

# THE DEPARTMENT OF DEFENSE'S RESPONSIBILITIES FOR POST-CONFLICT RESTORATION

by Kristin Ann Carl

*Major Kristin Ann Carl serves in the U.S. Air Force Judge Advocate General's Corps.*

---

## SUMMARY

---

The United States' federal environmental laws and many international treaties protecting the environment apply to the U.S. Department of Defense (DOD), both within the United States and at permanent overseas military installations. However, there are very few constraints on DOD actions in war zones and contingency areas, which leads to environmental harm. This Article surveys the legal landscape governing these situations, and concludes that the United States should enact and implement a federal law requiring post-conflict restoration and remediation when it terminates contingency missions.

---

The United States is progressive in many areas of environmental protection and conservation, including applying environmental laws to the U.S. Department of Defense (DOD). But DOD activities in contingency operations and war zones are exempt from nearly all of the laws and regulations. A gap exists in the state of U.S. federal law and relevant international treaties. This is problematic because war is inherently destructive, and the environment and its ecosystems suffer from DOD's anthropogenic operations. This Article suggests a compromise that balances the exigencies of war with the environment's need for protection.

International environmental law is a growing field, and the literature on and interest in this topic continues to expand. Some popular notions on bringing the state of the law into the 21st century include updating the Geneva Conventions to explicitly contemplate environmental damage among the long-held doctrines of military necessity,

proportionality, and distinction.<sup>1</sup> A model law on ecocide as an international war crime gained a great deal of traction in Europe.<sup>2</sup> A U.S. Army judge advocate general suggested a way for foreign nations with environmental damage to file claims against the United States under the Foreign Claims Act.<sup>3</sup> These are just some examples of suggestions for reconciling the modern law of armed conflict (LOAC) and the environment.

This Article takes a different tack, and proposes that the United States take responsibility for its environmental impacts when it is withdrawing from a foreign nation and executing its exit strategies in the form of post-conflict restoration. It may not be feasible for government leaders and military commanders to observe the regular body of U.S. environmental laws before deploying troops and engaging in military operations. A review of that universe of laws demonstrates that there is at least some amount of environmental guidance for ongoing contingency operations, though the United States does not always observe it.

Further, though the United States' law is to abide by host nation environmental laws in-theater (discussed further in Section I.D), the places that DOD engages in conflict tend to have anemic policies; for example, while Germany has robust environmental protectionism, Syria does not. Additionally, the United States typically enters into bilateral

---

*Author's Note: The reviews expressed in this Article are solely those of the author and do not reflect the official policy or position of the U.S. Department of the Air Force, U.S. Department of Defense, or U.S. government. The author wishes to thank Prof. Barry Kellman for first teaching her about environmental law at DePaul University College of Law in 2011; Marie Tipsord for hiring her to intern at the Illinois Pollution Control Board in Chicago; all of her patient mentors from Eielson Air Force Base, especially Lt. Colonel Brandt Whipple; the faculty at George Washington University Law School, especially Interim Director Lin Harmon-Walker; her parents, Matt and Deb Carl, for all the wonderful opportunities they gave her; and Justin Mills, for being Pepper Potts.*

- 
1. Jessica Corbett, *Scientists Urge UN to Add Environmental Destruction to Geneva Conventions' List of War Crimes*, COMMON DREAMS, July 24, 2019, <https://www.commondreams.org/news/2019/07/24/scientists-urge-un-add-environmental-destruction-geneva-conventions-list-war-crimes>.
  2. Anastacia Greene, *The Campaign to Make Ecocide an International Crime: Quixotic Quest or Moral Imperative?*, 30 FORDHAM ENV'T L. REV. 1, 2-5 (2018/2019).
  3. Jennifer Ann Neuhauser, *U.S. Military Responsibility for Environmental Cleanup in Contingency Environments*, 45 ENV'T L. 129 (2015).

agreements with settled ally host countries like Germany, which impose more environmental constraints, but the United States does not usually do so in countries related to conflict.<sup>4</sup> This means that the United States' good intentions to operate within a host country's legal boundaries do not amount to much accountability to the environment. Therefore, the most practical course of action is to observe the applicable regulations during conflict and conduct restoration and remediation post-conflict.

Part I of the Article explores the current tapestry of applicable U.S. laws, Executive Orders, U.S. federal agency-specific guidance, and international treaties to illustrate where the gaps lie as to the environment. Part II discusses specific issues, such as unexploded ordnance (UXO), other hazardous materials, depleted uranium (DU), and burn pits. Part III provides justifications for the need to prioritize environmental protection in war zones in the form of restoration, including protection of our own assets, the need for legitimacy as a global power, the human rights aspect, the reality that restoring natural resources vitalizes nation-building, developing motivations for in-theater commanders, and a comparison to the international and federal protection for artistic and cultural heritage sites.

The Article closes with three suggested courses of action: (1) that DOD undertake environmental restoration as a part of its exit strategy, such as through the U.S. Army Corps of Engineers (the Corps); (2) that DOD contract with the private sector to carry out restoration and remediation in its wake; or (3) that another U.S. federal agency, such as the U.S. Agency for International Development (USAID), transitions in to clean up after DOD withdraws. The conclusion then evaluates the strengths and weaknesses of these options, and suggests a preferred course of action.

## I. Background

To set the stage for the rest of the Article, this part defines “environment,” distinguishes between a DOD contingency operation and an established overseas military installation, observes the difference between *jus ad bellum* and *jus in bello*, and traces the evolution of the connection between environmental protection and the LOAC. The bulk of this part lays out the various federal laws and regulations and the international laws, both customary and treaty-based, that do and do not apply to U.S. contingency operations.

### A. Defining and Valuing the Natural Environment

For purposes of this Article, “environment” includes the global ecosystem and its inhabitants, natural resources, and the complex of physical, chemical, and biological factors within them. There are two ways to conceptualize and assign value to the environment. The first is considering its

intrinsic worth, which is a value “that is independent of the uses for which human beings may exploit it.”<sup>5</sup> This is not an anthropogenic lens through which to view the environment, but focuses instead on the value that an ecosystem might have or the capability of a species to regenerate.<sup>6</sup> Proponents of the intrinsic worth standpoint argue that the environment has merit beyond what human beings can exploit for human benefit.<sup>7</sup>

The dominant view, however, is the second: “utilitarian.”<sup>8</sup> It focuses on what the environment can give to human beings, like food, shelter, fuel, and other resources.<sup>9</sup> Supporters of this viewpoint argue that the environment is worth protecting because of its impact on humanity—either to offer means of survival or as a threat (i.e., in the form of weather, natural disasters, predators, or a dearth of resources).<sup>10</sup>

Both sides see merit in environmental protection, which is easily drawn to extend to war zones.<sup>11</sup> However, the valuation of a thing guides the policies that govern it. This plays out in political debates and shapes the landscape of how we treat the environment in contingency operations.

### B. DOD's Roles Overseas

DOD conducts a variety of overseas missions, and the variations require different structures and modalities. There are permanent overseas installations, such as Ramstein Air Base in Germany and Incirlik Air Base in Turkey. The United States has maintained a steady and significant presence there for decades, and that footprint is unlikely to diminish. Those installations are vitally important to supporting more transitory operations in areas like the Middle East and Africa. As discussed further in Section I.D, permanent installations operate basically in line with U.S. federal environmental laws. These permanent installations are not the target of this proposal, but it is important to describe the distinction.

There are also traditional wartime operations that accompany a congressional declaration of war. The U.S. Congress has declared war 11 times since 1789, the most recent of which were declarations against Bulgaria, Hungary, and Romania in 1942.<sup>12</sup> The modern version of war declarations are congressional authorizations for the use of military force abroad.<sup>13</sup> These have sometimes included very broad language, such as “promot[ing] the maintenance

4. DAVID E. MOSHER ET AL., GREEN WARRIORS: ARMY ENVIRONMENTAL CONSIDERATIONS FOR CONTINGENCY OPERATIONS FROM PLANNING THROUGH POST-CONFLICT 21 (2008).

5. Michael N. Schmitt, *Green War: An Assessment of the Environmental Law of International Armed Conflict*, 22 YALE J. INT'L L. 1, 6 (1997) (citing Merrit P. Drucker, *The Military Commander's Responsibility for the Environment*, 11 ENV'T ETHICS 135, 136-40 (1989)), available at <https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=1054&context=yjil>.

6. *Id.*

7. *Id.*

8. *Id.*

9. *Id.*

10. *Id.*

11. *Id.*

12. U.S. House of Representatives History, Art & Archives, *Power to Declare War*, <https://history.house.gov/Institution/Origins-Development/War-Powers/> (last visited Mar. 21, 2021).

13. *Id.*

of international peace and security in southeast Asia” in the Tonkin Gulf Resolution in 1964.<sup>14</sup> The term has become commonplace since the Gulf War.<sup>15</sup>

The concept of warfare is evolving as the world changes, and the process has led the United States to focus on these military operations other than war (MOOTW).<sup>16</sup> Some examples are protracted campaigns in Afghanistan and Iraq; on September 14, 2001, Congress passed Senate Joint Resolution 23 and on September 18, 2001, President George W. Bush signed Public Law No. 107-40 authorizing the use of military force against persons that aided the terrorist attacks on September 11, 2001, on the United States.<sup>17</sup> Operation Enduring Freedom (OEF) commenced in Afghanistan on October 7, 2001, and in 2009 then-President Barack Obama ordered the deployment of another 17,000 troops for a new strategy in Afghanistan and Pakistan.<sup>18</sup> OEF was finally terminated on December 28, 2014, but a follow-on mission called Operation Freedom’s Sentinel commenced on January 1, 2015.<sup>19</sup> On August 21, 2017, President Donald Trump announced his aspirations for his strategy in Afghanistan and South Asia; his goals were to “stop the resurgence of safe havens that enable terrorists to threaten America.”<sup>20</sup>

Modern Iraqi campaigns have had similarly ill-defined end dates. The United States deployed troops to Kuwait in 2002, and troops were sent into Iraq later that year.<sup>21</sup> On August 31, 2010, President Obama announced that the combat mission had ended, and, on September 1, 2010, Operation New Dawn (OND) commenced; OND was a transitional force tasked with “advising and assisting Iraq’s security forces, supporting Iraqi troops in targeted counterterrorism missions, and protecting U.S. civilians.”<sup>22</sup> Inevitably, another Iraq-focused mission commenced shortly thereafter. On October 15, 2014, Operation Inherent Resolve was designated, a U.S. and coalition operation against the terrorist entity the Islamic State in Iraq and the Levant, taking place along the Syrian-Iraqi border.<sup>23</sup> Kinetic operations had begun earlier that year, on August 8, 2014.<sup>24</sup>

This truncated recitation of modern American “warfare,” to use the term colloquially, makes it obvious that the

United States engages in transient missions with unclear end dates and fluctuating operational capacities; all of this leads to a confusing welter of facilities and other logistical considerations. The noteworthy change in the way DOD is forced to operate is a unique shift from conflicts with other established nation-states to conflicts with multinational organizations and non-state actors. Certainly, it is appropriate to pivot to meet threats and adapt to MOOTW, but that change (which is now well-established as the norm) necessitates updating U.S. environmental regulations and policies to match those complicated enemies.

### C. Jus ad Bellum and Jus in Bello

These phrases differentiate parts of armed conflict. *Jus ad bellum* is criteria to be consulted before engaging in war to determine whether the war is just and permissible. *Jus in bello* describes the agreements on limits of acceptable conduct in war; for example, the Geneva Conventions. This Article is limited to *jus in bello* rather than justifications for conflict. History demonstrates that the environment has been damaged as a second-order effect, but also has been weaponized itself.

The most famous example is likely Saddam Hussein setting fire to Kuwaiti oil fields as he fled, but the United States has also participated in similar activities. For example, the United States used chemical warfare to deliberately deforest and eliminate enemy crops in Vietnam.<sup>25</sup> Therefore, in addition to encouragement to participate in post-conflict restoration, the Article urges DOD to more widely educate commanders and troops on applicable *jus in bello* on those laws that are applicable in modern MOOTW.

### D. The Current State of the Law and Its Shortcomings

Before 1973, there was not a single international treaty on armed conflict that considered the environment for its own sake. In 1973, Sen. Claiborne Pell (D-R.I.) called for a draft treaty “to prohibit and prevent, at any place, any environmental or geophysical modification activity as a weapon of war.”<sup>26</sup> This was “deemed a ‘sense of the Senate’” in July 1973.<sup>27</sup> Out of that call to action came the Environmental Modification Convention (ENMOD).<sup>28</sup> It was opened for signature in 1977, and it came into force in the United States in 1980.<sup>29</sup> Party States agreed not to “engage in military or any other hostile use of environmental modification techniques having wide-spread, long-lasting or severe effects as the means of destruction, damage or

14. Pub. L. No. 88-408, 78 Stat. 384.

15. U.S. House of Representatives History, Art & Archives, *supra* note 12.

16. JOINT CHIEFS OF STAFF, JOINT PUBLICATION 3-0, DOCTRINE FOR JOINT OPERATIONS ch. V (1995).

17. CONGRESSIONAL RESEARCH SERVICE, U.S. PERIODS OF WAR AND DATES OF RECENT CONFLICTS 5 (2019).

18. *Id.*

19. *Id.* at 6.

