

Environment and Conflict: A Murky Picture

Quagmire [kwag-mahyuhr, kwog-], noun:

1. *An area of miry or boggy ground whose surface yields under the tread; a bog.*
2. *A situation from which extrication is very difficult: quagmire of financial indebtedness.*
3. *Anything soft or flabby*¹

Associating the United States' interventions in Afghanistan and Iraq — beginning, respectively, in Oct., 2001 and March, 2003 — with a quagmire is not a new rhetorical device. Nonetheless, reflections on the scope of the consequence of these invasions reminds observers just how appropriate such a characterization might be.

Specifically, an examination of an often-overlooked consequence of military action and conflict — their impact on the natural environment — shows first of all, how difficult it is to extricate individual strains from discussions of warfare's impact on the planet (in broad terms containing impacts on human life, animal and plant life, minerals and physical geography). Moreover, the definition of both those impacts and their consequences is anything but hard or firm. In fact, when it comes to Iraq and Afghanistan, even the players are murkily defined, particularly when it comes to discussing the “resistance” to the United States and its allies². As this paper shows, efforts to traverse the mire of this topic will cause the ground to yield,

1 Dictionary.com. <http://dictionary.reference.com/browse/quagmire>.

2 Edward Borchardt, et al., “Winning the invisible war: An Agricultural Pilot Plan for Afghanistan,” (Group Paper, Center for Technology and National Security Policy, National Defense University, Washington, D.C., March 2008) 1

revealing more questions in the discussion of the linkage between environmental degradation and military action.

Discussing the environment as it relates to the wars in Afghanistan and Iraq remain a largely theoretical task. It is quite difficult to simply isolate specific periods for this discussion. Anyhow, as this paper shall detail, most of the discussion that has taken place about the environmental consequences of conflict in each country has taken place within the international and environmental law community. The topic has emerged alongside greater global attention to environmentalism, but, as we shall see, there still remain a number of questions about where to limit the discussion in terms of determining culpability.³

Ultimately, those attempting to resolve a conflict and its consequences must decide who is affected by it, who is responsible for the actions during it, what issues are in dispute, and how the situation can be declared resolved.

Perhaps, though, one of the problems with this discussion is that conflict narratives require false limitations to be made. Perhaps the answer will be there is no way to look at war of any sort without a cosmopolitan viewpoint. That is, perhaps there is no way to look at conflict, and its consequences, without accepting that each action has global consequences.

The history of environmental degradation related to warfare is well documented.⁴ Some even argue that modern day warfare has a growing impact on the natural world. Even as early as 1970, though, well before the Vietnam War was over, scientists were beginning to explore the ecological consequences of that conflict :

3 McManus, Keith P. "Civil Liability for Wartime Environmental Damage: Adapting the United Nations Compensation Commission for the Iraq War." *Boston College Environmental Affairs Law Review* 33 (2006): 435

4 [Jay E. Austin and Carl E. Bruch, introduction to *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives*, ed. Jay E. Austin and Carl E. Bruch \(Cambridge: Cambridge University Press, 2000\), 1](#)

Wars are always destructive of environments, but never before have the ecological effects of a war been a major issue. For the past several years there has been widespread concern among scientists about the massive use of chemicals for defoliation and crop destruction in Vietnam. Because these chemicals have never before been used in military operations, there are no data upon which to predict the effects of such use.⁵

In the four decades since that study, much has been learned about the lasting damage caused by Agent Orange and many scholars describe the growing — in both chronological and temporal as well as, perhaps, more qualitative terms, such as health and livelihood — environmental consequences of conflict.

