. 5, 2018).
[59] Tzu, *supra* note 21, ¶ 18 at 3.

An example might be reinforcing foreign political groups opposed to an adversary's exploitation of critical resources. In democratic states, government opposition to these groups might create political dissent and electoral accountability, potentially with additional benefits in the form of Western-friendly elected officials. Even in a non-democratic country, leveraging these relationships might create a foundation to build future insurgencies against an adversary. Empirically, insurgencies are most effective when legitimizing a friendly government, justifying the use of force, and reforming government policy.[60] Fomenting insurgency is least effective when "crushing enemies," raising cultural awareness in a population, resettling populations, or building democracy.[61] Therefore, supporting foreign environmental groups that are strategically aligned with the United States, or seeing them as possible allies in an insurrection, could be an effective way to legitimize the use of force against an adversary or change the adversary's government policy.

Aligning American strategic interests with environmental groups also builds support for the people of that country against its government. This sentiment is useful if the United States ever wants to enact international policies against that adversary. It also helps build an international narrative supporting American environmental practices that can eventually coalesce into customary international law.

This policy carries risks; speaking out against dictatorship is a dangerous business. While a warfighter may be experienced in thinking about collateral damage to a civilian population from an explosion, they may be less sensitive to the political consequences for the same population.[62] Fomenting dissent in adversary nations is not new, but growing sympathy towards environmental causes in the age of information and climate change presents a unique opportunity for the United States to leverage environmental lawfare concepts to acquire a strategic advantage and support environmental causes.

B. Tactic 2: Creating Environmental Protection Buffers in Strategic Areas

Warfighters could use environmental laws to establish environmental protection areas that create buffers between adversaries and their objectives. Environmental protection areas are usually protected by a government's police or military. Leveraging those assets could allow for the forward deployment of

[60] CHRISTOPHER PAUL ET AL., PATHS TO VICTORY: DETAILED INSURGENCY CASE STUDIES (RAND Nat'l Def. Rsch. Inst. 2013).
[61] *Id*.
[62] For an examination of the political vulnerabilities of civilian populations during insurgencies, see generally Steven Metz, *New Challenges and Old Concepts: Understanding 21st Century Insurgency*, 37 PARAMETERS 20 (2007).

government forces within those zones in the name of environmental stewardship while providing surveillance and armed defense. The physical space these buffers create can slow an adversary, extend their lines of communication, provide advanced warning to a defending nation, and create a legal justification to engage in preemptory self-defense earlier than may otherwise be feasible.

A current example is China and the South China Sea. While China has disputed the maritime boundaries of its territory since at least the late 19th century, the history of its claims over large portions of the South China Sea began in earnest between 1947 and 1953.[63] China's justification for its territorial claims cites over one thousand years of history, including archaeological evidence of Chinese fishermen exploiting natural resources on various islands around the South China Sea.[64] The PRC's Ministry of Foreign Affairs states it in the following way:

> The Chinese people have since ancient times lived and engaged in production activities on Nanhai Zhudao [eds. "South China Sea Islands"] and in relevant waters. China is the first to have discovered, named, and explored and exploited Nanhai Zhudao and relevant waters, and the first to have continuously, peacefully and effectively exercised sovereignty and jurisdiction over them, thus establishing sovereignty over Nanhai Zhudao and the relevant rights and interests in the South China Sea.[65]

China has therefore been able to effectively leverage legal ambiguities using environmental justifications to significantly expand its military capacity.

America already has legal tools that protect specially designated sea space. The National Marine Sanctuaries Act,[66] Coastal Zone Management Act,[67] Marine Mammal Protection Act,[68] and other laws all provide enforcement mechanisms that can bring increased resources into an area.

For example, the National Marine Sanctuaries Act allows for the designation of national sea space as "Marine Sanctuaries" where fishing and

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[63] *1895–2024: China's Maritime Disputes*, COUNCIL ON FOREIGN RELS., https://on.cfr.org/3ZSVlp3.
[64] Intan Putri, Dina Sunyowati, & Enny Narwati, *China's Claim on Traditional Fishing Grounds Located in the South China Sea*, 50 ENV'T POL'Y & L. 243, 248 (2020).
[65] Policy Communique, Ministry of Foreign Affs. of the People's Republic of China, *China Adheres to the Position of Settling Through Negotiation the Relevant Disputes Between China and the Philippines in the South China Sea* ¶ 8 (Jul. 13, 2016), https://bit.ly/47V4kbq.
[66] 16 U.S.C. § 1431 *et seq* (2000).
[67] 16 U.S.C. § 1451 *et seq* (1990).
[68] 16 U.S.C. § 1361 *et seq* (1994).