20. *Id.*

21. Pub. L. No. 107-243, 116 Stat. 1499.

22. CONGRESSIONAL RESEARCH SERVICE, *supra* note 17, at 9 (citing *Remarks by the President in Address to the Nation on the End of Combat Operations in Iraq*, WHITE HOUSE, Aug. 31, 2010, <https://obamawhitehouse.archives.gov/the-press-office/2010/08/31/remarks-president-address-nation-end-combat-operations-iraq> house.gov).

23. Operation Inherent Resolve, *About CJTF-OIR*, <http://www.inherentresolve.mil/About-Us/> (last visited Mar. 21, 2021).

24. DOD, WEEKLY ISLAMIC STATE OF IRAQ AND SYRIA (ISIS) COST REPORT THROUGH JUNE 30, 2017 (2017), <https://media.defense.gov/2017/Jul/31/2001785287/-1/-1/0/ISIS%20MASTER%20REPORT%20-%2030JUNE17.PDF>.

25. Jessie King, *Vietnamese Wildlife Still Paying a High Price for Chemical Warfare*, INDEPENDENT, July 2006.

26. S. Res. 71, 93d Cong. (1973).

27. *Id.*

28. Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, Dec. 10, 1976, 31 U.S.T. 333, 1108 U.N.T.S. 152 [hereinafter ENMOD].

29. *Id.*



injury” to other Parties.<sup>30</sup> ENMOD focused on the use of, but not damage to, the natural environment in warfare.<sup>31</sup>

Shortly following ENMOD’s inception in 1973, the International Committee of the Red Cross oversaw meetings on updating the Geneva Conventions.<sup>32</sup> The Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts met four times to draft two new protocols to the conventions.<sup>33</sup> In 1977, Protocol I was published, and Articles 35(3) and 55 prohibit damaging the environment.<sup>34</sup> Notably, the United States signed Protocol I but did not ratify it.<sup>35</sup>

The United States continued to indicate its reluctance to be bound by such international agreements in 1991, when the Canadian Ministry of External Affairs hosted its own Ottawa Conference.<sup>36</sup> At the conference, the United States took the stance that the existing framework for the LOAC was already grounded in the principles of military necessity and proportionality, and that more restrictive environmental protections would conflict with otherwise lawful military operations.<sup>37</sup> In other words, the United States promoted the state of LOAC as is and did not want to include more environmental provisions.

Later, the United States echoed this perspective in its official statement on the environmental damage sustained during the Gulf War; specifically the burning of Kuwaiti oil fields and oil dumping into the Persian Gulf.<sup>38</sup> On the international stage, ENMOD came up again, and the Kingdom of Jordan argued that ENMOD was ineffective at preventing environmental injury, that ENMOD was too broad to be enforceable, and that it contained no dispute resolution mechanism.<sup>39</sup> The United Nations (U.N.) General Assembly referred the matter to the Sixth (Legal) Committee.<sup>40</sup>

The United States stuck to LOAC principles and argued that Hussein’s actions were wrong, not under ENMOD or Protocol I, but as they failed the military necessity test; therefore, they violated the fourth Geneva Convention.<sup>41</sup> Going further, the United States argued that those actions violated the customary international law principles

of proportionality and necessity.<sup>42</sup> Unsurprisingly, at the committee, the United States strongly opposed a new convention, arguing that none of the proposals under consideration appropriately balanced environmental protection and the right to self-defense under U.N. Charter Article 51.<sup>43</sup> The United States and the Kingdom of Jordan wrote a letter, opining that the core prescriptions were sufficient and appropriate for environmental concerns: Hague IV, Geneva Convention IV, and customary international law on military necessity, proportionality, and distinction.<sup>44</sup>

In addition to ENMOD and Geneva Convention Protocol I, other international treaties and agreements are in place that may indirectly protect the environment, though do not directly address the environment. The United States ratified the Laws and Customs of War on Land (Hague, IV)<sup>45</sup>; Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (Gas Protocol)<sup>46</sup>; the Biological Weapons Convention<sup>47</sup>; the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (Conventional Weapons Convention)<sup>48</sup>; and the Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict (Convention for the Protection of Cultural Property).<sup>49</sup> The United States is also a signatory to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention).<sup>50</sup> Finally, the Martens Clause is widely considered customary international law, so much so that the spirit of it was placed into the 1992 Rio Declaration on Environment and Development Article 24: “Warfare is inherently destructive of sustainable development. States shall therefore respect

30. *Id.* art. I, para. 1.

31. ENMOD, *supra* note 28.

32. Library of Congress, *Official Records of the Diplomatic Conference on the Reaffirmation and Development of International Humanitarian Law Applicable in Armed Conflicts*, [https://www.loc.gov/rr/frd/Military\\_Law/RC-dipl-conference-records.html](https://www.loc.gov/rr/frd/Military_Law/RC-dipl-conference-records.html) (last visited Mar. 21, 2021).

33. *Id.*

34. *Id.*

35. *Id.*

36. Hans-Peter Gasser, *For Better Protection of the Natural Environment in Armed Conflict, a Proposal for Action*, 89 AM. J. INT’L L. 637, 639 (1995).

37. James P. Terry, *The Environment and the Laws of War: The Impact of Desert Storm*, 15 NAVAL WAR C. REV. 61, 65 (1992).

38. Marc A. Ross, *Environmental Warfare and the Persian Gulf War: Possible Remedies to Combat Intentional Destruction of the Environment*, 10 DICK. J. INT’L L. 515, 525-34 (1992).

39. *Note Verbale Dated 5 July 1991 From the Chargé d’Affaires of the Permanent Mission to Jordan to the United Nations Secretary General*, U.N. GAOR, 46th Sess., Annex, paras. 2-3, U.N. Doc. A/46/141 (1991).

40. Schmitt, *supra* note 5, at 27.

41. *Id.*

42. *Id.*

43. *Id.* at 28.

44. *Protection of the Environment in Times of Armed Conflict, Letter From the Permanent Missions of the Hashemite Kingdom of Jordan and of the United States of America to the Chairman of the Sixth Committee*, U.N. GAOR 6th Comm., 47th Sess., Agenda Item 136, U.N. Doc. A/C.6/47/3 (1992).

45. *Laws and Customs of War on Land (Hague, IV), Convention Respecting the Laws and Customs of War on Land*, Oct. 17, 1907, 1907 U.S.T. LEXIS 29.

46. *Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous, or Other Gases, and of Bacteriological Methods of Warfare*, June 17, 1925, 1925 U.S.T. LEXIS 4.

47. *Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction*, Apr. 10, 1972, 1972 U.S.T. LEXIS 26. The treaty was implemented through the federal Bioweapons Anti-Terrorism Act of 1989. BOB COEN, *DEAD SILENCE: FEAR AND TERRORISM ON THE ANTHRAX TRAIL* 205 (2009).

48. *Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects*, Oct. 10, 1980, 1342 U.N.T.S. 137; S. REP. NO. 110-22 (2008), available at <https://www.congress.gov/110/crpt/erpt22/CRPT-110erpt22.pdf>.

49. *Convention for the Protection of Cultural Property in the Event of Armed Conflict With Regulations for the Execution of the Convention*, May 14, 1954, 1954 U.S.T. LEXIS 389 [hereinafter *Convention for the Protection of Cultural Property*]; Corine Wegener, *The 1954 Hague Convention and Preserving Cultural Heritage*, ARCHAEOLOGICAL INST. AM., Oct. 19, 2010, <https://www.archaeological.org/the-1954-hague-convention-and-preserving-cultural-heritage/>.

50. *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, Mar. 22, 1989, 1989 U.S.T. LEXIS 240.

international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.”<sup>51</sup>

There is also another body of federal law that applies overseas according to the individual statutes, but it fails to address conflict scenarios and as such the laws are not analyzed further herein: Atomic Energy Act, Endangered Species Act (ESA),<sup>52</sup> Energy Policy Act, Hazardous Materials Transportation Act, Marine Mammal Protection Act (MMPA),<sup>53</sup> National Historic Preservation Act, Noise Control Act, and Pollution Prevention Act.

Executive Order No. 11752, Prevention, Control, and Abatement of Environmental Pollution at Federal Facilities, was signed on December 17, 1973. However, it applies only to the U.S. Department of the Army’s implementation of federal, state, and regional water pollution control authorities.<sup>54</sup> It has no international applicability.

Executive Order No. 12088, Federal Compliance With Pollution Control Standards, was signed on October 13, 1978. Section 1-801 states that executive agencies “responsible for the construction or operation of Federal facilities outside the United States shall ensure that such construction or operation complies with the environmental pollution control standards of general applicability in the host country or jurisdiction.”<sup>55</sup> It is silent on contingency operations, however.

Executive Order No. 12114, Environmental Effects Abroad of Major Federal Actions, was signed on January 4, 1979.<sup>56</sup> This Executive Order essentially assigns the protocols in the National Environmental Policy Act (NEPA)<sup>57</sup> to activities on federal installations overseas, including military installations.<sup>58</sup> However, there is an enormous exception for “when the national security or interest is involved,” “when the action occurs in the course of an armed conflict,” “intelligence activities and arms transfers,” and “actions relating to nuclear activities.”<sup>59</sup>

DOD has also promulgated its own body of regulations expanding on the federal laws and international treaties. Department of Defense Instruction (DODI) 4715.05, Environmental Compliance at Installations Outside the United States, was promulgated on November 1, 2013, and updated August 31, 2018. The guidance is meant “for managing environmental compliance to protect human health and safety outside the United States on installations

under DoD control.”<sup>60</sup> Enclosure 3 includes responsibilities for hazardous waste disposal and management.<sup>61</sup>

Paragraph 2(a)(2) of the main body of text, however, contains familiar exemptions: U.S. military vessels, ships, aircraft, space vehicles, off-installation training, contingency locations and associated operations, deployments including cases of hostility, contingency operations in hazardous areas, peacekeeping missions, or relief operations.<sup>62</sup> The regulation goes on to clarify that the list includes U.S. forces operating as part of a multinational force that is not under complete U.S. control, activities for the U.S. Naval Nuclear Propulsion Program, and any “activities, systems, operations and areas on DoD installations for which DoD has no authority or responsibility.”<sup>63</sup>

DODI 4715.05 cross-references DODI 4715.08, Remediation of Environmental Contamination Outside the United States.<sup>64</sup> This was promulgated with the same dates: first published on November 1, 2013, and updated on August 31, 2018.<sup>65</sup> This protocol sounds promising, but actually contains a longer list of exemptions: spill responses governed by another regulation or any country-specific final governing standards (FGS), or where there is no FGS, the DODI 4715.05-G, the Overseas Environmental Baseline Guidance Document (OEBGD); Department of the Army civil works functions; environmental contamination caused by DOD activities in foreign assistance programs; and Naval Nuclear Propulsion facilities and activities.<sup>66</sup> This regulation goes further and directs DOD not to take action to remediate environmental contamination resulting from armed conflict.<sup>67</sup>

Moreover, DOD is directed not to take action outside of a DOD installation to remediate environmental contamination caused by DOD actions or activities beyond what may be required by an applicable international agreement.<sup>68</sup> Enclosure 3 breaks down those scenarios further, and explains that DOD shall take action to address only a “substantial impact” to human health and safety due to environmental contamination caused by DOD activities *and* that take place on a DOD installation.<sup>69</sup> However, when there is environmental contamination on a DOD installation but it is known not to be due to DOD, DOD is not required to perform any cleanup; DOD may do so if it poses a substantial impact to human health and safety of U.S. personnel or forces.<sup>70</sup>

Finally, no remediation will be done at DOD installations when the Office of the Secretary of Defense has determined that DOD operations are terminated and returned to the host nation, except that DOD may do so to prevent

51. *Rio Declaration on Environment and Development*, U.N. GAOR, U.N. Doc. A/CONF.151/26 (Vol. I) (1992); Convention (II) With Respect to the Laws and Customs of War on Land and Its Annex: Regulations Concerning the Laws and Customs of War on Land pmbl., July 29, 1899, 1899 U.S.T. LEXIS 31.

52. 16 U.S.C. §§1531-1544, ELR STAT. ESA §2-18.

53. 16 U.S.C. §§1361-1421h, ELR STAT. MMPA §2-410.

54. 32 C.F.R. §650.12 (2020).

55. Exec. Order No. 12088, 43 Fed. Reg. 47707 (Oct. 17, 1978).

56. Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 9, 1979).

57. 42 U.S.C. §§4321-4370h, ELR STAT. NEPA §2-209.

58. Exec. Order No. 12114, 44 Fed. Reg. 1957 (Jan. 9, 1979).

59. *Id.* §2-5.

60. DODI 4715.05, para. 1 (2013, updated 2018).

61. *Id.* enclosure 3.

62. *Id.* para. 2(a)-(c).

