UNDERSEA LAWFARE

Can the U.S. Navy Fall Victim to This Asymmetric Warfare Threat?

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The supreme art of war is to subdue the enemy without fighting.

SUN TZU

A federal judge has ruled in favor of environmentalists who assert the Navy has vastly underestimated the threat to marine mammals posed by its use of sonar and explosives during training off Southern California and Hawaii.

LOS ANGELES TIMES, 1 APRIL 2015

As the world's only superpower, the United States of America finds itself challenged by adversaries who know they cannot confront it directly, toe to toe, on traditional battlefields, or on or under the world's oceans.[1] In their attempts to follow Sun Tzu's instruction to "subdue the enemy without fighting," potential adversaries of the United States continuously assess and probe American strengths and weaknesses to identify vulnerabilities for military, political, and industrial exploitation. It is not fully appreciated, assessed, or addressed by American policy makers and warfighters how vulnerable the U.S. military is to the threat of "lawfare," both international and domestic environmental.

The leading expert on lawfare, Brigadier General Charles J. Dunlap, Jr., U.S. Air Force (Ret.), defines it as the use or abuse of law and legal processes as a substitute for traditional military means to achieve military objectives.[2] Both international environmental-protection political processes and American domestic environmental-protection laws and judicial processes offer tempting targets for exploitation by weaker adversaries willing to engage in political and legal lines of operations against superior U.S. military technologies and capabilities.[3]

The authors believe that it is possible for a competitor or potential enemy to use systemic American vulnerabilities to wage a campaign of misinformation and legal challenges to reduce U.S. military and antisubmarine-warfare readiness. In particular, this article focuses on how adversaries could use environmental lawfare covertly to wage war against the use of active sonar during testing, training,

and operations. Allowed to proceed unchecked heretofore, this use of undersea lawfare may already be providing potential adversaries an inexpensive way of reducing the antisubmarine-warfare capabilities of the U.S. Navy and its allies. This article is intended to stimulate action by warfighters and policy makers to identify, assess, and address this threat.

The article begins with an overview of asymmetric warfare, an introduction to lawfare as a form of warfare, and some historical examples of international lawfare. It then analyzes the potential military lawfare vulnerabilities to international environmental bodies and political processes as well as to American domestic environmental-protection laws and judicial processes. The article concludes with some lawfare threat-assessment indicators and possible courses of action.

ASYMMETRIC WARFARE / LAWFARE

Asymmetric warfare threats are nothing new.[4] Noting that "at the dawn of the 21st century, the United States of America faces a broad and complex array of challenges to our national security," the White House's 2010 *National Security Strategy* stated, "In addition to facing enemies on traditional battlefields, the United States must now be prepared for asymmetric threats."[5] Reiterating the domestic threat posed by this mode of warfare, the Department of Defense's 2013 *Strategy for Homeland Defense and Defense Support of Civil Authorities* states, "Potential nation-state adversaries will continue to refine asymmetric attack plans against the homeland as part of their concepts of operation and broader military strategies of confrontation with the United States."[6] It now becomes a matter of identifying and neutralizing these threats.

By their very nature, asymmetric nontraditional threats come in myriad forms and are especially difficult to conceptualize and combat. Knowing this, policy makers and warfighters must engage in rigorous and comprehensive strategic, operational, and tactical vulnerability self-assessments to identify and mitigate future challenges. In the past, these self-assessments have focused almost exclusively on a limited number of more traditional asymmetric threats (e.g., cyber and terrorist). Unfortunately, as the 9/11 attack and the recent North Korean cyber attacks more than amply demonstrated, asymmetric threats are often not identified in time to prevent damage; more-effective and more-meaningful assessments must account for creative and novel attacks. Consideration of the entire spectrum of potential asymmetric threats requires truly imaginative thinking.

Such thinking cannot simply ignore previously unidentified threats to U.S. military capabilities and the changing nature of warfare. In their 1999 book *Unrestricted Warfare,* Colonels Qiao Liang and Wang Xiangsui of the Chinese People's Liberation Army address some mechanisms a nation such as China can use to defeat a technologically superior adversary, such as the United States.[7] Noting

the narrow American focus on technology, Qiao and Wang argue that the United States is particularly vulnerable to attack along nontechnological *legal,* economic, and terrorist lines.[8] The U.S. Department of Defense in its 2005 *National Defense Strategy* acknowledged the issue: "Our strength as a nation state will continue to be challenged by those who employ a strategy of the weak using international forums, *judicial processes,* and terrorism."[9] Thus, an adversary's use (or misuse) of international political processes, domestic laws, and judicial processes constitutes a recognized and potentially feasible asymmetric threat.

INTERNATIONAL LAWFARE

The term "lawfare" may be of recent vintage, but its practice in international forums is not new. Weaker nation-states have long used international legal processes, world opinion, and domestic political support to try to level the playing field and neutralize an adversary's technological or other advantages. Qiao and Wang describe international law warfare as "seizing the earliest opportunity to set up regulations."[10] This initiative allows an adversary to define the "problem," control the agenda, force adverse responses, and achieve desired results.