Vietnam is just one example of such consequences. As Klaus Toepfer notes, the evolution of growing community, state and international attention to a host of “common environmental challenges” during a time that “also witnessed devastating damage to people and the environment as a result of inter-state wars and armed conflicts,” examples of which included the defoliation in Southeast Asia, the deliberate release and burning of oil by Saddam Hussein during the 1991 Persian Gulf War, forced migration during wars in West and Central Africa as well as Afghanistan, and the continued threat posed by weapons of mass destruction.⁶

As Adley and Grant point out, such dramatic instances of the intersection of human violence and the natural world have been well documented, but there are other ecological damages that don't receive as much outcry, despite equally deleterious consequences, as Jessica Adley and Andrea Grant Argue on the Web site of the Sierra Club of Canada (<http://www.sierraclub.ca/national/postings/war-and-environment.html>). In fact, that line of reasoning might be taken a step further.

Contemporary warfare doesn't just have more severe impacts, its impacts now consistently have transnational impacts and consequences affecting third-parties to a conflict.

5 Gordon Orians and E.W. Pfeiffer, E.W. “Ecological Effects of the War in Vietnam,” *Science* 168 (1970): 544

6 Klaus Toepfer, Forward to Jay E. Austin & Carl E. Bruch, xix

Where, say, the Roman salting of farmland in Carthage had localized effects, it didn't have the wide-ranging impact the U.S. defoliation campaign in Vietnam had.⁷ One might argue, though, that even this ancient example's specific goal of denying Carthage's ability to grow crops might have had transgenerational implications (depending upon how long those agricultural impacts lasted) suggesting that even historical cases of conflict's environmental impacts require complex analysis, some of which has taken place.⁸ I might also postulate that defoliation contributes to the world's global warming challenges by eliminating a potential carbon sink, though the scope of my research did not allow me to explore that question in detail. Scholars have, however, clearly noted, as Elliott did, that whatever the specific consequences, actions inside states don't just have environmental impacts limited to within those states' boundaries.⁹

Returning to the present day and recent past it might help to explore how changing conceptions of war itself affect the measurement of environmental degradation. Pace Law School Professor Nicholas Robinson — one of two editors of the United Nations Environmental Program (UNEP) training manual and the editor of the proceedings of the 1992 United Nations Earth Summit in Rio De Janeiro — argues that environmental conservation was one of the first casualties of the “War on Terrorism:”

When a government's concern for terrorism eclipse its attention to other crises, not only have terrorists unwittingly won a round, but also the other major crises, left to fester, can become even more problematic. In the first years of this century, environmental conservation has become such a casualty.¹⁰

Robinson doesn't limit his argument to the environmental impact of the military actions

7 Austin, Jay E. and Bruch, 1

8 American University's “Inventory of Conflict & Environment,” <http://www1.american.edu/TED/ice/ice.htm>, is one example, with a database of case studies discussing the relationship between the environment and conflict through history.

9 Lorraine Elliott, “Imaginative Adaptations: A Possible Environmental Role for the UN Security Council,” *Contemporary Security Policy* 24, No. 2 (Aug. 2003), 56

10 Nicholas A. Robinson, “Terrorism's Unintended Casualties: Implications for Environmental Law in the USA and Abroad,” *Environmental Policy and Law* 37 Issue 2-3, 126

associated with the War on Terror. Instead, he describes a much broader definition of environmental security sacrificed by Bush's war. This sacrifice doesn't only involve his administration being distracted from environmental protections within the United States. Robinson argues that species extinction, rising greenhouse gas production and increased incidences of transnational pollution further endanger the globe and, thus, environmental security should be protected while securing against terrorism.¹¹ There is a need to reassert environmental laws, Robinson argues, but such a reassertion is difficult. By declaring war on terrorism as a concept, instead of specific terrorists or specific sources of terrorism, the Bush administration consumes vast amounts of resources.