63. *Id.* para. 2(d)-(h).

64. DODI 4715.08 (2013, updated 2018).

65. *Id.*

66. DODI 4715.05, *supra* note 60, para. 2(b).

67. *Id.* para. 3(c).

68. *Id.* para. 3(d).

69. *Id.* enclosure 3, para. 1(a).

70. *Id.* para. 1(b).

immediate exposure to U.S. forces and personnel.<sup>71</sup> This regulation abdicates any responsibility for DOD contractors outside of DOD installations.<sup>72</sup> Any funding for a remediation action, however unlikely that may be based on those exceptions, is limited to military construction (MIL-CON) appropriations.<sup>73</sup> This is the only environmentally focused DODI that discusses funding and procurement at all.

One might think that the OEBGD, promulgated May 1, 2007, and updated on August 13, 2018, would offer more in the way of environmental protection, but it does not. The same exceptions appear there as well. Paragraph C1.3 exempts DOD installations that do not have more than a de minimis potential to affect the natural environment; where DOD components exercise control on only a temporary or intermittent basis; leased, joint-use, and similar facilities where DOD does not control the instrumentality or operation; operations of U.S. military vessels, aircraft, or operational off-installation training deployments; and Naval Nuclear Propulsion Program activities and operations.<sup>74</sup> This regulation goes further than the others and explicitly exempts “[t]he determination or conduct of remediation to correct environmental problems caused by the Department of Defense’s past activities.”<sup>75</sup> In other words, if DOD were to elect to clean up contamination from a previous operation, the cleanup activities would not be controlled by the regulation.

Environmental contamination is not the only major gap; DODI 4715.23, Integrated Recycling and Solid Waste Management, promulgated on October 24, 2016, is meant to help deal with waste at DOD facilities outside the United States, a chronic and unavoidable problem. However, the program is not applicable to military vessels, aircraft, contingency basing, operational and training deployments including in hostile and hazardous areas, and when the U.S. forces are operating as part of a multinational force.<sup>76</sup>

In 1990, Public Law No. 101-510 passed that year’s National Defense Authorization Act (NDAA). Section 342(b) is on reporting requirements on environmental compliance at overseas military installations. The definition of “military installation” is broad and includes “a base, camp, post, station, yard, center, or other activity under the jurisdiction of the Secretary of a military department which is located outside the United States and outside any territory, commonwealth, or possession of the United States.”<sup>77</sup> This would seem to encompass even contingency bases. However, the NDAA is silent on any practical guidance, and simply directs the Secretary of Defense to develop reporting requirements.<sup>78</sup>

DODI 4715.4, originally published on June 18, 1996, and updated on July 6, 1998, is on pollution prevention. It seems not to have been updated or superseded since then. Paragraph 2.2 confirms that the policy applies to United States-owned facilities outside the United States.<sup>79</sup> The language is aspirational and professes to reduce pollution, but contains no metrics or references to particular pollutants or their sources.<sup>80</sup> There are no directions for complicated contingency operations. Likewise, this regulation contains no enforcement mechanism, though ostensibly an active-duty member could be prosecuted under Article 92 of the Uniform Code of Military Justice (UCMJ) for failing to follow it.

DODI 4715.5, Management of Environmental Compliance at Overseas Installations, was published on April 22, 1996. However, it contains the same exemptions as all the others: no applicability overseas where the United States has only temporary or intermittent control; to military vessels, military aircraft, off-installation operational and training deployments; when the United States is operating as part of a multinational force; to the Naval Nuclear Propulsion Program; and for remediation of past environmental contamination.<sup>81</sup>

DODI 4715.07, Defense Environmental Restoration Program, was published on May 21, 2013, and updated on August 31, 2018. It applies only to environmental restoration undertaken by DOD within the United States.<sup>82</sup> It explicitly excludes all environmental remediation outside the United States.<sup>83</sup> Its policy is to reduce risks to human health and the environment from DOD activities, and to ensure DOD complies with all federal, state, and local laws and regulations governing environmental restoration in the United States.<sup>84</sup>

In 2009, the U.S. Central Command (CENTCOM), which is the organization that commands the contingency operations in the Middle East, published its own regulation on “environmental guidance and best management practices for U.S. base camps operated by United States Central Command (USCENTCOM) personnel engaged in contingency operations within the USCENTCOM Area of Responsibility (AOR).”<sup>85</sup> It applies to all elements of CENTCOM engaged in contingency operations, including active-duty units, DOD civilian employees, and DOD contractors.<sup>86</sup> It clarifies that the OEBGD is not to be used in contingency operations, and that it is the sole source of authority for those activities.<sup>87</sup>

The CENTCOM regulation addresses asbestos, base camp environmental operations, waste management, fuel spills, site closure and cleanup, hazardous materials and waste, historical and cultural preservation, lead-based

71. *Id.* para. 1(d).

72. *Id.* para. 1(h).

73. *Id.* para. 1(c).

74. DODI, OVERSEAS ENVIRONMENTAL BASELINE GUIDANCE DOCUMENT §C1.3 (2007) (DODI 4715.05-G).

75. *Id.* §C1.3.5.

76. DODI 4715.23, para. 1.1(b) (2016).

77. Pub. L. No. 101-510, §342(b)(5), 104 Stat. 1485.

78. *Id.* §342(b).

79. DODI 4715.4, para. 2.2 (1996, updated 1998).

80. *Id.* para. 4.

81. DODI 4715.5, para. 2 (1996).

82. DODI 4715.07, para. 2(a)(2) (2013, updated 2018).

83. *Id.* para. 2(b).

84. *Id.* para. 3(a)-(b).

85. CENTCOM Regulation 200-2, para. 1-1 (2009, updated 2012).

86. *Id.* para. 1-2.

87. *Id.* para. 1-5(a).



paint, regulated medical waste, pesticides, waste incineration, and wastewater.<sup>88</sup> Its language is aspirational and seems to incorporate many of the concerns highlighted in the 2008 RAND Report, “Green Warriors: Army Environmental Considerations for Contingency Operations From Planning Through Post-Conflict.”<sup>89</sup> However, most telling is the confirmation that “[d]uring combat operations environmental considerations will be subordinate to mission accomplishment and preservation of human life . . . .”<sup>90</sup>

## II. Argument

This part identifies the hazards that are major sources of lasting environmental damage, and then moves on to explore six justifications for a new policy: (1) protecting U.S. assets, (2) recognizing the United States’ need for international credibility and legitimacy as a global power, (3) upholding an international perspective on human rights, (4) restoring natural resources as support for rule of law and nation-building effort, (5) creating motivations for in-theater commanders, and (6) analogizing protection of historical and cultural sites and relics.

### A. Hazards

There are several major categories of concern when it comes to environmental hazards. This is not an all-inclusive list, but these four categories bear the greatest likelihood of future and lasting harm, which is why they are analyzed herein.

The first is UXO. UXO is defined as military munitions that “(A) have been primed, fused, armed, or otherwise prepared for action; (B) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (C) remained unexploded, whether by malfunction, design, or any other cause.”<sup>91</sup> Munitions are considered hazardous waste under U.S. federal law.<sup>92</sup> UXO is of particular concern because it embeds itself in the natural environment and then poses a lethal threat to humankind for decades or centuries after.

For example, World War II ordnance continues to maim and kill in Germany.<sup>93</sup> In Brandenburg, an average of 631 tons of UXO are found every year by builders.<sup>94</sup> As bombs age, they become so sensitive that they cannot be handled in order to be defused; the only way to dispose of them is

to detonate them.<sup>95</sup> And while the detonators decay underground, the TNT in them remains viable.<sup>96</sup>

One can argue that aerial bombings were the order of the day at that time in history, but certainly the United States has participated in its share of bombings in recent years. For example, the United States employed bombs in Afghanistan. In April 2014, the United States closed the majority of its 880 Afghan bases, but only 3% of the land had been cleared of munitions.<sup>97</sup>

Second, in addition to UXO, other hazardous materials create a blight. In practical terms, this comes in the form of “[d]eliberate targeting of industrial and ‘dual use’ sites . . . and collateral damage to the surrounding areas devastates the environment over and over again.”<sup>98</sup> In Operation Desert Storm, U.S. aircraft hit Iraqi industrial sites, such as pharmaceutical and fertilizer facilities, because they could have been used to create chemical weapons.<sup>99</sup> Those sites use inherently hazardous materials to make industrial and commercial products.<sup>100</sup> Once they are targeted, the United States does no remediation at them. This means the hazardous materials leach into the soil and groundwater.

A third major category is DU. DU is used to coat and reinforce anti-tank rounds, tank armor, missiles, and projectiles.<sup>101</sup> DU escapes in particle form into the environment through the munitions, but also from tank armor on U.S. tanks; when they are fired on, the armor loses its integrity and bits chip off in the form of uranium oxide and metallic uranium.<sup>102</sup> Those particles remain in the environment, mostly as dust, and can be inhaled or ingested.<sup>103</sup> DU is particularly insidious because its characteristics are chemical and radiological, as well as physical.<sup>104</sup> Depending on the nature of the exposure, either external or internal, human health effects include radiation impacts, kidney damage, cancer, and leukemia.<sup>105</sup> These health effects are of primary concern because they are caused by air pollutants.

Finally, the fourth major category is burn pits, which encompass a vast array of other environmental contamination and pollution. Though the CENTCOM 200-2 regulation encourages waste incineration only on an interim basis until better waste management solutions can be put in place, DOD still relies heavily on burn pits. The United States used them widely in Iraq and Afghanistan at both forward operating bases (FOBs) and contingency operating

88. CENTCOM Regulation 200-2, *supra* note 85.

89. *Id.* para. 1-5(b).

90. *Id.* para. 1-5(c).

91. 10 U.S.C. §101(e)(5).

92. 40 C.F.R. §266.202(b) (2020).

93. Neuhauser, *supra* note 3, at 134 (citing David Crossland, *Unexploded Bombs in Germany: The Lethal Legacy of World War II*, SPIEGEL ONLINE, Oct. 14, 2008, <https://www.spiegel.de/international/germany/unexploded-bombs-in-germany-the-lethal-legacy-of-world-war-ii-a-584091.html>).

94. Crossland, *supra* note 93.

95. *Id.*

96. *Id.*

97. Kevin Sieff, *A Rising Number of Children Are Dying From U.S. Explosives Littering Afghan Land*, WASH. POST, Apr. 9, 2014, [https://www.washingtonpost.com/world/a-rising-number-of-children-are-dying-from-us-explosives-littering-afghan-land/2014/04/09/dea709ae-b900-11e3-9a05-c739f29ccb08\\_story.html](https://www.washingtonpost.com/world/a-rising-number-of-children-are-dying-from-us-explosives-littering-afghan-land/2014/04/09/dea709ae-b900-11e3-9a05-c739f29ccb08_story.html).

98. Neuhauser, *supra* note 3, at 139.

99. *Id.* at 140.

100. *Id.*

101. Michael H. Repacholi, *Background Material on Depleted Uranium (DU)*, NATO INFO., Jan. 8, 2001, <https://www.nato.int/du/docu/d010108e.htm>.

102. *Id.*

103. *Id.*

104. *Id.*

105. *Id.*

bases (COBs).<sup>106</sup> Burn pits are discussed further in Section II.D, but the main problem is that burn pits are used for all waste generated at FOBs and COBs for long periods of time; waste is indiscriminately incinerated, with no regard given to mixing different types of waste or the additional compounds that result from materials being burned.<sup>107</sup> The adverse effects on the environment echo through the entire hydrologic cycle: first through air pollution, from there into the atmosphere and precipitation, and finally through rain and groundwater to exposure with humans.<sup>108</sup>

### B. Justifications for a New Policy

As is evident from Part I, there is a large hole in the tapestry of laws and regulations that govern environmental protection and remediation in contingency zones. The only regulation that is truly on point is the CENTCOM-specific publication. While its language seems strong, a careful reader will correctly infer that military commanders will prioritize the combat mission over all else, and the author's personal experience is that the guidance therein falls by the wayside.

The convenient excuse, of course, is that the wartime mission and its exigencies preclude observing the burdensome restrictions and duties. This is cynical and without context; it suggests that commanders are so war-hungry that they choose to ignore the regulations, which is not the case. The truth is that those commanders face another huge issue in the form of weak logistical support and infrastructure for better practices. In any event, the combat mission and other practicalities lead to burn pits operating indefinitely, hazardous materials and fuel spills going unreported and unmanaged, and a host of other egregious practices.

Further, this only addresses the activities during the combat operation. This Article posits that that is only half of the issue, and that the CENTCOM guidance does not fully address the United States' responsibilities to host nations post-conflict. Justifications for a robust post-conflict restoration and remediation plan are below.

### C. The United States as a Global Power

Rightly or wrongly, the United States occupies a high position in the global hierarchy. It is a massively wealthy nation. As of October 2019, the International Monetary Fund estimated that the United States makes up 24.1% of the global economy, which is the highest of all nations and has been since 1871.<sup>109</sup> The nominal gross domestic product was expected to reach \$22.32 trillion in 2020.<sup>110</sup> In

addition to controlling almost one-quarter of the world's economy, the United States is heavily involved in the main international bodies.