Historically, weaker parties have attempted to achieve such leveling by asserting that a stronger party's technology, weapons, or doctrines violate the international law of armed conflict. When successful, these efforts achieve an inexpensive, asymmetric, nonkinetic impact that restricts a stronger nation-state's military capabilities while undercutting its strategic or operational advantage. A historical example of the use of an international agreement to obtain and secure a strategic advantage is the attempt at the 1856 Congress of Paris to set limits to naval warfare by closing the Black Sea to all warships.[11] Other instances, involving operational or tactical advantages, are Pope Urban II's ban on the use of the crossbow against Christians in 1097; the Saint Petersburg Declaration of 1868, which prohibited explosive bullets under forty grams in weight; and the Convention of 1899, which banned the use of expanding ("dumdum") ammunition.[12]

Modern examples of parties using international bodies, other forums, and the Internet to limit U.S. military capabilities include efforts to shut down the detention facility at Guantánamo Bay, Cuba; to ban the testing of nuclear weapons; and to prohibit land mines, cluster munitions, space weapons, blinding lasers, drones, etc.[13] An excellent illustration of international lawfare is the ongoing attempt to blunt superior U.S. military technological capabilities by arguing that laser-guided "smart bomb" munitions render traditional "dumb bomb" kinetic munitions impermissibly indiscriminate under the law of armed conflict.[14] The above cases may be motivated solely by humanitarian concerns, but they make clear how malevolent or hostile actors could exercise lawfare for military and national strategic advantages.[15]

All of this appears to have been given only limited consideration by historians, policy makers, or warfighters, and that usually focused on an adversary's use or misuse of international law, mostly the law of war or of armed conflict. Nothing limits the exploitation of international or domestic laws and legal processes to achieve strategic, operational, or tactical advantage. The option to exploit American environmental-protection processes and laws is particularly attractive, given their particular susceptibility to abuse and manipulation.

INTERNATIONAL ENVIRONMENTAL LAWFARE

The environmental subset of lawfare is the use or misuse of environmental-protection laws and legal processes as a substitute for traditional military means to achieve objectives.[16] What would such a campaign against the United States, specifically against the Navy's antisubmarine capabilities, look like? To follow the *Unrestricted Warfare* playbook: adversaries, operating through activist environmental organizations—their knowing or unknowing proxies—would manipulate influential international forums, conferences, or governing bodies in a multi-pronged strategy to neutralize particular U.S. military superiorities, whether technological, tactical, or strategic.

An adversary's first need is for a proxy. Failing to co-opt an authentic well-intentioned environmental group, it must create an entity that appears to be one, that closely parallels the structure and operations of such successful nongovernmental organizations (NGOs) as the Natural Resources Defense Council or Greenpeace.[17] These organizations' activities would include fund-raising, press conferences, press releases, blogs, websites, social media campaigns, lobbying, meetings, conferences, and symposia, as well as partnerships with other respected NGOs and influential organizations, universities, and individuals and sponsorship of "research." To the public, these activities would appear to be legitimate, if not noble, aimed solely at the protection of marine mammals or the promotion of other oceanic environmental causes. In these ways proxy environmental NGOs would achieve significant leverage, building on the infrastructure, strategic communications, and other achievements of the scores of legitimate groups. Ideally, from the adversary's viewpoint, they could perform as self-funded, self-sufficient, and perpetual "launch and forget" weapons.

Next would be the development and execution of an effects-based, multimedia, external strategic communications plan. This plan would be centered on a comprehensive, well-resourced, and emotion-based public relations campaign that attempts to create both an "environmental crisis" and an "international consensus." That consensus would point to a predetermined solution that only the proxy group can provide and that is, not coincidentally, inimical to targeted U.S. military capabilities.

Recent efforts by (doubtless genuine) environmentalists demonstrate the potential effects of international strategic communications campaigns on military readiness. For example, environmentalists have expended significant effort and expense in public relations and strategic communications campaigns to "correlate" military active-sonar use with worldwide marine-mammal mass strandings. These events include, but are not limited to, the Canary Islands (1985, 1988, 1989, 2002, 2004), Greece (1996), the U.S. Virgin Islands (1998, 1999), the Bahamas (2000), Madeira (2000), the northwest coast of the United States (2003), and the coast of North Carolina (2005).[18]

Let us set aside the emotional message of the environmentalists and look at the facts. The Navy has been using active sonar for testing and training for over eighty-five years in the waters listed above and in other waters under the same conditions. Despite millions of dollars' worth of dedicated research, NGOs and other groups have been unable to present a single persuasive, peer-reviewed, empirically based, scientific study that definitively links military sonar use to significant long-term adverse physiological impacts on marine mammals. At best, opponents of military sonar have "correlated" worldwide antisubmarine training and active-sonar employment with the stranding of approximately fifty marine mammals during the period 1996–2006, an average of five per year. The loss of five marine mammals per year to military sonar use pales in comparison to the estimated six hundred thousand marine mammals killed each year in the same period by commercial fisheries.[19] In the meantime, countries such as Iceland, Norway, and Japan continue to hunt whales, Japan alone accounting for nearly two thousand whale deaths a year under its controversial "research" and other treaty exemptions.[20]

Despite these facts, the campaign against Navy training activities and active sonar use has been, by any measure, spectacularly successful. Given the relative lack of meaningful natural-resource-protection benefit to be gained by either eliminating or reducing antisubmarine-warfare training worldwide, the prudent response is to ask, Where's the crisis? Even better questions are, How and why did this become a crisis? How are these efforts affecting U.S. military capabilities? Granting for argument's sake the highest motivations for the current anti-active-sonar strategic communications campaign, it should be clear that an adversary could mount a similar campaign to obtain comparable or more damaging results. This possibility is relevant for any asymmetric-threat assessment.

Another avenue of attack using international lawfare is targeting influential international forums, conferences, and governing bodies in aggressive and sophisticated lobbying and "educational" campaigns. A potential adversary's initial attempt will be to use or modify existing international treaties, conventions, or regional agreements to obtain statements, resolutions, or other endorsements for

significant reductions in the use of, for example, military sonar testing, training, and operations.