certain other activities are prohibited.[69] It is administered by the National Oceanographic and Atmospheric Administration (NOAA), including the NOAA Commissioned Officer Corps, itself a uniformed service of the United States. Its enforcement provisions may be applied against non-Americans per international law and it directs the Secretary of State to coordinate enforcement provisions with international partners.[70] Section 1437 of the act allows enforcement officials to search and board vessels and arrest individuals suspected of violating the act.[71]

Marine sanctuaries could be established along strategically important axes between the United States and an adversary. The extent of the sanctuaries could be expanded through international agreements with other nations. Prohibited activities might include weapons testing and military exercises that make foreign military transit more difficult. The designation would also entail enforcement resources, providing more information and reconnaissance capabilities in strategically important areas. The boarding and seizure provisions of the Act could also potentially be used to monitor foreign intelligence gathering and "gray zone" maritime activities wherein foreign governments utilize civilian vessels for government or military purposes.[72]

International law already supports this. UNCLOS Article 118, for example, states:

> States shall cooperate with each other in the conservation and management of living resources in the areas of the high seas. States whose nationals exploit identical living resources, or different living resources in the same area, shall enter into negotiations with a view to taking the measures necessary for the conservation of the living resources concerned.[73]

Convention and customary international law therefore encourages interstate cooperation in the development of conservation zones.

Designating buffer areas is not going to stop an invasion. It may, however, create legal regimes that enhance international cooperation and surveillance of strategically important sea space and provide resources to monitor them. The environmental legal tools associated with enforcement provisions in these acts can provide additional justifications and opportunities to stop foreign

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[69] *See* 16 U.S.C. §§ 1433, 1436 (2000).
[70] 16 U.S.C. § 1435 (1992).
[71] 16 U.S.C. § 1437 (2000).
[72] *See generally* Shuxian Lao & Jonathan G. Panter, *China's Maritime Militia and Fishing Fleets, A Primer for Operational Staffs and Tactical Leaders*, MIL. REV., Jan.–Feb. 2021, at 7.
[73] U.N. Convention on the Law of the Sea, art. 118, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

intervention and surveillance gathering, all while benefiting environmental protection. Creating enforcement areas and increasing resources within them is a legitimate way to leverage the law for strategically advantageous purposes.

C. Tactic 3: Subject International Environmental Crime to Universal Jurisdiction

Warfighters could subject international environmental crimes to universal criminal jurisdiction. International law uses many environmental protection regimes and recognizes the rights of states to enforce certain laws outside their borders. Applying universal jurisdiction to environmental protection violations could expand a state's ability to prevent environmental damage while providing the legal justification necessary to frustrate adversary activity.

The most comprehensive international environmental protection regime in a maritime context is UNCLOS. The United States is not a party to UNCLOS, though it does recognize it as customary international law.[74] UNCLOS makes the crime of piracy as defined in Article 101 of the convention subject to universal criminal jurisdiction.[75] On the high seas this powerful tool means that any state may seize a vessel, including a warship, if that vessel is engaged in piracy.

Compare that powerful enforcement regime to the weak environmental enforcement provisions of UNCLOS Part XII. UNCLOS contains obligations for states to protect their natural environment (Article 194), cooperate internationally to coordinate conservation efforts (Article 97), and prevent pollution (Section 5, Articles 207 to 212).[76] Enforcement is contemplated in Section 6, Articles 213 through 22 and puts the onus for enforcement on the "flag state" where the vessel is registered, a "coastal state," or a "port state."[77] Typically, the only real obligation is for states to adopt regulations and laws within their own jurisdictions to enforce these environmental provisions.[78] Perhaps not surprisingly, ships will therefore often register with "flags of convenience" to avoid them.[79] Ocean dumping, illegal fishing, etc., however, are all severe crimes with significant penalties including imprisonment and fines if committed under domestic law.[80] For example, in the United States, an oil polluter who fails to notify authorities

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[74] *See* Ensign Lara Palaver, *It is Time for the U.S. to Ratify UNCLOS*, 147 PROCEEDINGS (June 2021), https://bit.ly/3zBVAKJ.
[75] *See* UNCLOS, *supra* note 69, arts. 100–105.
[76] *Id*. arts. 97, 194, 207–12.
[77] *See id*. arts. 213–22.
[78] *See id*.
[79] *See* Captain Ira Dye, *Flags of Convenience; Maritime Dilemma*, 88 PROCEEDINGS (Feb. 1962), https://bit.ly/47Sc65K.
[80] *See* 33 U.S.C. § 1321 (2022).

regarding a spill is liable for five years imprisonment for the failure to notify alone.[81]