Terrorists themselves may not consider the environmental consequences of their actions, but those actions have consequences nonetheless. While there aren't significant examples of terrorism specifically targeting the environment, Robinson argues governments should nonetheless be prepared to deal with the possible environmental impacts of terrorist acts.¹² He further argues that criminal law is already being employed to try suspected terrorists. Acts of eco-terrorism are so rare and the definitions of eco-terrorism included in the Treaty of Rome — which established the International Criminal Court and to which the United States is not a signatory — so narrow that it might take such an extraordinary instance of environmental terror that the US' negative opinion about the ICC might change.¹³ Still, in his conclusion, Robinson argues for strengthening of international environmental law, particularly because environmental law is often given a low priority in discussions of terrorism.¹⁴

Robinson is not the only legal scholar to note the short shrift given environmental law in

11 *Ibid*

12 *Ibid*, 131.

13 *Ibid*, 135.

14 *Ibid*, 137

discussions of the ICC. Even before the Sept. 11 attacks, legal scholars, including Mark Drumbl, noted that environmental war crimes barely merited a mention in the Treaty of Rome. Despite evidence of environmental damage from the military, Drumbl argues that the international community has been more reluctant to account for such damage, even as it has made strides to codify and enforce laws of war dealing directly with human costs.¹⁵ Drumbl points out, however, that Article 8(2)(b)(iv) of the treaty is the only one to specifically mention prohibitions against environmental harm. Additionally, that harm has to be intentional, cause physical harm, and lack an argument that the perpetrator received a justifiable military advantage from taking the action in question.¹⁶

Indeed, the United Nations Environmental Program itself has warned not to make firm connections between warfare and environmental data without proper study. In a 2004 report jointly authored with the Woodrow Wilson Institute, it noted a scholarly history analyzing the aforementioned environmental impacts of the war in Vietnam and the 1991 Persian Gulf War, as well as the Cold War legacy of ecological destruction in the Soviet Union. But it also urges caution:

While such claims may seem intuitive, it is not clear that they are based on satisfactory evidence; researchers should avoid making strong allegations connecting war to environmental damage without providing empirical support. Researchers also need an evaluative framework that will enable comparisons between wars.¹⁷

Quantitative, solid data is a good thing. Empirical analysis is a good thing. When discussing legal claims, numbers are important. However, the environment and damage to it can't be strictly quantified and valued in dollars and cents terms. Still, a case study in a 2009 UNEP report on the

15 Mark A. Drumbl, "Waging War Against the World: the Need to Move From War Crimes to Environmental Crimes," in *The Environmental Consequences of War*, ed. Austin and Bruch, 621-622.

16 *Ibid*, 622-623

17 *Understanding Environment, Cooperation and Conflict*, Division of Early Warning and Assessment, (United Nations Environmental Programme, 2004), 7-8

role of natural resources and the environment in conflict makes a point about why proper analysis of a country's conditions should take place before humanitarian interventions. In Afghanistan, the study points out, some emergency well drilling exacerbated water scarcity problems. "By failing to understand groundwater dynamics, coordinating activities, or monitoring extraction levels, these operations have undermined local *karez* water," the report says.¹⁸

This politically cautious approach by the UNEP immediately after the invasion of Iraq squares with other UNEP approaches which suggest the program did not want to sink into the political mire, but it is also important to note the logistical difficulties that hampered UNEP's abilities to conduct the assessment in that country. This includes ongoing violence, and, most notably, the Aug. 2003 bombing that killed top UN envoy Sergio Vieira de Mello.¹⁹

Still, another reason UNEP isn't involved with determining culpability for war-crimes is more simple. That is not its purpose in post-conflict situations. Instead, said Pekka Haavisto²⁰ at a 2005 symposium on international law and environmental damage, the program focuses on aid and assessing immediate post-conflict needs in a given location. The UNEP, Haavisto said in his

Security Council to prevent environmental damage. She sees the authorization provided in Article 39 of the United Nation's Charter to the body to determining “what constitutes a threat to the peace, a breach of the peace, or an act of aggression” as a crucial tool for enforcement of environmental protection.²² While Elliott's discussion primarily focuses on protecting environmental security in both peacetime and war, the problem for the present discussion of the impact of war on the environment, though, is that the council hasn't articulated any specific instructions about how militaries should act to protect the environment.²³ Even if the security council were to develop policies specifically addressing its responsibilities toward enforcing environmental security, she notes, it would need to do so without allowing such policies to become “caught up in the geopolitics and charges of selected intervention and 'liberal western imperialism,' that have been levied at humanitarian intervention,”²⁴ charges which carry some weight considering the conduct of the War on Terror to this date.