Again, consider the effectiveness of environmental-group efforts. For more than a decade coalitions of environmentalists and others have lobbied and influenced numerous international bodies against the use of military active sonars because of the alleged harm caused to marine resources in general and marine mammals in particular. Table 1 lists some of the major "wins" by these groups during the last decade. They represent diversions of time, effort, and resources on

TABLE 1
INTERNATIONAL SONAR ACTIONS

Legal Body / Document	Purpose	Action
1994, United Nations Convention on the Law of the Sea	UNCLOS, with 157 signatories, is the seminal document governing international maritime activities, including environmental protection.[a]	Generally codifying customary international law, UNCLOS, among other things, assigns member states an affirmative obligation and responsibility to protect and preserve the marine environment as well as requires member states to assess and communicate the potential impacts of their activities on the marine environment.[b] UNCLOS regulates "pollution of the marine environment," defined, in relevant part, as "the introduction by man, directly or indirectly, of substances *or energy* into the marine environment."[c]
2004, International Convention for the Regulation of Whaling	The ICRW is an international agreement signed in 1946 to ensure the protection and conservation of worldwide whale stocks by establishing a system of international regulation of the members and contracting governments' commercial, scientific, and aboriginal whaling practices.[d]	Its June 2004 International Whaling Commission's Scientific Committee Report claimed that "compelling evidence" implicates ocean noise as a threat to marine mammals.[e]
2004, European Parliament	The EP is the directly elected parliamentary body of the member states of the European Union.[f] Together EP and the Council of the European Union form the bicameral legislative branch of the EU's institutions.	In October 2004, the EP overwhelmingly adopted a resolution calling for a moratorium on military sonars.[g]
2004, International Union for Conservation of Nature		In November 2004, its World Conservation Congress passed Resolution 3.068 calling for international action to address the problem of ocean noise, including military sonars.[h]

INTERNATIONAL SONAR ACTIONS CONTINUED

Legal Body / Document	Purpose	Action
2006, Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS) / 2006, Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS)	Aimed at preserving and protecting the numerous small migratory cetacean species native to the seas bordering Europe, including dolphins, whales, and harbor porpoises, the ACCOBAMS and ASCOBANS are regional cooperative agreements "to reduce threats to cetaceans, improve knowledge, and conserve marine diversity."[i]	In December 2006 ASCOBANS parties passed Resolution 4, "Adverse Effects of Sound, Vessels and Other Forms of Disturbance on Small Cetaceans," calling for the development of effective mitigation measures to "reduce disturbance of, and potential physical damage to, small cetaceans."[j] "The European Cetacean Society resolution adopted during the 23rd Conference (2009), requests to urgently adopt and enforce regulations for effective mitigation of active sonar use. This Resolution particularly urges competent authorities to take into account the conservation status and the potential and known effects of sonar on beaked whales."[k]
2008, Convention on the Conservation of Migratory Species of Wild Animals	CMS is an intergovernmental treaty concerned with the conservation of terrestrial, marine, and avian migratory wildlife and habitats on a global scale.[l]	Meeting in Rome in December 2008, the CMS Conference of Parties adopted a resolution entitled "Adverse Anthropogenic Marine/Ocean Noise Impacts on Cetaceans and Other Biota" (Resolution 9.19).[m] Resolution 9.19 recognizes anthropogenic ocean noise as a form of energy "pollution" and reaffirms that "the difficulty of proving negative impacts of acoustic disturbance on cetaceans necessitates a precautionary approach in cases where such impact is likely."[n]

Notes:

Acronyms used in tables 1 and 2 are expanded in table 3.

a. United Nations Convention on the Law of the Sea, 10 December 1982, 1833 UNTS 3 [hereafter UNCLOS]. An overview and copy of the full text is available at *United Nations,* www.un.org/. See Elena M. McCarthy, "International Regulation of Transboundary Pollutants: The Emerging Challenge of Ocean Noise," *Ocean and Coastal Law Journal* 6, no. 2 (2001), pp. 275–77.
b. UNCLOS, arts. 192, 204–206.
c. Ibid., art. 1(1)(4) [emphasis added].
d. International Convention for the Regulation of Whaling. A copy of the convention is available at *International Whaling Commission Key Documents,* iwc.int/convention. The list of the ICRW members and contracting governments is available at *International Whaling Commission,* iwc.int/.
e. International Whaling Commission, *Scientific Committee (IWC-SC) Report Annex K: Report of the Standing Working Group on Environmental Concerns* (Cambridge, U.K.: May 2004). A copy of the report is available at *The Acoustic Ecology Institute,* www.acousticecology.org/.
f. *European Parliament,* www.europarl.europa.eu/.
g. European Parliament, *Resolution on the Environmental Effects of High-Intensity Active Naval Sonars,* B6-0089/2004, available at awionline.org/. The resolution called on the EU and its member states to "adopt a moratorium on the deployment of high-intensity active naval sonars until a global assessment of their cumulative environmental impact on marine mammals, fish and other marine life has been completed."
h. International Union for Conservation of Nature World Conservation Congress, Resolution 3.068, "Undersea Noise Pollution," in *Resolutions and Recommendations: World Conservation Congress, Bangkok, Thailand, 17–25 November 2004* (Gland, Switz.: 2005), available at cmsdata.iucn.org/.
i. Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS). Text available at *ACCOBAMS,* www.accobams.org/. There are currently twenty-eight contracting-party governments; a complete list as of September 2011 is at ibid. ACCOBAMS was established under the auspices of the United Nations Environmental Programme's 1979 Convention on the Conservation of Migratory Species of Wild Animals; see *Convention on the Conservation of Migratory Species of Wild Animals,* www.cms.int/en.
j. 5th Meeting of the Parties to ASCOBANS, the Netherlands, 18–20 September and 12 December 2006, Resolution 4, *Adverse Effects of Sound, Vessels and Other Forms of Disturbance on Small Cetaceans,* available at www.ascobans.org/.
k. Fifth Meeting of the Parties to ACCOBAMS, Tangier, 5–8 November 2013, *Anthropogenic Noise and Marine Mammals: Review of the Effort in Addressing the Impact of Anthropogenic Underwater Noise in the ACCOBAMS and ASCOBANS Areas,* p. 16, available at www.cbd.int/.
l. *Convention on the Conservation of Migratory Species of Wild Animals.*
m. Convention on Migratory Species, Ninth Conference of the Parties, Rome, 1–5 December 2008, *Adverse Anthropogenic Marine/Ocean Noise Impacts of Cetaceans and Other Biota,* UNEP/CMS/Resolution 9.19, available at www.cms.int/.
n. Ibid., p. 2.

the part of the U.S. Navy, to the detriment of readiness and national defense. The long-term impacts, if any, have yet to be fully assessed and quantified. But these actions succinctly illustrate how strategic communications campaigns can seize effective control of processes and achieve desired end states. The proponents of the activities listed in table 1 are presumably at least willing to accept degradation of both antisubmarine-warfare capability and overall readiness. It is not difficult to imagine the assimilation of similar processes, to obtain comparably adverse impacts, by actors who specifically desire to target military capability or technological superiority.