Extending universal criminal jurisdiction to environmental crimes would provide the legal justifications necessary to stop severe environmental violations at any time, avoiding the loopholes created by flags of convenience or lax coastal state enforcement. From a tactical perspective, a search of a ship for an environmental violation might reveal additional illegal activity such as arms smuggling, human trafficking, and nuclear proliferation. China, for example, conducts maritime military operations in the "gray zone," that is, the "operational space between peace and war, involving coercive actions to change the status quo below a threshold that, in most cases, would prompt a conventional military response, often by blurring the line between military and nonmilitary actions and the attribution for events."[82] If in the course of stopping an environmental violation, "gray zone" activities were also revealed, then it could potentially provide intelligence benefits and frustrate adversarial activity. The potential for this justification to be abused is significant and would require case-by-case legal analysis for risks to international and maritime law. While pre-textual searches and seizures are already legal in many jurisdictions under U.S. domestic law, the diplomatic implications of using them in international waters would require additional research and scrutiny.[83]

This tactic would require the United States to ratify UNCLOS, which has historically proven difficult.[84] Second, the convention itself would need to amend UNCLOS part XII to change the enforcement provisions of the environmental sections to mirror the universal jurisdiction language found in Article 105.

D. Tactic 4: Applying Environmental Legal Paradigms to the Law of War

The final proposed tactic is a way of thinking, versus a direct application of law. As explained above, environmental law focuses on risk mitigation, coalition building, the use of advanced technologies, and the application of policy solutions according to the best available scientific evidence. This manner of considering a problem from a different perspective is useful for warfighters who may only be focused on applying kinetic force to a problem. I propose that warfighters have at least a baseline understanding of environmental law, or have someone with that understanding to advise them, to have a strategically different

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[81] *Id*.
[82] Chongjin Jung, *China's Gray Zone Operations in the Yellow Sea*, SEC. NEXUS PERSPS., Sep. 2021, at 1 (emphasis removed).
[83] *See generally* Brian J. O'Donnell, *Whren v. United States: An Abrupt End to the Debate Over Pretextual Stops*, 49 MAINE L. REV. 207 (1997).
[84] *See* John Kraus, *Unmoored from the UN: The Struggle to Ratify UNCLOS in the U.S.,* SAIA REV. INT'L AFFS. (Jun. 26, 2023), https://bit.ly/3ByvEQC.

and potentially advantageous paradigm to apply to conventional problems. Examples may include: considering the environment in addition to the human costs in a collateral damage assessment; assessing the political fallout risk from counterinsurgency operations vis-a-vis a population's relationship to its physical environment; and advancing a global theory of environmental equity and conservation. This last suggestion aligns with America's strategy of retaining the moral authority necessary to affect foreign policy, a prerequisite for relationship building with foreign partners.

Environmental policymakers are adept at analyzing political, economic, biological, and various other factors when confronting complex problems. These analyses are reflected in environmental policies that require best evidence, risk mitigation, alternative courses of action, and others, before an action is taken that could negatively impact the environment. The physical environment is, in essence, a complex interconnected system, much like a social or political system. Influencing those systems is often the ultimate strategic objective in a war. Military doctrine could benefit from the hard lessons learned over decades of environmental policy.

V. CONCLUSIONS AND RECOMMENDATIONS

The brilliance of Sun Tzu's *Art of War* lies in its succinctness. Each lesson is a valuable takeaway for a warfighter. Recommendations to military planners, policymakers, and environmentalists should therefore be short, easy to understand, and achievable. The recommendations below attempt to distill the aspects of environmental lawfare similarly into discrete planning elements and recommendations (mercifully without the poeticism Sun Tzu might have used):

1. Learn the language and way of thinking of environmentalists.
2. Understand that environmental lawfare is a tactical tool. Use it when planning a strategy.
3. Conflicts will always arise when a government seeks to exploit the environment. Mitigate these conflicts at your home and exacerbate them at your enemy's.
4. Environmental law can influence the physical shape of the battlefield. Bring additional resources into strategically important areas and unite allies in mutually agreeable pursuits.
5. Use environmental lawfare to take the fight to the enemy and leverage every justification possible to frustrate his plans both during war and in preparation for it.
6. Establish and enforce a global order that values environmental protection; in the long run, it can provide the legal justification for military intervention while advancing environmentally beneficial causes.

7. View political, economic, and other sociologic systems as environmental ecosystems and apply environmental law principles to mitigate damage, increase combat effectiveness, and achieve the ultimate strategic objective of your operation.

This Article advocated for warfighters and environmentalist interoperability and then proposed this definition of environmental lawfare:

> *Environmental Lawfare: A term used to describe a government's use of environmental legal theories, instruments, and institutions to achieve a strategic advantage over a foreign adversary, usually incorporating informational, economic, and political tactics.*

The Article then analyzed four possible ways that environmental warfare could be used and distilled this analysis into seven actionable recommendations for military planners. The ultimate goal of this Article is to propose a means of developing another weapon for America's arsenal, one that can hopefully complement the other tools it has at its disposal while providing benefits for the physical environment.