Nearly all discussion of the application of international law to the environmental consequences of the wars in Afghanistan and Iraq has taken place in the international environmental law community. Little media coverage has specifically explored culpability for environmental degradation. That which has discussed environmental degradation primarily focused on the historical legacy of said destruction. What more extensive coverage has emerged primarily exists in specialist and foreign press sources.

One of the rare examples of significant reportage specifically addressing potential culpability for the environmental consequences of the U.S.-led military interventions was not in a newspaper, magazine or television broadcast. Instead, it appeared in an article by Charles Black

22 Elliott, 49

23 *Ibid*, p. 53

24 *Ibid*, p. 63

in *OnEarth*, a magazine published by the Natural Resources Defense Council, an American NGO. That article continues the placement of environmental degradation along a centuries-old timeline (specifically mentioning the middle East) and detailed the “limitations of environmental law in governing the environmental ravages of wartime.”²⁵ The article quotes legal scholars and describes various elements of international law that fall short of obligating environmental protection. Interestingly, the article takes the rare step of exploring how domestic law in the United States might apply to Iraq's environmental conditions, specifically as it relates to private contractors assisting the Coalition Provisional Authority's responsibilities in the reconstruction of the country.

“The centerpiece of the reconstruction effort was to restore electrical power and clean water,” Black writes.²⁶ The article went on to detail how San Francisco-based Bechtel Corp. — which was bound by United Agency for International Development regulations — was awarded billions of dollars to fix water treatment facilities and return power production to prewar levels by June 2004. This had direct environmental and human health impacts:

Clean water is directly related to the reliability of power supplies. Iraq's sewage treatment system, which relies on a network of pumping stations, breaks down when blackouts occur and the pumps stop running. When this happens in Baghdad, for example, huge quantities of raw sewage and industrial waste pour directly into the Tigris River, the city's only source of drinking water. The result, says Bathsheba Crocker, a post-conflict reconstruction expert with the Center for Strategic and International Studies in Washington, D.C., is “an increase in water-borne diseases, everything from cholera to hepatitis and chronic diarrhea.”²⁷

Likewise, NGOs appear to have focused on documenting the current state of the environment in each country. They tend to position that status on a timeline of decades of political instability (in Afghanistan's case) or on decades of warfare and dictatorship (in Iraq's case). Whether because of political motivations or an inability to collect adequate data, they do

25 George Black, “Is Environmental Destruction a War Crime,” *OnEarth*, (Winter 2005). Accessed 26 April 2009 at <http://www.nrdc.org/onearth/05win/briefings.asp>.

26 *Ibid*

27 *Ibid*

not draw significant links between the Western invasions, resistance to those invasions, and the ongoing security operations and regime stabilization efforts within each country.

Perhaps the best example of the legal community's more in-depth focus on this issue occurred in 2005, when Georgetown's international environmental law review hosted a symposium and produced a focus issue discussing the legal tools available to address the environmental consequences of war. Such conferences are useful for discussing the legal dynamics of international environmental law as it pertains to conflict, but there is no evidence any of the recommendations discussed at the conference have been adopted by any party involved in Iraq or Afghanistan, so it may be little more than an intellectual exercise.

Despite the limited discussion of the potential for environmental war crimes prosecution — or other topics related to the ecological consequences of the wars in Afghanistan and Iraq — the international community is beginning to pay more attention to the toll warfare takes on the natural world. This discussion is beginning to include more discussion of the environmental consequences of war, in addition to the role environmental circumstances play in precipitating conflict.