A logical extension and continuation of international environmental lawfare would be new international treaties, conventions, or agreements directly reducing or banning particular technologies or warfighting capabilities. Suggestive of what such efforts would look like, were it in the hands of an actual adversary, is Greenpeace International's proposal for a global network of marine reserves covering 40 percent of the world's oceans, including international waters.[21] If enacted, the implications for military readiness and operations are painfully obvious.

It should be noted that a significant constraint on an adversarial international lawfare arises from one of the limitations of international law itself: the general lack of meaningful enforcement mechanisms. Since all nation-states are sovereign, each unilaterally decides whether to commit itself to given international conventions, treaties, or agreements. Even when a nation-state does so, compliance remains voluntary and effectively immune from enforcement in case of alleged or real violations.

DOMESTIC ENVIRONMENTAL LAWFARE

This situation changes dramatically, however, when a potential adversary shifts to the arena of American domestic environmental law. The United States proclaims itself a world leader in environmental and natural-resource protection. The Environmental Protection Agency is a cabinet-level entity, and Congress has enacted over a hundred environmental laws since 1899 establishing programs to improve air and water quality; handle solid, hazardous, and toxic wastes; clean up landfills; and protect endangered species, as well as natural and cultural resources. In the United States, environmental-protection laws differ from most other federal statutes in that Congress has intentionally waived U.S. sovereign immunity. The majority of American environmental-protection laws mandate federal-agency compliance and apply injunctive, civil, and criminal sanctions to the government's employees, officers, and officials. For the most part, these waivers of federal sovereignty do not exempt the Department of Defense. Accordingly, the Navy, like other federal agencies, is subject to myriad federal and, in some cases, state, territorial, and tribal environmental laws and regulations.

These include, but are not limited to, the "big four" affecting maritime readiness: National Environmental Policy Act requirements for preactivity environmental impact statements; Marine Mammal Protection Act requirements for incidental take authorizations; Endangered Species Act requirements for consultation prior to any activities that "may affect" a threatened or endangered species or habitat; and Coastal Zone Management Act requirements for federal agency "consistency" with state coastal-zone management.[22]

To take midfrequency active sonar as an example, the Navy is required to assess the potential impacts of its use on the environment and maritime resources. To start with, it must conduct requisite preactivity environmental planning, including documented impact analyses to determine whether the intended sonar use will adversely affect marine resources. If expected impacts exceed certain statutory or regulatory thresholds, the Navy is required to consult federal and state regulatory and coastal-resource agencies. It may also be required to obtain federal authorization. These consultations, authorizations, approvals, and notifications often produce detrimental restrictions of time, place, and operational mode, such as prohibition of sonar use at night.

U.S. EQUAL ACCESS TO JUSTICE ACT

Increasing the attractiveness to potential adversaries of encumbering U.S. Navy military readiness with burdensome agency approvals processes (and the possibility of civil damage awards and court injunctions) is the 1980 Equal Access to Justice Act (EAJA).[23] The EAJA authorizes U.S. federal courts to award (aside from injunctions and civil damages) costs and attorney fees "in any civil action brought by or against the United States or any agency or any official of the United States."[24] These "civil actions" include environmental and resource-protection compliance challenges. Originally intended to assist small businesses to defend themselves from governmental agency actions, the EAJA also extends to 501(c)(3) nonprofit organizations, including environmental NGOs and other private groups.

Under the EAJA, plaintiffs, if they prevail, are entitled to reimbursement for their attorney fees, up to $750 per hour, and other allowed costs incurred in bringing the lawsuit (e.g., expert witness fees, costs of scientific studies, mailings). In some cases, costs and attorney's fees are payable even to plaintiffs who ultimately lose their legal challenges. Exact costs to the federal government and American taxpayers are apparently unknown, untracked, and unreported by most federal agencies. One Government Accountability Office study tracked 525 reimbursements during 2001–10 resulting in $44.4 million in legal-fee reimbursements.[25] Some examples to date from recent federal lawsuits by environmental groups and others challenging U.S. Navy active sonar include approximately $1.7 million for a 2002 lawsuit challenging low-frequency sonar use in the Pacific; approximately

$400,000 for the five-day injunction on U.S. midfrequency active sonar during the 2006 Rim of the Pacific (RIMPAC) multinational training exercise; and over $500,000 in attorney fees and costs alone related to an injunction in the Navy's Southern California Operating Area.

The EAJA "fee shifting" mechanism provides both an incentive and a steady source of income to law firms willing to litigate environmental compliance challenges against U.S. military departments and its officials, even on behalf of potential adversaries engaging in an asymmetric lawfare campaign. From the perspective of lawfare vulnerabilities, judicial enforcement of federal agency compliance provides adversaries an effective, essentially cost-free means to engage in legal lines of attack against U.S. military readiness.

U.S. DOMESTIC SONAR LITIGATION

For over a decade the Navy has been challenged in federal court by environmental NGOs and other groups seeking court orders enjoining active-sonar use, testing, and training. While their specifics vary slightly, these legal challenges have commonalities. They all allege violations of American domestic environmental-planning and natural-resource-protection laws, and they all seek judicial intervention to reduce or end, temporarily or permanently, Navy midfrequency active-sonar testing and training. Finally, the lawsuits target almost exclusively the Pacific theater antisubmarine warfare training areas off the coasts of California, Hawaii, and the Pacific Northwest.[26] As one example, on 3 July 2006 the U.S. District Court for the Central District of California issued an injunction barring the Navy from training with midfrequency active sonar during RIMPAC 2006 off the Big Island of Hawaii.[27]

Table 2 summarizes the major domestic legal challenges against the Navy since 2002. Like table 1, it shows clearly how an adversary could capitalize on American domestic environmental laws and federal judicial processes to eliminate or degrade military capabilities.