The United States is a founding Member of the North Atlantic Treaty Organization (NATO) and accounts for a great deal of its funding. In 2017, the United States accounted for 51.1% of NATO's total funding and 71.7% of its defense expenditure, which is more than Canada, France, Germany, Italy, Spain, and the United Kingdom combined.<sup>111</sup> In addition to holding a prominent role in NATO, the United States is a permanent Member of the U.N. Security Council.<sup>112</sup> As such, the U.N. Charter charges the United States to maintain international security, formulate plans for regulating armaments, determine threats to peace and acts of aggression, apply economic sanctions, take military action against aggressors, and appoint secretaries-general and elect judges to the International Court of Justice.<sup>113</sup>

The United States also maintains more foreign bases than any other country, with U.S. troops or other military personnel in about 160 foreign countries and territories.<sup>114</sup> By contrast, Chile, France, Great Britain, India, Israel, Japan, Russia, South Korea, Turkey, and soon China combined maintain only about 30 installations abroad.<sup>115</sup> In 2015, the Pentagon reported that the United States had 174 base sites in Germany, 113 in Japan, and 83 in South Korea; again, in stark contrast, no foreign nation maintains any military footprint within the United States.<sup>116</sup> The United States is, indisputably, a (if not the) global power.

However, in order to continue to earn recognition and trust by allies and to exert influence and control over enemies, the United States must act scrupulously in all situations. Despicable actions in war zones sour the United States' relations on the international stage, and engender resentment, if not rage, in host nations. The actions taken at Abu Ghraib, though not an environmental incident, blemished the United States' reputation around the world. Lt. General Ricardo S. Sanchez ordered an investigation into the Army's prison system, which revealed numerous examples of "sadistic, blatant, and wanton criminal abuses" just from October to December 2003.<sup>117</sup> The investigating officer's report was supported with photographic and video evidence taken by soldiers as the abuse happened.<sup>118</sup>

106. JOINT CHIEFS OF STAFF, JOINT PUBLICATION 3-0, JOINT OPERATIONS x, xv, xx, V-22 (2011).

107. See Section II.D, at 26-28.

108. Cliff I. Davidson et al., *Airborne Particulate Matter and Human Health: A Review*, 39 AEROSOL SCI. & TECH. J. 737 (2005), available at <https://www.tandfonline.com/doi/full/10.1080/02786820500191348>.

109. Caleb Silver, *The Top 20 Economies in the World: Ranking the Richest Countries in the World*, INVESTOPEDIA, Dec. 24, 2020, <https://www.investopedia.com/insights/worlds-top-economies/>.

110. *Id.*

111. Amanda Macias, *The US Spent \$686 Billion on Defense Last Year—Here's How the Other NATO Countries Stack Up*, CNBC, July 6, 2018, <https://www.cnbc.com/2018/07/03/nato-spending-2017.html>.

112. U.N. Security Council, *Current Members: Permanent and Non-Permanent Members*, <https://www.un.org/securitycouncil/content/current-members> (last visited Mar. 21, 2021).

113. U.N. Security Council, *Functions and Powers*, <https://www.un.org/security-council/content/functions-and-powers> (last visited Mar. 21, 2021).

114. David Vine, *The United States Probably Has More Foreign Military Bases Than Any Other People, Nation, or Empire in History*, NATION, Sept. 14, 2015, <https://www.thenation.com/article/archive/the-united-states-probably-has-more-foreign-military-bases-than-any-other-people-nation-or-empire-in-history/>.

115. *Id.*

116. *Id.*

117. Seymour M. Hersh, *Torture at Abu Ghraib*, NEW YORKER, Apr. 30, 2004, <https://www.newyorker.com/magazine/2004/05/10/torture-at-abu-ghraib>.

118. *Id.*



Without going into more detailed atrocities here, suffice it to say that the international community roared. Human Rights Watch and Amnesty International cited growing evidence that U.S. diplomats encountered resistance from foreign governments, and foreign government officials complained of U.S. mistreatment of Iraqi detainees.<sup>119</sup> In particular, China, Egypt, Iran, Libya, Malaysia, Pakistan, the Philippines, and Sudan pointed to the detainees' treatment to justify their own behavior with respect to prisoners and civil liberties.<sup>120</sup> One Sudanese official spoke to Amnesty International, saying, "You Americans committed terrible crimes at Abu Ghraib. You have ignored international law at Guantanamo Bay. Who is your government to tell mine what to do?"<sup>121</sup> In short, it is clear that the United States must guard against hypocrisy to win support for humane treatment with other foreign governments. The United States cannot demand that other nations live up to high moral standards if it does not do so itself.

The same rationale applies to international environmental protections. Glen Sussman cites Gary Bryner, who argued that "the USA is morally responsible to ensure that international environmental commitments are carried out because 'Americans pollute more and consume more than any other people. The United States is so economically and politically powerful that its participation in global environmental protection efforts is essential.'"<sup>122</sup>

And the United States does promote an agenda of environmental protection internationally. Under the Trump Administration, the United States fought for provisions to remediate marine litter and debris in the United States-Mexico-Canada Agreement.<sup>123</sup> Chapter 24 of the agreement deals exclusively with environmental issues, and it incorporates by reference obligations from a number of other multinational environmental protection agreements.<sup>124</sup> Article 24.10 mandates the protection of the marine environment from ship pollution, including accidental pollution, pollution from routine operations of ships, deliberate pollution from shipments, and emissions from ships; the development of technologies to minimize ship-generated waste; adequate port waste reception facilities; increased protection for special geographic areas; and enforcement measures by flag and port States. Then, Article 24.12 goes on to mandate each Party's responsibility to prevent and

reduce marine litter, even in the form of additional multinational agreements.

As discussed in Section I.D, the United States declares its policy on DOD activities overseas specifically as one of preservation, conservation, and sustainability.<sup>125</sup> Even CENTCOM has published a long and detailed regulation purporting to prioritize environmental protection during combat operations.<sup>126</sup>

Moreover, the United States should concern itself with the host nation and its views on U.S. activities within its borders. DOD often engages in follow-on operations to nation-build and provide stability and security in countries like Afghanistan and Iraq.<sup>127</sup> But if DOD has wreaked environmental havoc on the country, the United States should expect that its positions on how to run countries, develop healthy economies, and improve quality of life through the rule of law will be disregarded.

In conclusion, insofar as the United States has proclaimed international environmental protection a priority, it cannot neglect to undertake such actions when we cause damage and harm to foreign territory and then fail to remediate it.

#### D. *Environmental Damage Harms U.S. Assets*

Another poignant argument is the reality that U.S. troops and missions suffer from DOD's own lack of healthy environmental practices. The burn pits are malignancies and cause respiratory and other health problems for U.S. personnel deployed to contingency areas. The U.S. Department of Veterans Affairs (VA) notes that burn pits commonly dispose of the following:

- Chemicals, paint, medical and human waste
- Metal and aluminum cans
- Munitions and unexploded ordnance
- Petroleum and lubricant products
- Plastics, rubber, wood and food waste<sup>128</sup>

Members who have been exposed to burn pits can enroll in the national Airborne Hazards and Open Burn Pit Registry; claims for disability compensation for related health problems may be filed and are decided on a case-by-case basis.<sup>129</sup> The VA's position is that the burn pits may cause long-term health effects on a limited basis, but that skin, eyes, respiratory systems, cardiovascular systems, gastrointestinal tracts, and internal organs are affected by toxins immediately. The VA notes that research shows the irri-

119. Sonni Efron, *Prison Abuse Seen as Hurting U.S. Credibility*, L.A. TIMES, Jan. 14, 2005, <https://www.latimes.com/archives/la-xpm-2005-jan-14-fg-rights14-story.html>.

120. *Id.*

121. *Id.*

122. Glen Sussman, *The USA and Global Environmental Policy: Domestic Constraints on Effective Leadership*, 25 INT'L POL. SCI. REV. 350 (2004) (citing GARY BRYNER, FROM PROMISES TO PERFORMANCE: ACHIEVING GLOBAL ENVIRONMENTAL GOALS (1997)).

123. Remarks by President Trump on America's Environmental Leadership, DAILY COMP. PRES. DOC. (July 8, 2019), available at <https://www.govinfo.gov/content/pkg/DCPD-201900459/pdf/DCPD-201900459.pdf>; United States-Mexico-Canada Agreement Implementation Act, Dec. 16, 2019, S. 3052, 116th Cong. (2019), available at <https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement/agreement-between> [hereinafter US-Mexico-Canada Agreement].

124. US-Mexico-Canada Agreement, ch. 24.

125. See Section I.D.

126. *Id.*

127. See Section I.B.

128. VA, *Public Health: Airborne Hazards and Burn Pit Exposures*, <https://www.publichealth.va.gov/exposures/burnpits/> (last updated Jan. 27, 2021).

129. *Id.*

tation is temporary and resolves once the exposure has ended. But that does not spare the troops while in situ from suffering “eye irritation and burning, coughing and throat irritation, breathing difficulties, and skin itching and rashes.”<sup>130</sup> Such ailments negatively impact troops’ readiness and morale.

The burn pit issue and its health ramifications continue to unfold politically; House Resolution 663 before the 2019-2020 U.S. House of Representatives was a bill requiring DOD to determine whether each member of the armed forces (1) has been based or stationed where an open burn pit was used, or (2) has been exposed to toxic airborne chemicals.<sup>131</sup>

At the same time, the grassroots organization Burn Pits 360 is active in seeking treatment for exposure to toxins they claim come from using jet fuel to burn “batteries, medical waste, amputated body parts, plastics, ammunition, human waste, animal carcasses, rubber, chemicals, [and] more.”<sup>132</sup> Burn Pits 360 is less conservative than the VA, and states that the exposure causes “neurological disorders, pulmonary diseases, rare forms of cancer, and many unexplained symptoms.”<sup>133</sup> Whether one examines the VA’s more tentative conclusions or the nongovernmental organization’s (NGO’s) more radical conclusions, it is clear that burn pits negatively impact the U.S. personnel exposed to them.

As of November 30, 2018, more than 180,000 people have registered with the voluntary burn pit registry.<sup>134</sup> Of those, 12,000 VA disability claims have been filed.<sup>135</sup> The VA has accepted 2,500 of them.<sup>136</sup> While proving that illnesses are service-linked proves to be a contentious issue, even those claims honored can prove expensive. As of 2021, a 100% disability rating for a veteran with a spouse and one child is \$3,450.32 per month, or \$41,403.84 per year.<sup>137</sup> If each veteran in the entire country only received one-half of that, payouts would still amount to \$51,090,600 annually.

Burn pits are not the only hazard to degrade human health and harm DOD troops. The Ash Shuaiba Port in Kuwait is a deepwater port that supports U.S. operations in Iraq. The industrial oil production and high levels of particulate matter have led to illnesses due to the high pollution levels and releases of chemicals, such as ammonia and sulfur dioxide.<sup>138</sup> The U.S. Army Center for Health Pro-

motion and Preventive Medicine reported that “[a] release of similar concentrations could result in a portion of individuals experiencing respiratory irritation and mild health effects ultimately resulting in reduced mission capacity.”<sup>139</sup>

Further, the data are also only part of the larger environmental impact. While the studies on the burn pits have focused on human health, it is likely that the particulates contributed by the burn pits to the ambient air can inflict farther-reaching harm. For example, the burn pits may contribute to the climate crisis and raise the global temperature.<sup>140</sup> It is also likely that animal populations are adversely affected by exposure to the burn pits; in 2010, the Gulf War Veterans’ Illnesses Task Force recommended to the Secretary of VA that the VA work with DOD to review military working dogs’ health records to explore “potential long-term adverse health effects . . .”<sup>141</sup>

In addition to ameliorating the adverse health effects to troops, better environmental practices improve the mission itself. A 2008 RAND survey found that “[l]ogistics requirements and costs can be reduced by good practices, for instance, applying technologies to reduce operational requirements for petroleum, oil, and lubricants . . . or field water treatment systems, or reduced acute threats to soldier health.”<sup>142</sup> One of the major conclusions from the study is that DOD ends up spending “large sums to remediate serious preexisting environmental contamination at base camps,” since DOD often returns to the same locations in the Middle East.<sup>143</sup>

In other words, had DOD cleaned up base camps in the first place, they would be able to act more swiftly when they set up there again, which has been an inevitability in Middle East operations. The study specifically evaluated the ramifications of a poorly sited base camp during Operation Joint Endeavor.<sup>144</sup> Troops were diverted to dismantle and relocate the camp, and the overall mission was delayed.<sup>145</sup>

RAND examined a case study of an unreported fuel spill and all of its potential impacts on DOD. It concluded that the friendly forces’ water supply was contaminated causing water-related illnesses, a delay to the expansion of the base camp, costly remediation efforts to clean up the resulting plume, a public relations problem, the likelihood that soldiers would have used contaminated dirt to fill sandbags around their living facilities, and ground and groundwater contamination.<sup>146</sup>

130. *Id.*

131. H.R. 663, 116th Cong. (2019).

132. Burn Pits 360, *About Us*, <https://www.burnpits360.org/about-us/> (last visited Mar. 21, 2021).

133. *Id.*

134. *Thousands of Veterans Fear “Burn Pits” Exposed Them to Lethal Disease*, CBS News, Aug. 17, 2019, <https://www.cbsnews.com/news/burn-pit-military-lung-disease-thousands-of-veterans-fear-burn-pits-exposed-them-to-lethal-disease-2019-08-17/>; Jennifer Steinhauer, *Congress Poised to Help Veterans Exposed to “Burn Pits” Over Decades of War*, N.Y. TIMES, Feb. 12, 2019, <https://www.nytimes.com/2019/02/12/us/politics/veterans-burn-pits-congress.html>.