UN Secretary General Ban Ki Moon has also weighed in on the subject. In November, 2008, on the occasion of the International Day For Preventing the Exploitation of the Environment in War and Armed Conflict, Ban noted that protections of the environment codified in Protocol 1 of the Geneva Convention are regularly violated in times of armed conflict.²⁸ Ban drew specific connections between environmental degradation, security, health and livelihoods. He also specifically pointed to the relationship between environmental issues and migration in

²⁸ Ban Ki-Moon, "Message on the International Day For Preventing the Exploitation of the Environment in War and Armed Conflict," (United Nations, Nov 6 2008)

Afghanistan. “In Afghanistan, warfare and institutional disintegration have combined to take a major toll,” Ban said. “In a clear case of environmentally induced displacement, tens of thousands of people have been forced from rural to urban areas in search of food and employment.”²⁹ Ultimately the statement is but a ceremonial acknowledgment by the secretary general, but it does suggest increased recognition that impacts to the natural landscape don't only have macroeconomic impacts to resource production or agriculture within a state, but quantifiable human impacts. While this paper doesn't delve into the new administration's position on this issue, Barack Obama's inauguration as President of the United States may also provide an opportunity to revisit this topic.

In fact, Ban's position seems indicative of a deeper shift taking place at the UN regarding the environmental angle of of conflicts. This shift suggests more explicit acknowledgment that the 1992 Rio declaration “explicitly recognizes that peace, development and environmental protection are 'interdependent and indivisible.’”³⁰ The UNEP's 2009 *From Conflict to Peacebuilding* report acknowledges the politicization of links between conflict and environmental concerns (not just in terms of conflict's impact on the environment, but environmental issues as causative factors in war). This suggests a solidifying of the UN's position on climate change as well as greater willingness on the part of the organization to treat environmental security as it pertains to distressed populations as an imperative, as a threat to world peace and stability that needs to be dealt with.

So, while it avoids making politically unfavorable recommendations such as discussing potential environmental prosecution, it does take a step forward by providing new data about the

²⁹ *Ibid*

³⁰ Achim Steiner and Jane Holl Lute Jane, forward in *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, ed. Silja Halle, 4

environment and conflict. Importantly, it also recognizes a shift — also recognized by multiple International Relations scholars — from interstate conflict to conflicts primarily involving non-state entities, often within traditional state boundaries.³¹ This was underscored by a presentation given on March 24 by Andrew Morton, the program manager for disasters and conflicts with the UNEP, during which Morton said there are clear impacts to the environment from conflict and it is the UNEP's role to serve as a neutral, “expert” witness in assessing these damages.³²

In 2001, before the September 11 attacks, and, thus, before the U.S. invasion of Afghanistan, the U.S. Army's own environmental program studied the specific impact the establishment of an International Criminal Court would have on the prosecution of crimes related to environmental damage. The paper's authors rightly note in their executive summary that architects of the treaty establishing the ICC did not prioritize environmental crimes, even though such crimes are becoming more generally understood. “Crimes against the environment were given very little attention in the negotiations which led to the ICC Statute,” they note.³³

The study's authors describe the requirements that would bring a case of environmental crime to the ICC as “stringent.” They also note “consensus that more enforcement is needed in most environmental treaties, conventions and protocols in order to make them efficient.”³⁴ The existence of this detailed analysis shows that the Pentagon was concerned enough with the status of international laws governing environmental crime and the military that it studied the reach of those laws. But six months before the U.S. intervention in Afghanistan, the paper dismissed the

31 *Ibid*, 6

32 Andrew Morton, (Transcript of remarks at announcement of *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, Woodrow Wilson International Center for Scholars, Washington, D.C., March 24 2009)

33 Joe Sills, et al. “Environmental Crimes in Military Actions and the International Criminal Court (ICC) — United Nations Perspectives,” (Atlanta: Army Environmental Policy Institute), 1