LAWFARE THREAT-ASSESSMENT INDICATORS

The authors understand the inherent difficulties of identifying and assessing nontraditional asymmetric threats as a whole or of legal lines of operations in particular—hence the appeal of lawfare to potential adversaries. The following considerations may help separate actual threats from the background "noise" of legitimate challenges.

What Is the Target?

Is the international effort, strategic communications campaign, or lawsuit aiming at an increase in environmental or natural-resource protection or at something else? Does it seek rather to limit military-readiness activities, such as

TABLE 2
U.S. DOMESTIC SONAR LITIGATION EXAMPLES

Case	Court	Claim	Result
Natural Resources Defense Council v. U.S. Navy	U.S. Federal Dist. Court (C.D. Cal. 2002)	NEPA, ESA, MMPA, and MSA violated by U.S. Navy's LWAD program, including active sonar	Dismissed
NRDC v. Evans	U.S. Federal Dist. Court (N.D. Cal. 2002)	MMPA, ESA, and NEPA violated by U.S. Navy's peacetime use of low-frequency active sonar systems (SURTASS-LFA) for training, testing, and routine operations in the world's oceans	Permanent "tailored" injunction granted to plaintiffs limiting U.S. Navy's use
Cetacean Cmty. v. Bush	U.S. Federal Dist. Court (D. Haw. 2003)	ESA, MMPA, and NEPA violated by U.S. Navy use of SURTASS-LFA for training, testing, and routine operations in the world's oceans	Dismissed—whales and dolphins were not "persons" under the acts and therefore lacked standing to bring claims
NRDC v. Winter I	U.S. Federal Dist. Court (C.D. Cal. 2005)	NEPA, APA, and ESA violated by all U.S. Navy uses of midfrequency active sonars	Injunction sought
NRDC v. Winter II	U.S. Federal Dist. Court (C.D. Cal. 2006) [amended complaint]	MMPA, NEPA, ESA, and CZMA violated by U.S. Navy's use of MFAS during its international RIMPAC exercises off Hawaii	Preliminary injunction granted prohibiting U.S. Navy use of MFAS for training
NRDC v. Winter II	U.S. Federal Dist. Court (C.D. Cal. 2007) [amended complaint]	MMPA, NEPA, ESA, and CZMA violated by U.S. Navy's use of MFAS during exercises in the Southern California Operating Area February 2007–February 2009	Preliminary injunction granted, later vacated for tailored injunction measures
NRDC v. Winter II	U.S. Supreme Court (2008)	U.S. Navy alleged lower courts erred in granting injunctions	Lower courts reversed
NRDC v. Gutierrez	U.S. Federal Dist. Court (N.D. Cal. 2008)	MMPA, NEPA, and ESA violated by U.S. Navy SURTASS-LFA use on the world's oceans	2002 injunction continued; case settled
Ocean Mammal Inst. v. Gates	U.S. Federal Dist. Court (D. Haw. 2008)	NEPA, ESA, CZMA, and MSA violated by U.S. Navy's use of MFAS in twelve undersea warfare exercises in the Hawaiian Islands Operating Area January 2007–January 2009	Preliminary injunction ordered requiring U.S. Navy implementation of restrictive mitigation measures

U.S. DOMESTIC SONAR LITIGATION EXAMPLES CONTINUED

Case	Court	Claim	Result
Earthjustice et al. v. Nat'l Marine Fisheries Service (NMFS)[a]	U.S. Federal Dist. Court (N.D. Cal. 2012)	APA, ESA, and MMPA violated by U.S. Navy's MFAS use for ASW training in its Northwest Training Range Complex off Washington State	Injunction sought by plaintiffs to enjoin U.S. Navy MFAS use
Earthjustice et al. v. NMFS, U.S. Dept. of Commerce, and U.S. Navy[b]	U.S. Federal Dist. Court (D. Haw. 2014)	ESA, NEPA, and MMPA violated by U.S. Navy MFAS use for ASW training in its Hawaii–Southern California Training and Testing Study Area	Summary judgment in favor of environmental NGO plaintiffs granted on 31 March 2015

Notes:

a. Complaint for Declaratory and Injunctive Relief, U.S. Dist. Ct. (No. Dist. of Cal.), 25 January 2012, available at earthjustice.org/. Plaintiffs: Earthjustice, InterTribal Sinkyone Wilderness Council, Center for Biological Diversity, Natural Resources Defense Council, Inc., People for Puget Sound, Friends of the San Juans, and Friends of the Earth.

b. Amended Complaint for Declaratory and Injunctive Relief, U.S. Dist. Ct. (Dist. of Hawaii), Civil No. 13-00684 SOM RLP, 15 January 2015, available at earthjustice.org/. Plaintiffs: Earthjustice, Conservation Council for Hawai'i, Animal Welfare Institute, the Center for Biological Diversity, and Ocean Mammal Institute.

Source: Craig, "Beyond *Winter v. NRDC.*"

development, testing, training, and operation? For example, does the group target only U.S. Navy active sonar but not other maritime activities potentially equally harmful to marine resources, such as commercial shipping, fishing, natural-resource exploration, air-gun arrays, or recreational boating?[28]

Analysts should also consider what other activities groups are targeting. Illustrative are two separate lawsuits, filed in 2003 and 2004, in which environmental NGOs sued the Department of Commerce's National Marine Fisheries Service to stop it from issuing scientific research permits to determine the impacts of active sonar on marine mammals.[29] In one case, the court issued a temporary injunction against scientific experimentation in the northern Pacific Ocean to test whale-finding high-frequency sonar on grey whales.[30] Again, our reasonably prudent policy maker and warfighter should be asking why any group or individual purportedly dedicated to environmental and natural-resource protection would actively attempt to impede scientific studies to determine whether an activity may have an adverse environmental or natural-resource impact.