135. *Thousands of Veterans Fear “Burn Pits” Exposed Them to Lethal Disease*, *supra* note 134.

136. *Id.*

137. Military Benefits, *2021 VA Disability Rates*, <https://militarybenefits.info/va-disability-rates/> (last visited Mar. 31, 2021).

138. MOSHER ET AL., *supra* note 4, at 61.

139. *Id.*

140. U.S. Environmental Protection Agency, *Climate Change and Municipal Solid Waste (MSW)*, <https://archive.epa.gov/wastes/conservation/tools/payt/web/html/factfin.html> (last updated Feb. 21, 2016) (waste incineration emits greenhouse gas).

141. VA, FINAL DRAFT REPORT OF DEPARTMENT OF VETERANS AFFAIRS GULF WAR VETERANS’ ILLNESSES TASK FORCE TO THE SECRETARY OF VETERANS AFFAIRS (2010), [https://www.va.gov/RAC-GWVI/docs/Gulf\\_War\\_Illnesses\\_Links/VA\\_GWVITaskForce\\_FinalDraftReport\\_Mar292010.pdf](https://www.va.gov/RAC-GWVI/docs/Gulf_War_Illnesses_Links/VA_GWVITaskForce_FinalDraftReport_Mar292010.pdf).

142. MOSHER ET AL., *supra* note 4, at 7.

143. *Id.* at 8.

144. *Id.* at 84.

145. *Id.*

146. *Id.* at 82.

RAND also evaluated financial savings specifically. In Bosnia, DOD engineers ran a pilot program composting sewage-treatment sludge with petroleum-contaminated soil, which meant the Army did not have to ship hazardous waste out of the country.<sup>147</sup> The project saved \$1 million in shipping costs.<sup>148</sup>

The RAND study's conclusions are clear: "[g]ood environmental practices can also reduce the sources that must be diverted to address environmental issues."<sup>149</sup> For example, "developing local water sources and reusing engine oil to reduce logistical needs" means DOD can reduce the logistical burdens, freeing up capacity for warfighting and reducing the overall size of logistical support and supply chains needed for an operation.<sup>150</sup>

The RAND survey is backed up by a study the Army published in 2011 clearly demonstrating that environmental sustainability would be a force multiplier.<sup>151</sup> The study identified four major benefits to environmentally focused logistics: reduced casualties associated with source and supply movement, increased operational efficiencies and effectiveness, reduced logistical burdens, and reduced life-cycle costs.<sup>152</sup> The Army survey concluded that sustainable operations enhance the military's relationship to host nation communities and mitigate health hazards and post-event liabilities.<sup>153</sup>

Therefore, it is evident, and has been for at least a decade, that employing sustainable practices in MOOTW and the contingency environment will pay dividends to DOD's most precious resource: its men and women.

### E. *The Moral Imperative: Human Rights*

International human rights law has been burgeoning alongside, and sometimes in tandem with, international environmental law for the past decade or so. The right to a healthy environment is being included in more and more human rights doctrines, as discussed in depth in this section. The United States would do well to pay attention to the climate and attitudes of other nations in this regard.

For example, Article 12 of the International Covenant on Economic, Social, and Cultural Rights states:

All State Parties to the present Convention recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health . . . the improvement of all aspects of environmental and indus-

trial hygiene . . . disease control . . . medical service and medical attention.<sup>154</sup>

General Comment 14 expounds on Article 12, explaining that the right to health is more than a right to be healthy.<sup>155</sup> It includes access to facilities, food, nutrition, housing, safe and potable water, adequate sanitation, safe and healthy working conditions, and a healthy environment.<sup>156</sup>

The African Charter also explicitly recognizes the right to a healthy environment. Article 24 proclaims that all peoples shall have the right to a general satisfactory environment favorable to their development.<sup>157</sup>

As further evidence that the societal climate is changing and recognizes a healthy environment as a human right, in 2010, a model law was submitted to the U.N. Law Commission that would make "ecocide" the fifth international crime against peace.<sup>158</sup> The model law reads:

1. Acts or omissions committed in times of peace or conflict by any senior person within the course of State, corporate or any other entity's activity which cause, contribute to, or may be expected to cause or contribute to serious ecological, climate or cultural loss or damage to or destruction of ecosystem(s) of a given territory(ies), such that peaceful enjoyment by the inhabitants has been or will be severely diminished. 2. To establish seriousness, impact(s) must be widespread, long-term or severe.<sup>159</sup>

The model law was drafted as a strict liability standard, which made it distinct from the other international crimes against peace, which all have an intent requirement.<sup>160</sup> The proposal received a great deal of attention and is part of a larger movement, mostly gaining traction in Europe.<sup>161</sup>

Even more recent is the Paris Agreement, proving that the right to a healthy environment has gained solid traction.<sup>162</sup> The Paris Agreement qualifies as a treaty within the meaning of international law, and it creates legal obligations on Member Parties; compliance is not voluntary.<sup>163</sup> For the first time ever, a legally binding agreement under the U.N. climate regime affirmatively recognized the "need to respect, promote, and consider human rights," and "[t]he need to consider the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities, and people in vulnerable

154. International Covenant on Economic, Social, and Cultural Rights art. 12, Dec. 16, 1966, 1996 U.S.T. 521, 993 U.N.T.S. 3.

155. *Id.* General Comment 14.

156. *Id.*

157. African Charter on Human and Peoples' Rights art. 24, June 27, 1981, 21 I.L.M. 58.

158. Greene, *supra* note 2, at 2.

159. *Id.* at 2-3.

160. *Id.* at 3.

161. *Id.* at 5.

162. Multilateral, Environment, and Conservation: Climate Change; Paris Agreement, Apr. 22, 2016, 2016 U.S.T. LEXIS 43.

163. Daniel Bodansky, *The Legal Character of the Paris Agreement*, 25 REV. EUR. COMPAR. & INT'L ENV'T L. 142 (2016), available at <https://onlinelibrary.wiley.com/doi/abs/10.1111/reel.12154>.

147. *Id.* at 87.

148. *Id.*

149. *Id.* at 7.

150. *Id.* at 85.

151. DAVID A. KROOKS & KURT J. KINNEVAN, U.S. ARMY CORPS OF ENGINEERS, ANALYSIS OF POLICY AND GUIDANCE REGARDING SUSTAINABILITY AND ENVIRONMENTAL CONSIDERATIONS IN OVERSEAS CONTINGENCY OPERATIONS IN THE JOINT, INTERAGENCY, INTERGOVERNMENTAL, AND MULTINATIONAL (JIIM) ENVIRONMENT 1 (2011).

152. *Id.*

153. *Id.*



situations.”<sup>164</sup> This concept is contained in the preamble, which positions the lens through which the rest of the agreement is meant to be viewed.<sup>165</sup>

The United States signed onto the Paris Agreement in April 2016 under President Obama, along with 189 other countries.<sup>166</sup> On January 20, 2021, President Joe Biden reaffirmed the United States’ commitment to the effort and rejoined the Paris Agreement, after the previous administration moved to withdraw.<sup>167</sup>

So, while it is obvious that the United States has not taken such a liberal view on the environment as it relates to human rights, it is apparent that this is a position that will not go away. There is a strong consensus among a majority of nations that the United States would be wise to monitor and try to reconcile its policies with the issues *du jour*. The fact that the global majority has recognized the right to a healthy environment as a human right under treaties and other international agreements gives credibility and prominence to this issue.

## F. Natural Resource Restoration Supports Nation-Building

There is a wealth of evidence, both anecdotal and empirical, that healthy natural resources support stable nation-states. The United States’ purported goals in the Middle East have been to “stop the resurgence of safe havens that enable terrorists to threaten America.”<sup>168</sup> Well-planned post-conflict restoration supports that aspiration.

Restoring natural resources helps host-nation citizens reestablish their livelihoods.<sup>169</sup> Especially in developing nations, access to land, water, and forests are paramount to survival.<sup>170</sup> Livelihood thus promotes “local, regional, and national stability and is also key to reintegrating excombatants [sic] and other vulnerable groups into post-conflict society, thereby reducing the likelihood of future combat.”<sup>171</sup> Scholarly literature links social identity and natural resources strongly together, and armed conflict threatens both of those.<sup>172</sup>

The human and cultural element is an often-overlooked component in DOD strategies to deal with host nations.<sup>173</sup> Perhaps it is an omission borne of complications, since each country has its own varied history and cultural mores. Perhaps DOD neglects it because the knowledge on nation-building does not appear to directly impact the combat mission. Perhaps this reality is not intuitive or easy to understand. But the evidence is incontrovertible.

In 2004, Major General Peter Chiarelli, then-commander of the U.S. Army First Cavalry Division, gave an interview to the *Wall Street Journal*.<sup>174</sup> He reported that his intelligence officers analyzing insurgent attacks found that insurgency was “strongest in areas with little or no sewer service, faltering electricity, and high unemployment.”<sup>175</sup> In other words, insurgents and their non-state-actor organizations find footing in abject poverty and squalor.

Cambodia is a good example of a country that experienced extensive damage to its environment and subsequent destabilization. It experienced more than a decade of civil conflict following the end of the Vietnam War.<sup>176</sup> This conflict caused severe harm to the country’s forests, which is a natural resource with major economic importance.<sup>177</sup> Finally, after the collapse of the Khmer Rouge regime, the major combatant groups signed a peace accord in Paris in 1991.<sup>178</sup> The U.N. appointed a Transitional Authority in Cambodia (UNTAC), which quickly recognized that the commercially valuable forests needed to be prioritized and saved.<sup>179</sup> However, after years of conflict, illegal exploitation was rampant.<sup>180</sup>

UNTAC first tried to lease the land and grant concessions without consulting the citizens who used the forests.<sup>181</sup> This failed, and illegal logging and timber-harvesting exploded.<sup>182</sup> Those who depended on the forest suffered and distrusted UNTAC’s administration.<sup>183</sup> UNTAC’s colossal failure ultimately inspired a solution with sustainable forest management, and legal logging was appropriately regulated.<sup>184</sup> The lessons learned were clear and highlight the need for a country-specific, tailored solution: Cambodia was a forest-rich country, and timber management requires a great deal of specific infrastructure and expertise to manage it correctly.<sup>185</sup> UNTAC was so busy trying to create government revenues that it mismanaged the greatest natu-

164. Mienhard Doelle, *The Paris Agreement: Historic Breakthrough or High Stakes Experiment?*, 6 CLIMATE L. 6 (2016).

165. Multilateral, Environment, and Conservation: Climate Change; Paris Agreement, *supra* note 162, pmb.

166. Tanya Somanader, *President Obama: The United States Formally Enters the Paris Agreement*, WHITE HOUSE BLOG, Sept. 3, 2016, <https://obamawhitehouse.archives.gov/blog/2016/09/03/president-obama-united-states-formally-enters-paris-agreement>; U.N. Climate Change, *Paris Agreement—Status of Ratification*, <https://unfccc.int/process/the-paris-agreement/status-of-ratification> (last visited Mar. 21, 2021).

167. Nathan Rott, *Biden Moves to Have U.S. Rejoin Climate Accord*, NPR, Jan. 20, 2021, <https://www.npr.org/sections/inauguration-day-live-updates/2021/01/20/958923821/biden-moves-to-have-u-s-rejoin-climate-accord>; Press Statement, Secretary of State Michael Pompeo, On the U.S. Withdrawal From the Paris Agreement (Nov. 4, 2019), <https://2017-2021.state.gov/on-the-u-s-withdrawal-from-the-paris-agreement/index.html>.

168. CONGRESSIONAL RESEARCH SERVICE, *supra* note 17, at 6.

169. LIVELIHOODS, NATURAL RESOURCES, AND POST-CONFLICT PEACEBUILDING 1 (Helen Young & Lisa Goldman eds., 2015).

170. *Id.*

171. *Id.*

172. *Id.* at 21.

173. Amy Davidson Sorkin, *What’s Wrong With McChrystal?*, NEW YORKER, June 22, 2010, <https://www.newyorker.com/news/amy-davidson/whats-wrong-with-mcchrystal>; Oleg Svet, *COIN’s Failure in Afghanistan*, NAT’L INT., Aug. 31, 2012, <https://nationalinterest.org/commentary/coins-failure-afghanistan-7409>.