34 *Ibid*, 2

likelihood that environmental war crimes cases might be brought to the ICC.³⁵

Of course, the authors of this study believe environmental war crimes prosecution was unlikely because of a perceived increased awareness of environmental concerns. Yes, a chapter in the U.S. Army's June 2000 Field Manual spells out how the Army and the U.S. Marine Corps should work to protect the environment while carrying out their missions. But it also presents environmental damage as intrinsic to warfare, the successful practice of which is the military's primary mission.³⁶ This suggests that the army will continue to reserve definition of the military advantage it might hope to gain through actions damaging to the environment. This doesn't leave one confident in the Army's ability to protect the environment, or at least to be proactive about it. Again, in this case, environmental protections codified in the manual are tenuous, at best.

Late in her examination of the extent to which international law can assist environmental protection in Iraq, Alice Louise Bunker offers a unique interpretation of the issue. Addressing the phenomenon of “victor's justice”³⁷ and the United States' resistance to contemporary elements of international law, Bunker argues that the U.S. may nonetheless find itself complying to certain treaties because it is subject to a “coalition factor.” Two allies of the United States in the invasion of Iraq — Australia and the United Kingdom — had reason to comply with the Convention on Biological Diversity, The United Nations Convention on the Law of the Sea and Protocol I to the Geneva Conventions.³⁸ Bunker's point is that the U.S. was interested in the legitimacy offered by

35 *Ibid*, 31

36 “Environmental Considerations in Military Operations,” *Field Manual No. 3-100.4* (Headquarters, Department of the Army, 2000) Changed May 11 2001. Accessed via <http://www.globalsecurity.org/military/library/policy/army/fm/3-100-4/index.html>. 19 April 2009.

37 Falk, Richard, “Evaluating the adequacy of existing international law standards,” *The Environmental Consequences of War*, ed. Austin and Bruch, 148

38 Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Geneva, 8 June 1977), entered into force 7 December 1978 (Protocol I)

a broader coalition in the Iraqi intervention, even though it meant it would need to comply with the above treaties as a result of its allies' acceptance of jurisdiction from the International Court of Justice and ratification of the International Criminal Court. Bunker argues that political pressure on states exerted by other states and from within further commits states to adhere to international law. The court of public opinion and further pressure from international organizations may not be binding, she acknowledges, but she posits that perceptions of injustice or immoral action can be enough to prevent offenses.³⁹

Such conclusions fail on a number of grounds. First of all, her own presentation of international law relating to the environment and conflict presented in the preceding thirteen pages seems to lead to a different conclusion, that which Bunker addresses at the very end of her paper when she notes:

Although protection of the environment is a sensitive and difficult issue in the context of armed conflict, it must be addressed or there is a risk that peacetime protection could become redundant. An active rather than passive approach is necessary in order to create the climate of opinion required to protect our environment from the scourge of war.⁴⁰

If an active approach is necessary, why trust in public opinion or other non-binding pressures to change state behavior?

Moreover, the conclusion fails on the reality of the circumstances surrounding the U.S. invasion of Iraq. There are numerous cases of environmental negligence and damage resulting from the U.S. presence in Iraq. Serious questions also exist about whether the invasion was legitimate under UN Security resolution 1441. Bunker's argument also ignores the existence of repeated and numerous protests against an invasion within the United States in the months before the operation was launched, as well as additional protests outside of the country. Finally, she

39 Alice Louise Bunker, "Protection of the environment during armed conflict: One gulf, two wars," *Review of European Community & International Environmental Law* 13 issue 2 (2004), 213.

40 *Ibid*

ignores the fact that numerous, detailed warnings about the potential environmental consequences of the invasion were made. These warnings didn't only detail the damage Saddam Hussein might threaten had he repeated the ecosystem destruction that took place in the 1991 Gulf War, but also the damage that allied bombing and a ground occupation might pose. They included a letter signed by environmental lawyers, scholars and environmentalists from 51 countries in which signers specifically detailed international laws requiring the protection of Iraq's natural environmental and cultural heritage.⁴¹ Together, this evidence suggests that fervent and widespread expressions of attitudes specifically addressing the moral and environmental consequences of an invasion of Iraq did not prevent offenses from being committed.