Finally, are U.S. military technologies or capabilities exclusively, or almost exclusively, the targets? Since similar human activities will likely cause adverse impacts anywhere in the world regardless of the political or military affiliation, genuine environmental challenges should be politically and militarily neutral in strategy and tactics. Disparities here may indicate malicious intent. It casts no aspersion on any environmental group or individual—certainly none is

intended—to point out in this connection a potentially important discrepancy in current practice. At least one major environmental NGO has adopted the strategy of mounting challenges in federal court to compel U.S. Navy environmental compliance while simultaneously adopting cooperative "partnerships" to obtain equivalent Chinese and Russian environmental compliance.[31] The nationality of the military forces should be irrelevant, one might reasonably expect, to the potential adverse impacts of waterborne sound energy on marine resources. Motivation matters.

Where Is the Targeted Activity?

Lawfare analysts should look for temporal, political, and geographic discrepancies. For example, it seems interesting and relevant that aggressive international efforts, strategic communications campaigns, and domestic judicial challenges against military sonar use started only within the last decade or so, although the U.S. Navy has used sonar for eighty-five years and Congress has enacted environmental protection laws for over forty. As noted above, environmental efforts appear focused almost exclusively on Pacific Fleet testing and training areas. Temporally and spatially they seem aligned with the national security "pivot to Asia" and with geopolitical events in the U.S. Pacific Command area of responsibility. They also coincide with China's drive for naval domination on both sides of the Malacca Strait, the South China Sea, and Taiwan Strait and with its (and other potential adversaries') growing acquisition of quiet conventional and nuclear submarines. These strategic shifts, in turn, have driven a resurgence of interest within the U.S. Navy in antisubmarine warfare. If military sonars do adversely affect marine mammals at the individual and species "crisis" levels claimed by environmental organizations, one would expect the impacts to be worldwide. Yet to date there has been little or no such interest in, and few lawsuits and injunctions have sought to stop, similar sonar use or training in the Atlantic Ocean, Gulf of Mexico, Mediterranean, or Persian Gulf.

It goes without saying that no one factor alone is determinative in identifying and assessing potential lawfare threats. Each situation is fact and circumstance specific. It is the very nature of nontraditional warfare threats that other factors exist outside the scope of this article. What is required is either creativity from future analysts or the harsh reality of 20/20 hindsight gained from hard lessons learned.

DEALING WITH AN UNINTENDED VULNERABILITY

Policy makers and warfighters today should not allow themselves to be complacent or, worse, uncreative about such threats as environmental lawfare. They must be open to exploring all avenues of attack available to potential adversaries,

TABLE 3
ACRONYMS

ACCOBAMS	Agreement on the Conservation of Cetaceans in the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
APA	Administrative Procedure Act (5 USC § 701 et seq. [1946])
ASCOBANS	Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas
ASW	antisubmarine warfare
CMS	Convention on the Conservation of Migratory Species of Wild Animals (also Bonn Convention)
CZMA	Coastal Zone Management Act (16 USC § 1451 et seq. [1972])
EP	European Parliament
ESA	Endangered Species Act (7 USC § 136, 16 USC § 1531 et seq. [1973])
EU	European Union
ICRW	International Convention for the Regulation of Whaling
kHz	kilohertz
LWAD	Littoral Warfare Advanced Development (program)
MFAS	midfrequency active sonar[a]
MMPA	Marine Mammal Protection Act (16 USC § 1361 et seq. [1972])
MSA	Marine Sanctuaries Act (16 USC § 1431 et seq. and 33 USC § 1401 et seq. [1988])
NEPA	National Environmental Policy Act (42 USC § 4321 et seq. [1969])
NGO	nongovernmental organization
RIMPAC	Rim of the Pacific (exercise series)
SURTASS-LFA	Surveillance Towed Array Sensor System (SURTASS)–Low-Frequency Active (LFA)[b]
UNCLOS	United Nations Convention on the Law of the Sea

Notes:

a. U.S. Justice Dept., "Mid- and Low-Frequency Sonar," *The United States Department of Justice,* September 2014, www.justice.gov/ ("Mid-frequency active sonar (1kHz–10kHz) is the Navy's primary tactical sonar and its main tool to combat the threat posed by the world-wide proliferation of ultra-quiet diesel submarines").

b. Ibid. ("SURTASS-LFA is a low frequency passive surveillance system that is deployed on surface ships with acoustic data collection and analysis capabilities. It provides passive detection of quiet nuclear and diesel submarines and real-time reporting of surveillance information to theater commanders").

recognizing the potential for long-term strategic damage inflicted by a malicious actor operating either parallel to, or in conjunction with, authentic judicial and strategic-communications challenges to military-readiness activities.

A good rule of thumb would be that the more nontraditional, unusual, and unfamiliar the threat, the more serious the required inquiry and assessment. Lawfare in general, and international and domestic lawfare in particular, warrants the attention of U.S. service colleges and policy think tanks.

Internationally, the United States is vulnerable to adverse resolutions, pronouncements, interpretations, and other actions by various international bodies, organizations, and groups, especially those to which this nation is a party by treaty or other similar agreement. It is imperative that analysts understand potential adversaries' motives and capabilities, recognize vulnerabilities for threat exploitation, and exercise due diligence to counter those threats in a timely and effective manner.

Domestically, the congressional intent in waiving U.S. federal relief from environmental-compliance injunctions, civil damages, and attorney's fees and costs was to ensure that agencies did their part to help protect the environment and preserve natural resources. Notwithstanding, Congress has created an Achilles' heel for military and national security, one susceptible to exploitation by potential adversaries willing to engage in lawfare.