174. Greg Jaffe, *U.S. Offers Iraqis Public-Works Jobs*, WALL ST. J., June 8, 2004, at A4.

175. *Id.*

176. LIVELIHOODS, NATURAL RESOURCES, AND POST-CONFLICT PEACEBUILDING, *supra* note 169, at 67.

177. *Id.* at 68.

178. *Id.*

179. *Id.*

180. *Id.* at 21.

181. *Id.* at 68.

182. *Id.*

183. *Id.*

184. *Id.* at 21.

185. *Id.*

ral resources of Cambodia.<sup>186</sup> Only after the forestry issues were resolved did Cambodia find stability.<sup>187</sup>

Afghanistan is a more recent example. Structural inequities in irrigation water supply contribute to instability and localized conflict.<sup>188</sup> Water stress on the Hari Rud River system led to flared violence and bloodshed between upstream and downstream irrigators in the Herat Province.<sup>189</sup> In the arid Afghani highlands where resource scarcity can threaten survival, members of the Khogiani and Shinwari tribes forcefully and violently opposed local security authorities; farming was impossible, opium poppy cultivation had been legislatively banned, and the only other off-farm wages were paid to fighters with armed insurgency groups.<sup>190</sup>

So, the tribesmen united to oppose the poppy-farming ban, which led to an immediate deterioration in security conditions; the security was overrun not just in the Spin Ghar region, but throughout the highlands.<sup>191</sup> That problem continues to the present day. Even more vulnerable are Afghani farmers of rainfed lands who rely on cereal grains for consumption and pasturage for livestock.<sup>192</sup> There are reports that in times of resource scarcity, more powerful landowners seize large tracts of pasturelands to accumulate and increase their own security.<sup>193</sup>

With the backdrop of these specific examples, the U.N. Environment Programme (UNEP) published a report in 2009 titled “From Conflict to Peacebuilding.”<sup>194</sup> Much of the report focused on natural scarcity as it leads to and inspires conflict, but it also studied the value of natural resource restoration to economic recovery and future stability.<sup>195</sup> In an analysis of intrastate conflicts over the preceding 60 years, UNEP concluded that “conflicts associated with natural resources are twice as likely to relapse into conflict within the first five years.”<sup>196</sup>

The UNEP report also highlights another problem: war refugees. In addition to disrupting normal socioeconomic activity and the health of the environment, wars displace populations to neighboring countries.<sup>197</sup> This taxes the natural resources of the countries to which refugees flee, and it even undermines delivery of humanitarian aid.<sup>198</sup> Recovery, which includes resettlement of refugees and reestablishment of economic activities, puts “intense pressure on natural resources”; the post-conflict reconstruction “can be more persistent and widespread than the direct impacts of war.”<sup>199</sup> The UNEP report made three strong

recommendations for incorporating post-conflict restoration in peacebuilding efforts: supporting economic recovery, developing sustainable livelihoods, and contributing to dialogue, cooperation, and confidence-building.<sup>200</sup> These recommendations resolve the tragedies that conflict brings to war-torn areas.

Therefore, it is evident that post-conflict restoration and remediation directly serves the United States’ proclaimed goals. Insofar as the United States tasks DOD and other agencies with nation-building and recovery, protection of natural resources and the environment would greatly strengthen our chances of success. It could even speed up the successive nation-building missions that follow conflict, as discussed in Section 1.B. The United States would do well to include such plans alongside its typical goals of security-building, rule of law, and democratic governance.

### G. Commanders’ Motivation

The Army’s 2008 RAND survey also came to another interesting conclusion: without strict laws and regulations on preservation, conservation, and cleanup, DOD has no motivation to engage in better environmental practices.<sup>201</sup> There are so few constraints on DOD as a whole, individual Service members, and U.S. contractors, that there is no reason to improve. Military commanders operate autonomously, and some choose to develop policies for each contingency, but some do not.<sup>202</sup> While this approach offers operational flexibility, it means there is no cohesive or coherent doctrine overall.<sup>203</sup> The piecemeal nature of environmental protection is inconsistent with both the way the United States approaches environmental violations within its own borders, and also the way DOD develops force protection plans and programs.

If commanders were accountable for post-conflict restoration, it seems likely that they would have greater motivation during conflicts to observe the CENTCOM regulation and the OEBGD, improve logistical channels, and eradicate the more egregious practices. Even were an ad hoc approach maintained in which installations were permitted to develop their own tailored post-conflict restoration policies and protocols, the individual commanders would be galvanized to create clear policies and guidance for their troops. Therefore, the very existence of a legal post-conflict restoration mandate would improve practices during conflict.

### H. An Analogy to the Cultural Heritage Convention

In 2009, the United States ratified the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict (Convention for the Protection of

186. *Id.*

187. *Id.*

188. *Id.* at 56.

189. *Id.* at 57.

190. *Id.*

191. *Id.*

192. *Id.* at 58.

193. *Id.*

194. UNEP, FROM CONFLICT TO PEACEBUILDING: THE ROLE OF NATURAL RESOURCES (2009).

195. *Id.*

196. *Id.* at 11 (citing UPPSALA CONFLICT DATA PROGRAM & CENTRE FOR THE STUDY OF CIVIL WAR (2008)).

197. *Id.* at 15.

198. *Id.*

199. *Id.*

200. *Id.* at 19.

201. MOSHER ET AL., *supra* note 4, at 24-25.

202. *Id.*

203. *Id.* at 25.

Cultural Property).<sup>204</sup> It protects “immovable and movable cultural heritage, including monuments of architecture, art or history, archaeological sites, works of art, manuscripts, books, and other objects of artistic, historical or archaeological interest, as well as scientific collections of all kinds.”<sup>205</sup> It was inspired by the extensive destruction of cultural property during World War II.<sup>206</sup>

The Convention prohibits “any use of the [protected] property and its immediate surroundings or of its appliances in use for its protection for purposes which are likely to expose it to destruction or damage in the event of armed conflict.”<sup>207</sup> It explicitly prohibits any acts of hostility directed against such property.<sup>208</sup> In the instance of occupation, the occupying State is required to support the occupied State “in safeguarding and preserving its cultural property.”<sup>209</sup> Articles 6, 16, and 17 describe a special marking to be displayed at protected sites in order to indicate their status.<sup>210</sup> The marking is known as the “Blue Shield.”

Since 1954, two new protocols have been passed and added to the original Convention, which provide even stronger protections to designated sites. These were engendered by damage from modern warfare.

In 1973, the United States ratified the World Heritage Convention.<sup>211</sup> Its twin purposes are to preserve cultural sites and conserve nature.<sup>212</sup> The damage and destruction of World War I inspired the international movement, and World War II emphasized the need for protection of cultural sites and the world’s natural and scenic areas.<sup>213</sup> The preamble states that the “deterioration or disappearance of any item of the cultural or natural heritage constitutes a harmful impoverishment of the heritage of all the nations of the world.”<sup>214</sup>

Article 1 defines “cultural and natural heritage” as monuments and groups of buildings of outstanding universal value from a historical, artistic, or scientific perspective.<sup>215</sup> It includes sites that have “outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.”<sup>216</sup>

Article 2 defines “natural heritage” as natural features with outstanding universal value from the aesthetic and scientific points of view, geographical and physiological formations that are habitats of threatened flora and fauna of outstanding value from scientific or conservationist points of view, and natural sites with outstanding universal value from scientific and conservationist points of view or that have natural beauty.<sup>217</sup> Notably, the protection is limited to certain declared properties, rather than providing safeguards to general environmental standards.

The World Heritage Convention operates by allowing State Parties to designate protection for certain properties and create planning programs.<sup>218</sup> Once sites are so designated, the Convention recognized the universal value of and imposes an international obligation to protect them.<sup>219</sup> State Parties are prohibited from taking “any deliberate measures which might damage directly or indirectly” designated sites on another State Party’s sovereign territory.<sup>220</sup> It also creates a fund to facilitate these obligations.<sup>221</sup> Examples of World Heritage Convention projects include Venice and its lagoon, the archaeological ruins at Mohenjo-Daro, and the Borobudur temple compounds in Indonesia.<sup>222</sup>

The World Heritage Convention is relevant to this Article and its proposal because conflict can threaten designated properties. In 2016, UNEP published the “Protection of Cultural Property: Military Manual.” The then-director-general of the U.N. Educational, Scientific, and Cultural Organization (UNESCO) wrote that the newer guidelines “should be viewed not as an additional burden on armed forces but as a means to achieve and consolidate long-term security objectives, in particular social cohesion and reconciliation.”<sup>223</sup> She characterized cultural preservation and conservation as “a security imperative.”<sup>224</sup>

These conventions are discussed because they raise an important question: why are specific cultural properties protected, but the environment as a whole is not? Some could argue that this is a false equivalency, but the undisputed fact is that a healthy environment is requisite to human health. A healthy environment is no less valuable than cultural properties. A healthy environment is no less relevant to the enduring human experience than sites such as Stonehenge or Bamiyan Buddhas. A healthy environment is no less universally needed than the Old Bridge Area in the Old City of Mostar.

Perhaps it is because plundering and pillaging of cultural resources in wartime has been criticized since the 2d century B.C., while mankind has been slow to understand the adverse effects its wars can have on the environment.<sup>225</sup>

204. Convention for the Protection of Cultural Property, *supra* note 49; U.N. Educational, Scientific, and Cultural Organization (UNESCO), *Convention for the Protection of Cultural Property in the Event of Armed Conflict With Regulations for the Execution of the Convention*, The Hague, 14 May 1954, <http://www.unesco.org/eri/la/convention.asp?KO=13637&language=E&order=alpha> (last visited Feb. 27, 2021).

205. UNESCO, *1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict*, <http://www.unesco.org/new/en/culture/themes/armed-conflict-and-heritage/convention-and-protocols/1954-hague-convention/> (last visited Mar. 21, 2021); Convention for the Protection of Cultural Property, *supra* note 49, art. 1.

206. Convention for the Protection of Cultural Property, *supra* note 49.

207. *Id.* art. 4.

208. *Id.*

209. *Id.* art. 5.

210. *Id.* arts. 6, 16, 17.

211. UNESCO, *States Parties Ratification Status*, <https://whc.unesco.org/pg.cfm?cid=246> (last visited Mar. 21, 2021).

212. UNESCO, *The World Heritage Convention*, <https://whc.unesco.org/en/convention/> (last visited Mar. 21, 2021).

213. *Id.*

214. Convention Concerning the Protection of the World Cultural and Natural Heritage pmbl., Nov. 21, 1972 [hereinafter World Heritage Convention].

215. *Id.* art. 1.

216. *Id.*

217. *Id.* art. 2.

218. *Id.* art. 5.

219. *Id.* art. 6.

220. *Id.*

221. *Id.* art. 15.

222. World Heritage Convention, *supra* note 214.

223. UNESCO, PROTECTION OF CULTURAL PROPERTY: MILITARY MANUAL xiv (2016).

224. *Id.*

225. U.S. Committee of the Blue Shield, *History of Protection of Cultural Property: Ancient Authors*, <https://uscbs.org/antiquity.html> (last visited Mar. 21, 2021).



But now that we are aware, this is no longer a viable excuse for lack of protection.

Perhaps it is because it is simpler to designate discrete areas or items rather than global phenomena such as air or water. But since the United States fights wars on international scales with rippling aftereffects, the United States can no longer shy away from the difficulty. Further, lots of natural resources, such as forests, are much easier to scale down than the earth's ozone. The United States cannot fail to protect and restore them.

Perhaps it is because it is easier to agree on cultural and historic value, while scientists and politicians fight over the degree of anthropogenic effect on the natural environment. But while legislatures and executives can battle over the reality of climate change, many of the effects of military conflict are tangible and quantifiable: pollution of potable water, contamination with hazardous waste, and destruction of arable land. These are the equivalent of the Cultural Heritage Convention's prevention of the deterioration of cultural artifacts. There are many opportunities to address these smaller-scale issues immediately.

Therefore, the environment is no less deserving of enforceable legal protection during wartime as cultural and historical sites and relics. And the Cultural Heritage Convention offers a useful tool for protection and conservation, and it could be used to inspire environmentally focused protection and conservation. Again, while the exigencies of war may not always permit the niceties of NEPA and Executive Order No. 12114 to be observed during military operations, it is still possible and appropriate to engage in post-conflict restoration.

### III. Proposals: The Way Ahead

It is appropriate for the United States to conduct post-conflict restoration in contingency zones for the aforementioned reasons: (1) protecting U.S. assets, (2) recognizing the United States' need for international credibility and legitimacy as a global power, (3) upholding an international perspective on human rights, (4) restoring natural resources as support for rule of law and nation-building effort, (5) creating motivations for in-theater commanders, and (6) analogizing protection of historical and cultural sites and relics. Once it accepts the responsibility, the United States has several options for completing the work. First, DOD could be tasked to conduct the projects itself via a federal law or amendment to existing DOD guidance. Second, DOD could contract the restoration out to the private sector, either to U.S. companies or foreign companies. Third, DOD could coordinate with another well-positioned federal agency and transition the work as part of its exit strategy; USAID is a fitting choice for the third option because it has some experience in environmental projects, as discussed further below.

With any option, there are three separate spheres of work. The first is to create the obligation and make it binding. The second is to incorporate the restoration obligation into current and future contingency missions. The third is to clean up past contamination; in other words, take on a

retroactive responsibility. This would require a comprehensive study of the DOD footprint overseas and an analysis of what has already been done. Then any remaining cleanup work would have to be assigned and completed.

#### A. DOD Conducts Post-Conflict Restoration

DOD could undertake the work itself in accordance with its obligations under the laws and regulations discussed above. The Corps is the most likely entity for these projects. It is the nation's environmental engineer, overseeing the largest federal environmental missions. Its website confirms that it cleans up contaminated sites from past military activities.<sup>226</sup> Its cleanup programs have expertise in cleaning up hazardous, toxic, or radioactive waste or ordnance at old defense sites; low-level radioactive waste from the nation's early atomic weapons program; and Superfund sites and brownfields.<sup>227</sup> However, this expertise is limited to the geographic United States.<sup>228</sup>

But the Corps also has a contingency mission, which is directed at "responsive technical engineering, contingency planning, and contract construction support capabilities."<sup>229</sup> Congress could expand the Corps' scope so it could apply its environmental restoration expertise to the contingency zones where it already operates.

Though this Article examines and analyzes the law and is not a cohesive operational mission plan, it is important to address the viability of the options described herein. Of course, such a tasking would expand the Corps' mission, and the exact extent is difficult to estimate based on the unknown quantity of work remaining from historic missions as well as the current state of affairs. Congress or DOD could expand the Corps' personnel and mission so that it could be solely responsible for the work. It currently employs 33,000 civilians and 700 military troops, and it operates with a \$42 billion budget.<sup>230</sup> In support of DOD, the Corps works in 110 countries and allocates \$10 billion to combatant commands and interagency missions.<sup>231</sup> Of that, \$1.5 billion is allocated to national environmental cleanup.<sup>232</sup>

In order to extrapolate those numbers reasonably and calculate what international environmental restoration would look like, compare the U.S. (including Alaska and Hawaii) DOD footprint to its international footprint. In total, DOD employs 1.4 million active-duty members, 718,000 civilians, and 1.1 million reserve component members.<sup>233</sup> Of those 2.8 million personnel, more than

226. U.S. Army Corps of Engineers (USACE), *Environmental Program*, <https://www.usace.army.mil/missions/environmental/> (last visited Mar. 21, 2021).

227. *Id.*

228. DODI 4715.07, *supra* note 82, para. 2(a)(2).

229. USACE, *Contingency Support*, <https://www.usace.army.mil/Missions/Military-Missions/Contingency-Support/> (last visited Mar. 21, 2021).

230. TODD T. SEMONITE, USACE, USACE COMMAND BRIEF, [https://media.defense.gov/2019/Mar/05/2002096110/-1/-1/1/190304-A-A1401\\_USACE-101.PDF](https://media.defense.gov/2019/Mar/05/2002096110/-1/-1/1/190304-A-A1401_USACE-101.PDF).

231. *Id.*

232. *Id.*

233. DOD, *About the Department of Defense (DOD)*, <https://archive.defense.gov/about/> (last visited Mar. 31, 2021).

450,000 serve overseas.<sup>234</sup> About 200,000 of those are currently deployed.<sup>235</sup> Therefore, the contingency footprint (based on personnel) is a little less than 7% of the overall U.S. force. For the sake of making a reasonable estimate of Corps increase, if it matches the deployed footprint, that would be an increase in personnel of 2,350 and a little more than \$2.9 billion; these figures are based on the total personnel count and budget. While of course there are many factors that are currently unknown, most importantly the extent of damage to be remediated, this at least casts the proposal in a quantifiable light.

In the alternative, the Corps could seek local support from the other DOD branches. The restoration engineers could work with deployed active-duty troops to complete cleanup and remediation efforts while drawing down and terminating the missions. For example, civil engineering units have expertise in fuels cleanup and compliance. Each military branch has a specialized civil engineering entity meant for heavy construction and operations, usually in standing-up bases in conflict zones. For example, the Air Force has the Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers (RED HORSE), and the Navy has the Naval Construction Battalions (Seabees). DOD could develop specialists for closing down bases, just as RED HORSE and the Seabees stand them up. Or perhaps DOD could expand those heavy operations experts' mission sets for post-conflict cleanup.

In terms of funding, DOD would be required to utilize MILCON funds.<sup>236</sup> The various restoration efforts would have to be "specified" by Congress if they exceed \$2 million.<sup>237</sup>

## B. DOD Could Contract to the Private Sector

DOD could also hire private industry to do the work. This might be an appropriate choice if the work is particularly specialized, or the need for flexibility is heightened. The Federal Acquisition Regulation (FAR) mandates that the federal government "maximize its use of commercial products and services in meeting Government requirements."<sup>238</sup>

Commercial items are items, other than real property, that are customarily used by the public or nongovernment entities for something other than government purposes and are being sold or offered to the general public; it also includes commercial services to install, maintain, or repair those items.<sup>239</sup> A service contract is one that "engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end item of supply."<sup>240</sup> "Base services" are listed in the statute,

and "[a]gencies shall generally rely on the private sector for commercial services."<sup>241</sup> Since environmental restoration is also undertaken by private entities and NGOs, a commercial service contract is probably an option for the work.

There are unique policies and procedures for a federal executive agency contracting in contingency zones. Contingency contracting is defined in the Joint Chiefs of Staff Joint Publication 4-10 as "[t]he process of obtaining goods, services, and construction via contracting means in support of contingency operations."<sup>242</sup> In addition to U.S. federal laws, LOAC, international agreements, and status of forces agreements, there are often country-specific bilateral agreements that apply to contingency contracting. For example, the diplomatic note executed between the United States and the Transitional Government of the Islamic State of Afghanistan, dated December 12, 2002, covers the duties and rights of the United States and its contractors operating in Afghanistan. U.S. military personnel and contractors there are not liable for any taxes or fees assessed within Afghanistan.<sup>243</sup>

Notably, there is no deployment exception to U.S. contract or fiscal law. All of the regular formalities and clauses apply, including full and open competition.<sup>244</sup> Contingency operations are held to the same standards as home station operations. However, FAR does have some particularly helpful provisions when it comes to contingency contracting.

FAR Subpart 6.3 sets out lawful exceptions to a contract award for less than full and open competition.<sup>245</sup> "Unusual and compelling urgency" is a useful argument to develop justification and approval in contingency operations.<sup>246</sup> FAR Section 5.101(a)(2) explains that for contracts awarded outside the United States, the normal minimum 45-day procurement administrative lead time is waived, so contracts can proceed more quickly.<sup>247</sup> FAR Part 13 explains the use of the simplified acquisition threshold (SAT) in contingency operations; contracts awarded and purchased outside the United States that are less than \$1.5 million benefit from streamlined contracting procedures.<sup>248</sup> The SAT jumps to \$7 million for commercial items and services.<sup>249</sup> For DOD humanitarian and peacekeeping missions, the SAT is \$500,000.<sup>250</sup>

FAR Part 18 lists expedient and relaxed provisions, which are often utilized in contingency situations.<sup>251</sup> FAR Part 25 and the Defense Federal Acquisition Regulations Supplement (DFARS) Part 225 govern foreign acquisi-

234. *Id.*

235. Thomas Gibbons-Neff & Eric Schmitt, *Despite Vow to End "Endless Wars," Here's Where About 200,000 Troops Remain*, N.Y. TIMES, Oct. 21, 2019, <https://www.nytimes.com/2019/10/21/world/middleeast/us-troops-deployments.html>.

236. DODI 4715.05, *supra* note 60, enclosure 3, para. 1(c); 10 U.S.C. §2802.

237. FISCAL LAW OVERVIEW: ETHICS COUNSELOR'S DESKBOOK 51 (2013).

238. FAR §1.102-2(a)(4).

239. *Id.* §2.101.

240. *Id.* §37.101.

241. *Id.* §§37.101, 37.102(b) (citing OMB Circular No. A-76, Performance of Commercial Activities (May 29, 2003) and FAR subpt. 7.3).

242. JOINT CHIEFS OF STAFF, JOINT PUBLICATION 4-10, OPERATIONAL CONTRACT SUPPORT pt. II (2008) [hereinafter JP 4-10].

243. CONTRACT AND FISCAL LAW DEPARTMENT, CONTRACT ATTORNEYS DESKBOOK 30-4 (2019).

244. FAR §6.101.

245. *Id.* §6.3.

246. *Id.* §6.302-2.

247. *Id.* §5.101(a)(2).

248. *Id.* §13.

249. *Id.* §13.500(a).

250. CONTRACT AND FISCAL LAW DEPARTMENT, *supra* note 243, at 30-29.

251. FAR pt. 18.

tions and discuss the Buy American Act.<sup>252</sup> FAR Part 50 describes exceptions for certain emergency situations, but they are rarely utilized due to their low \$50,000 threshold and high levels of required approval.<sup>253</sup>

In addition to FAR, the Joint Chiefs of Staff Joint Publications prescribe more guidance. In operations with a significant amount of contracted support, a contract support integration plan (CSIP) must be developed.<sup>254</sup> The CSIP focuses on how to acquire and manage contracted support.<sup>255</sup> The mission must also have a contractor management plan (CMP).<sup>256</sup> The CMP focuses on government obligations to support the contractor personnel.<sup>257</sup>

There are three different types of contract support for contingency operations. The first is theater support contracts, which are those awarded by contracting officers (COs) in an operational area and serving under the direct contracting authority of the responsible Service component.<sup>258</sup> Next are systems support contracts, and these apply mainly to technical support, maintenance, and repair for selected military weapons systems and aircraft.<sup>259</sup> Notably, these are usually awarded well before and unrelated to a specific operation.<sup>260</sup>

Finally, external support contracts are awarded outside the responsible Service component, and are used for logistics and noncombat-related services and supply support.<sup>261</sup> They are used for transportation, port services, warehousing, facilities construction, prime power, materiel maintenance, communications, and commercial computers and information management.<sup>262</sup> They are not directly related to a contingency operation, but are often peacetime contract awards for use during contingencies.<sup>263</sup> Theater support contracts are likely the most appropriate modality for post-conflict restoration since they would be specific to particular operations.

Once the contract is awarded, DOD will be responsible for designating the in-country status of the contractors. There are four main categories: contractors authorized to accompany the force, DOD contractors not accompanying the U.S. armed forces in the CENTCOM AOR, DOD contractors not accompanying the U.S. armed forces outside the CENTCOM AOR, and non-DOD contractors. All contractors, regardless of category, must receive a letter of authorization detailing the support due under the contract; this must be carried on the contractor's person at all times.<sup>264</sup>

One of the most important laws when it comes to government procurement and fiscal law is that commanders

have broad authority to direct operations.<sup>265</sup> However, only explicitly designated individuals within a federal agency have the authority to obligate funds. Only authorized officials may enter into contracts and direct changes.<sup>266</sup> Commanders are almost never COs. This is another reason why it is important to develop a coherent universal policy on environmental restoration and remediation post-conflict: commanders may not have the legal authority to do it at their low command level.

Based on these contracting and fiscal law principles, the most appropriate course of action is to develop a CSIP and a CPM for each respective operation, award a theater support contract, and ensure that DOD contractors are authorized to accompany the DOD force, but also to operate unaccompanied within the CENTCOM AOR.

### C. Partnering With USAID

DOD could also partner with another federal agency to complete post-conflict environmental restoration. USAID is an appropriate choice for this proposal.

First, USAID has the requisite expertise. It is already focused on effective implementation of its development projects through environmental impact assessments and economic sustainability.<sup>267</sup> A professional environmental staff enforces implementation of and compliance with applicable environmental laws, which includes an agency coordinator, a bureau of environmental officers, regional environmental advisors, mission-specific environmental officers, and a biosafety review advisor.<sup>268</sup> This knowledge and proficiency could be greatly useful both in commencing new military missions and in managing logistical burdens of new infrastructure, as well as in performing any restoration after a mission has terminated.

In terms of environmental expertise, USAID has experience in many of the desired sectors. It works in agriculture, climate change issues, energy, human health, natural resource management, waste management, and water.<sup>269</sup> Biodiversity and tropical forests are one of USAID's environmentally focused projects, which is valuable for revitalizing natural resources post-conflict as in the Cambodian example discussed above in Section II.F.<sup>270</sup> USAID also has experience in enhancing the energy sector; in 2020, it began constructing a wind farm in Herat, Afghanistan.<sup>271</sup> As for potable water, it has a current wastewater treatment plant project in North Aqaba, Jordan.<sup>272</sup> In 2019, USAID

252. *Id.* pt. 25; DFARS pt. 225; 41 U.S.C. §§8301-8305.