Lawfare attacks constitute the quintessential asymmetric threat, in that they exploit simultaneously both strengths and weaknesses of the United States. These weaknesses include the nation's reliance on technology, its culturally myopic focus on symmetric kinetic threats, and its hypersensitivity to international opinion. The nation's strengths include its deeply held belief in the rule of law, its declared world leadership in environmental stewardship, and its penchant for using treaties, laws, and judicial systems to right perceived wrongs. Finally, the American taxpayer, through the EAJA and voluntary donations, is clearly vulnerable to being made to subsidize lawfare attacks. Everything is in place for a sophisticated adversary with the vision, resources, ability, and a "long view" of history to exploit these vulnerabilities and thereby impact U.S. military capability and readiness.

As with most asymmetric "peacetime" threats, there is little doctrine and less agreement on how to respond effectively.[32] However, several commonsense options are available. The first is to develop processes designed to look for, recognize, and assess the full spectrum of potential and actual political or judicial threats, such as international and domestic environmental lawfare. It just takes creativity and some true out-of-the-box thinking.

The second is aggressive response to identified lawfare threats. Response starts with a comprehensive and coordinated campaign to educate both military and civilian leadership, the American public, and allies on the nature of the lawfare involved and the strategic and operational implications for security and defense. Senior military and executive-branch leadership should begin by elevating this problem to a multiagency level. Currently the United States typically generates only stovepiped, piecemeal, tactical responses—lawyers fending off lawsuits and public affairs teams defensively replying to press inquiries.

The international counteroffensive should not be limited to the State Department but should proactively track and participate in international conferences, governing bodies, symposia, and other relevant forums, in an effort to educate audiences and oppose attempts at international regulation of critical activities. The domestic counteroffensive should focus on eliminating the pathways vulnerable to legal lines of attack, especially the exploitation of domestic law. Potential options include, but are not limited to, defining and exempting from regulation critical military-readiness activities, enforcing registration and tracking as applicable of environmental organizations and NGOs under the Foreign Agents Registration Act, and implementing NGO reforms similar to recent election and lobbyist measures. The United States must insist that when it comes to limiting its critical military capabilities, litigants must definitively prove the military activities are actually doing harm—not the other way around. The United States must not be continuously obliged to prove its innocence in public forums, online, and in the courtroom.

Additional responses include limiting judicial review of such cases, removing injunctions as an enforcement option, and legislatively requiring regulatory agencies and courts to balance military-readiness impacts with environmental protection. Finally, Congress should shift critical environmental compliance of military-readiness activity from a matter of statute to presidential executive order. This would maintain the imperative for environmental protection by federal agencies but remove judicial enforcement vulnerabilities. An excellent model is the executive order directing the services to conduct rigorous environmental planning and impact assessments for overseas activities but ensuring these requirements remain free from international or American domestic law interference, enforcement, or abuse.[33]

Potential adversaries are clearly thinking about "subdu[ing] the enemy without fighting" by asymmetric attack against U.S. military capabilities under the guise of environmental and natural-resource protection or other types of lawfare. American policy makers and warfighters can afford not to respond only if they believe no potential adversary will recognize or act on exploitable vulnerabilities. If adversaries do seize the opportunity, they may without opposition achieve their likely goal—cheaply and effectively eliminating or reducing U.S. Navy readiness. In the case of capabilities against quiet diesel-electric and nuclear submarines, this reduction or elimination will lead to inability to protect sea lines of communications, cause a wasteful expenditure of resources in exchange for a minimal benefit in natural-resource protection, and substantially reduce U.S. operational and strategic options. To exercise the doctrinal creativity required to recognize, assess, and respond to such nontraditional asymmetric warfare threats as possible

environmental lawfare is not paranoid but rather a prudent exercise in cautionary strategic thinking.

NOTES

This article represents the views of the authors, unless otherwise attributed, and not necessarily the views of the Department of Defense, the Department of the Navy, or any other federal agency.

1. Second epigraph from Tony Perry, "Judge Rules Navy Underestimated Threat to Marine Mammals from Sonar," *Los Angeles Times,* 1 April 2015, www.latimes.com/.
2. Brig. Gen. Charles J. Dunlap, Jr., "The Law of Armed Conflict" (Air & Space Conference and Technology Exposition 2005, 13 September 2005); "Lawfare, the Latest in Asymmetries," *Council on Foreign Relations,* 18 March 2003, www.cfr.org/.
3. Dunlap, "Law of Armed Conflict." See David McCormack, "Waging Lawfare," *Center for Security Policy,* 29 January 2006, www.centerforsecuritypolicy.org/.
4. U.S. military operations doctrine defines "asymmetric" as "the application of dissimilar strategies, tactics, capabilities, and methods to circumvent or negate an opponent's strengths while exploiting his weaknesses." U.S. Defense Dept., *Counter–Improvised Explosive Device Operations,* Joint Publication 3-15.1 (Washington, D.C.: 9 January 2012), p. GL-5, available at info.publicintelligence.net/.
5. White House, *National Security Strategy 2010* (Washington, D.C.: May 2010), pp. 1, 17, available at www.whitehouse.gov/.
6. U.S. Defense Dept., *Strategy for Homeland Defense and Defense Support of Civil Authorities* (Washington, D.C.: February 2013), p. 7, available at www.defense.gov/.
7. Qiao Liang and Wang Xiangsui, *Unrestricted Warfare* (Beijing: PLA Literature and Arts Publishing House, February 1999).
8. Ibid. [emphasis added]. Illustrating this point is the following July 1974 exchange purportedly between Col. H. G. Summers, U.S. Army, Chief, Negotiations Division of the Four Party Joint Military Team, and his North Vietnamese counterpart, a Colonel Tu. Said Summers, "You know, you never beat us on the battlefield." Tu replied, "That may be so, but it is also irrelevant"; David T. Zabecki, "Colonel Harry G. Summers, Jr., Was a Soldier, Scholar, Military Analyst, Writer, Editor and Friend," *Clausewitz Homepage,* www.clausewitz.com/.
9. U.S. Defense Dept., *The National Defense Strategy of the United States of America* (Washington, D.C.: March 2005), p. 5 [emphasis added], available at www.defense.gov/.
10. Qiao and Wang, *Unrestricted Warfare,* p. 43.
11. Michael Howard et al., eds., *The Laws of War: Constraints on Warfare in the Western World* (New Haven, Conn.: Yale Univ. Press, 1997), p. 7.
12. For "dumdum" ammunition, Harold C. Hutchinson, "Lawfare as a Terrorist Tool," *Strategy Page,* 14 March 2006, www.strategypage.com/; for explosive bullets, Howard et al., *Laws of War,* p. 6; for the crossbow, TheMiddleAges.net, s.v. "crossbow," www.themiddleages.net/ ("Pope Urban II banned the crossbow's use against Christians in 1097, and the Second Lateran Council did the same in 1139").
13. For drones, Amnesty International, *Will I Be Next? US Drone Airstrikes in Pakistan* (London: 2013), pp. 43–47, available at www.amnestyusa.org/; and see "Drones: Killing outside the Bounds of Law?," *Amnesty International,* n.d., www.amnestyusa.org/. For blinding lasers, International Committee of the Red Cross, "Ban on Blinding Laser Weapons Now in Force," News Release 98/31, 30 July 1998, www.icrc.org/. For space weapons, Institute for Security and Cooperation in Outer Space [hereafter ISCOS], "Proposed Prevention of an Arms Race in Outer Space (PAROS) Treaty," available at cns.miis.edu/inventory/pdfs/paros.pdf; ISCOS, "The Treaty on Prevention of the Placement of Weapons in Outer Space," available at peaceinspace.com/