253. FAR pt. 50.

254. JP 4-10, *supra* note 242, at III-9.

255. *Id.*

256. *Id.* at V-5.

257. *Id.*

258. *Id.* at I-7.

259. *Id.* app. A, at A-1.

260. *Id.*

261. *Id.* app. B.

262. *Id.*

263. *Id.*

264. DFARS §252.225-7040(c)(3).

265. 10 U.S.C. §164.

266. FAR §§1.603, 43.102(a); *City of El Centro v. United States*, 922 F.2d 816 (Fed. Cir. 1990).

267. USAID, *Environmental Impact Assessment*, <https://www.usaid.gov/our-work/environment/compliance> (last visited Mar. 31, 2021).

268. *Id.*

269. USAID, *Environmental Compliance Database (ECD)*, <https://www.usaid.gov/environmental-procedures/compliance-database> (last visited Mar. 31, 2021).

270. USAID, *Biodiversity and Tropical Forest (FAA 118/119) Analyses*, <https://www.usaid.gov/environmental-procedures/biodiversity-tropical-forest-analyses> (last updated Nov. 13, 2020).

271. USAID, *Environmental Compliance Database (ECD)*, *supra* note 269.

272. *Id.*



published a full technical update on healthcare and hazardous waste, making USAID an expert in advising how best to handle medical and other hazardous waste.<sup>273</sup>

As far as ability to handle a new environmental restoration tasking, USAID is in a unique position, which may allow it to be more flexible and agile than DOD. USAID received a budget of more than \$20 billion in 2018, which was invested in 139 countries across 28 sectors of work.<sup>274</sup> This was less than 1% of the entire federal budget.<sup>275</sup> In 2016, the most recent year for which data are available, USAID employed 3,059 career employees.<sup>276</sup> Funding those career employees cost \$455,474.<sup>277</sup> In order to accomplish its many projects, USAID relies heavily on contracts with NGOs.<sup>278</sup>

Those close working relationships with NGOs all over the globe are perhaps the most valuable aspect to USAID. It has invaluable information that is specific to regional blocs and countries, which allows it to focus on specific and tailored solutions. Further, the deep level of involvement and historical embedding means that USAID probably has more continuity and sensitivity to the cultural nuances that so often elude DOD.

Funding USAID's post-conflict restoration work would require some different appropriations than it currently operates under. Currently, USAID's work is authorized by the Foreign Assistance Act.<sup>279</sup> That is aimed at foreign aid and development assistance. In order to identify the appropriate authorizations and appropriations for USAID to undertake new projects, such as cleanup of hazardous waste related to warfighting missions, one must assign the responsibility to a particular executive agency. Appropriations under the Foreign Assistance Act cannot be used for environmental restoration.

In terms of funding, one option is to appropriate money to DOD because DOD would be generating the need for the restoration, rather than tasking another federal agency with seeking money for its own budget. 31 U.S.C. §1531(a) authorizes transfers of funds for functional transfers between government agencies.<sup>280</sup> Specifically, one federal agency may transfer a portion of an appropriation necessary to finance or discharge a function for which the appropriation was originally available.<sup>281</sup> However, it requires the president's approval, in a specific amount, in the case

of interagency transfers.<sup>282</sup> Therefore, while the logistical hurdle is high, such a transfer from DOD to USAID is explicitly authorized.

Additionally, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)<sup>283</sup> provides a helpful example for funding authorizations, though it does not apply overseas. The Secretary of Defense may "enter into agreements on a reimbursable or other basis with any other Federal agency, any State or local government agency, any Indian tribe, any owner of covenant property, or any nonprofit conservation organization . . . to assist . . . in carrying out any of the Secretary's responsibilities under this section."<sup>284</sup> The chapter in question refers to DOD's responsibilities under CERCLA, which applies to "real property that is owned by, leased to, or otherwise possessed by the United States at locations at which military activities are conducted under this title or title 32."<sup>285</sup> Therefore, this authorization is not the one that will be used for agreements and reimbursements for environmental cleanup in the contingency AOR, as CERCLA does not apply overseas. However, it is a good model for authorizations related to the proposed federal requirement outlined here.

The other alternative is to appropriate funds for the environmental restoration into USAID's budget. However, this is less logical for a few reasons. First, as a matter of common sense, USAID is not causing any environmental damage, and forcing USAID to fight for appropriations for foreign aid, which is historically not politically popular, as well as undertake the restoration work is simply unreasonable. Second, DOD currently receives the majority of the United States' discretionary budget, whereas USAID receives less than 1% of the entire federal budget.<sup>286</sup> In 2019, DOD's budget authority was a little more than \$693 billion, whereas USAID received \$20 billion.<sup>287</sup> Congress and the taxpayers are used to large defense expenditures, whereas foreign aid tends to be unpopular; in 2017, a poll found that 57% of Americans favored a reduction in foreign aid.<sup>288</sup> Therefore, trying to take the money from USAID is not likely to be successful.

## IV. Conclusions

This part discusses arguments in favor of the proposed federal law, which is followed by major counterarguments, and then concludes that the federal law should prevail.

273. USAID, *SECTOR ENVIRONMENTAL GUIDELINES: HEALTHCARE WASTE—FULL TECHNICAL UPDATE* (2019), [https://www.usaid.gov/sites/default/files/documents/1864/FINAL\\_HC\\_W\\_SEG\\_508\\_12.02.19.pdf](https://www.usaid.gov/sites/default/files/documents/1864/FINAL_HC_W_SEG_508_12.02.19.pdf).

274. USAID, *Why Our Work Matters: Worldwide* (2018), <https://results.usaid.gov/results?fiscalYear=2018> (last visited Mar. 21, 2021).

275. *Id.*

276. USAID, *USAID STAFFING REPORT TO CONGRESS* (2016), [https://www.usaid.gov/sites/default/files/documents/1868/2016\\_USAID\\_Staffing\\_Report\\_to\\_Congress.pdf](https://www.usaid.gov/sites/default/files/documents/1868/2016_USAID_Staffing_Report_to_Congress.pdf).

277. *Id.* at 4.

278. USAID, *Non-Governmental Organizations (NGOs)*, <https://www.usaid.gov/partnership-opportunities/ngo> (last visited Mar. 31, 2021).

279. USAID, *Operational Policy (ADS): The Automated Directives System (ADS)*, <https://www.usaid.gov/who-we-are/agency-policy> (last updated Feb. 2, 2021).

280. 31 U.S.C. §1531(a).

281. *Id.*

282. *Id.* §1531(b).

283. 42 U.S.C. §§9601-9675, ELR STAT. CERCLA §§101-405.

284. 10 U.S.C. §2701(d)(1).

285. *Id.* §2700(2)(B).

286. USAID, *Why Our Work Matters: Worldwide*, *supra* note 274.

287. OFFICE OF THE UNDER SECRETARY OF DEFENSE (COMPTROLLER), *NATIONAL DEFENSE BUDGET ESTIMATES FOR FY 2020*, at 6 (2019); USAID, *Why Our Work Matters: Worldwide*, *supra* note 274.

288. *Most See U.S. Foreign Aid as a Bad Deal for America*, RASMUSSEN REP., Mar. 20, 2017, [https://www.rasmussenreports.com/public\\_content/politics/general\\_politics/march\\_2017/most\\_see\\_u\\_s\\_foreign\\_aid\\_as\\_a\\_bad\\_deal\\_for\\_america](https://www.rasmussenreports.com/public_content/politics/general_politics/march_2017/most_see_u_s_foreign_aid_as_a_bad_deal_for_america).

## A. Arguments

For the reasons stated above, the United States should enact a federal law requiring post-conflict environmental restoration and remediation where DOD has caused environmental harm or contamination in contingency areas of operation. It should be a federal law incorporated in the U.S. Code so that it is enforceable and violations are punishable under UCMJ Article 92, Failure to Obey Order or Regulation. It is not enough to have a CENTCOM regulation address this, since it does not carry the same weight as a congressionally mandated law. Also, a federal law, unlike a military-specific regulation, would be applicable to all actors, including U.S. contractors. It would also be enforceable over any other federal agencies partnering with DOD in contingency operations, such as USAID.

It is appropriate to enact and enforce such a law because: (1) it would protect U.S. troops and civilians from in situ adverse health effects while protecting the operational mission; (2) it would enhance the United States' international credibility and legitimacy as a global power; (3) it is in line with the evolving idea of human rights and the right to a healthy environment; (4) there is overwhelming evidence that restoring natural resources supports the rule of law and nation-building efforts, which are U.S. goals post-conflict; (5) it would incentivize in-theater commanders during conflicts to observe applicable environmental practices and procedures; and (6) it is an appropriate parallel to the mandated protection the United States grants historical and cultural sites and relics.

Finally, the best way to implement the new law is to leave the responsibility and the fiscal appropriations in the hands of DOD. DOD could expand the Corps' mission set to include post-conflict work, thereby capitalizing on the long-held experience and premier expertise with hazardous waste and contamination. This would simplify budgetary considerations, coordination, and mission responsibilities. However, it may be that certain circumstances would call for specialized response and coordination, which is why creating a channel to USAID is advisable.

The model law can mirror other DOD responsibilities. The U.S. Code can incorporate the overarching responsibility to restore the environment back to its prewar state. The most logical standards to use are those that are set in other federal laws, such as CERCLA, the Clean Air Act (CAA),<sup>289</sup> and the Clean Water Act (CWA),<sup>290</sup> when host nations do not have their own variants. The statute should include penalties, either civil or criminal, or both. Finally, to allow DOD to remain flexible and agile, Congress can delegate authority to the Secretary of Defense to enact more specific procedures. It is also likely appropriate to allow for a further delegation to the secretaries of the respective Service departments to enact Service-specific procedures where needed.

Were DOD to transfer the environmental restoration work to USAID, it is likely most appropriate to do so as part of the exit strategy and termination of the mission. DOD should prepare a comprehensive report of its actions, which is akin to an after-action report, which it prepares anyway, and provide it to USAID during the transition. It is not necessary for USAID to be in place during the commencement and execution of the military operation if DOD provided a complete debriefing of the work to be done. As this would also be part of the request to the president for transfer of funds, it should be simple to complete.

## B. Responses to Potential Objections

The United States assigning itself more duties in a war zone is an unpopular opinion. However, there is ample support for the proposition, despite several anticipated points of contention: (1) it is not currently required under any federal or international law, (2) it may be costly, and (3) joint operations complicate such a responsibility.

### 1. There Is No Requirement to Undertake Post-Conflict Restoration

The main counterargument is that post-conflict restoration is not required by federal law or treaty, and the United States should not take on more responsibilities than exist. It is true that the United States has historically resisted restrictions on its military operations. However, shifting the responsibility to post-conflict restoration allows the United States to fight its MOOTWs to the greatest degree of flexibility, while observing the doctrines of military necessity, proportionality, and distinction.

Post-conflict efforts do not threaten the military mission, which has always been the United States' concern when it comes to updating ENMOD or the Geneva Conventions. Further, post-conflict restoration should be able to take place alongside the peacekeeping and nation-building efforts the United States engages in frequently. The infrastructure for logistics and security would already be in place. Most importantly, post-conflict restoration directly supports peacekeeping and nation-building once a conflict has ended. Therefore, it is appropriate for the United States to impose this requirement on itself.

### 2. Lack of Funding

The second major issue is funding. Environmental restoration can be costly. But the responses to this counterargument are the same as the first: First, reasonable precautions and environmental protocol during conflict protect the health of U.S. personnel, reduce operational costs, and streamline requisite logistical support. Second, protection of natural resources buys us goodwill from host nations, which are often hostile.

Third, and perhaps most persuasive, is the reality that DOD ends up returning to the same locations, especially in the Middle East. Remediating the environmental harm would allow DOD to set up and proceed with new future

289. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

290. 33 U.S.C. §§1251-1387, ELR STAT. FWPCA §§101-607.

missions and operations more quickly, and with less risk of adverse health effects to U.S. personnel. Finally, while it is impossible to quantify the cost without knowing the exact scope of the work to be done, suffice it to say that wars are costly under any circumstances. There is political value to be gained, with Americans and foreign nationals, by restoring damage caused by the United States on foreign sovereign soil. In the end, the question of cost is more political than it is legal.

### 3. Applications to Joint Operations and Coalition Forces

The third issue is that a U.S. federal law would not have clear application or enforcement mechanisms with respect to joint operations and coalition forces. The most reasonable resolution to this is that the United States only take responsibility for missions where it is the primary actor and has

primary command-and-control authority. The rest of the response is that an international solution to environmental damage is outside the scope of this Article. While certainly a worthy topic, this work is focused on the United States' acknowledgment of its responsibilities outside of its borders and presenting a cogent solution to that unilateral issue.

### C. Conclusion

In conclusion, none of these potential objections is fatal to the overall proposal. The major benefits are increased security of U.S. personnel and materiel, increased mission efficiency, and increased effectiveness of nation-building efforts. Each of the potential objections has an efficacious rebuttal and solution. Therefore, the United States should impose a comprehensive post-conflict restoration obligation on itself for contingency operations and MOOTW overseas.