(formerly called the Outer Space Security and Development Treaty; calling for a ban on all space-based weapons). For land mines, "Arguments for the Ban," *International Campaign to Ban Landmines,* www.icbl.org/ ("Antipersonnel mines are indiscriminate and inhumane weapons and therefore violate the basic elements of international humanitarian law"). For nuclear testing, "The Case for a Ban Treaty," *International Campaign to Abolish Nuclear Weapons,* www.icanw.org/ ("International law obliges all nations to pursue in good faith and conclude negotiations for nuclear disarmament"). For Guantánamo Bay, "U.S., Guantanamo: Guantanamo, Bagram and Illegal U.S. Detentions," *Amnesty International,* n.d., www.amnestyusa.org/.

14. See Stuart W. Belt, "Missiles over Kosovo: Emergence, Lex Lata, of a Customary Norm Requiring the Use of Precision Munitions in Urban Areas," *Naval Law Review* 47 (2000), pp. 115–75.
15. See "Lawfare, the Latest in Asymmetries."
16. Dunlap, "Law of Armed Conflict."
17. See *Greenpeace USA,* www.greenpeace.org; and *NRDC: Natural Resources Defense Council,* www.nrdc.org.
18. "Lethal Sounds: The Use of Military Sonar Poses a Deadly Threat to Whales and Other Marine Mammals," *NRDC: Natural Resources Defense Council,* n.d., www.nrdc.org/.
19. Andrew J. Read, Phebe Drinker, and Simon Northridge, "Bycatch of Marine Mammals in U.S. and Global Fisheries," *Conservation Biology* 20 (2006), pp. 163–69.
20. "Whaling," *WDC* [Whale and Dolphin Conservation], us.whales.org/.
21. Greenpeace International, *Emergency Oceans Rescue Plan* (Amsterdam, Neth.: 4 October 2010), available at www.greenpeace.org/.
22. Coastal Zone Management Act, 16 USC §§ 1451–56 (1972); Endangered Species Act, 7 USC § 136; 16 USC § 1531 et seq. (1973); Marine Mammal Protection Act, 16 USC § 1361 et seq. (1972); National Environmental Policy Act, 42 USC § 4321 et seq. (1969).
23. 28 USC § 2412 (2011).
24. Ibid., § 2412(b).
25. Joshua Rhett Miller, "Environmental Groups Collecting Millions from Federal Agencies They Sue, Studies Show," *Fox News,* 8 May 2012, www.foxnews.com/.
26. For a comprehensive history of Navy sonar litigation see Robin Kundis Craig, "Appendix: Navy Sonar Litigation," table in "Beyond *Winter v. NRDC:* A Decade of Litigating the Navy's Active Sonar around the Environmental Exemptions," in "20-Ton Canaries: The Great Whales of the North Atlantic," issue, *Boston College Environmental Affairs Law Review* 36 (2009), p. 379.
27. NRDC v. Winter II, 129 S. Ct. 365 (2008).
28. See Michael T. Palmer, "Regulating Ocean Noise: A Non-traditional Threat to Maritime Security," *Maritime Affairs* 5, no. 2 (Winter 2009), pp. 86–112.
29. Australians for Animals v. Evans, 301 F. Supp. 2d 1114 (N.D. Cal. 2004); Hawaii County Green Party v. Evans, No. C-03-0078 SC, 2003 WL 21033523 (N.D. Cal. May 2, 2003).
30. See the discussion of *Hawaii County Green Party v. Evans* in Palmer, "Regulating Ocean Noise."
31. For example, one particularly vocal opponent of U.S. Navy sonar, Natural Resources Defense Council, Inc., has "partnered" since 1996 with agencies of the Chinese provincial, municipal, and central governments, as well as a wide range of emerging Chinese environmental NGOs and major Chinese academic institutions and universities; "About NRDC China," *NRDC,* www.e2.org/. NRDC also operates a fourteen-member office in Beijing and maintains an *NRDC China* website; "International Issues," *NRDC: Natural Resources Defense Council,* www.nrdc.org/; *NRDC China,* www.nrdc.cn.
32. See "Lawfare, the Latest in Asymmetries."
33. Exec. Order No. 12,114, 44 Fed. Reg. 1957 (1979), 3 CFR 356 (1980).

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Naval War College Review, Winter 2016, Vol. 69, No. 1