In fact, a report three weeks before the war started that the Bush Administration asked Congress to exempt the Pentagon from numerous environmental laws⁴² suggests that the administration intended to lessen adherence to environmental laws. Coupled with Robinson's argument that Bush was using the "War on Terror" to justify rolling back environmental protections, we see that there clearly was not a "Coalition Factor" at play. Interestingly, the consequences of this decision continue to play out in venues far removed from the battlefields in both Afghanistan and Iraq, most notably with the recent example of the U.S. Navy's successful defense in the U.S. Supreme Court of an exemption allowing it to conduct sonar testing harmful to marine life⁴³ (exemptions originally sought as part of the pre-war rollback). This case suggests indirect consequences of the military actions in Afghanistan and Iraq were real. It also shows how there is at least some role for domestic courts in deciding on alleged military strains on the

41 Eric Pianin, "Environmental Damages a concern; Ex

environment.

Bunker's conclusion may be optimistic, but, finally, it's worth noting that she doesn't offer adequate data comparing the environmental impact of the current Iraqi conflict with the 1991 Gulf War. Citing the UNEP's *Desk Study of the Environment in Iraq* — prepared before the invasion — is a start, and the ability for a more thorough inventory of environmental damage would have still been difficult when Bunker wrote in 2004. Nonetheless, as was already briefly mentioned, it could be argued that the very difficulty to do a proper accounting of environmental conditions in post-invasion Iraq exacerbated any remediation efforts that were necessary. It could also be argued that the widely-reported instances of looting across the country, including of important environmental infrastructure signifies that the coalition was not making efforts to protect Iraq's environment.

During his keynote at the Georgetown Law Symposium Haavisto, the UNEP official, mentioned looting as the most damaging environmental impact of the Coalition invasion of Iraq.⁴⁴ In addition to ruined infrastructure causing water pollution and other problems, looting raised dramatic environmental dangers at the Tuwaitha nuclear facility⁴⁵ south of Baghdad and at a chemical facility in Dora.⁴⁶

Indeed, the case of looting at the Tuwaitha nuclear facility south of Baghdad is a significant example of how the United States was not properly prepared for environmental consequences of its invasion. The problems at Tuwaitha exemplify how poor preparation by the

44 Haavisto, 583

45 Richard Stone, "Iraq Embarks on Demolition of Saddam-Era Nuclear Labs." *Science* 321. no. 5886 (2008),188

46 Chris Shumway, "Most Costs of Iraq War Remain Immeasurable," *The New Standard*, June 7 2005, Accessed 24 Apr. 2009 at http://earthhopenetwork.net/Most_Costs_of_Iraq_War_Remain_Immeasurable.htm

U.S. military may have exacerbated environmental concerns in Iraq, even if the roots of those concerns lie in actions taken by Saddam Hussein's regime. As cited in the *Bulletin of the Atomic Scientists*, a Sept. 2005 Government Accountability Office report detailed how the Iraq War may⁴⁷ have increased the risk of a “dirty bomb” radiological attack while putting Iraq at risk for radioactive contamination.

“The underlying cause of this chaos was the failure of the Pentagon to adequately consult and coordinate with other U.S. agencies,” the article's author, Andrew Grotto wrote. He criticizes the GAO report for not adequately exploring why the Pentagon wasn't prepared to secure radiological material after the invasion:

The GAO's description of Defense's slippage on potential radiological threats emanating from Iraq—its failure to anticipate looting, to provide troops with the right equipment, and to draw on the expertise of other agencies—would be an appropriate picture of Defense's planning for the Iraq invasion writ large. What specific bureaucratic and political forces caused Defense to determine that Iraq's radiological sources posed a threat, but then wait so long to act? It's hard to believe that there's not more to this story than interagency bickering.⁴⁸

Part of understanding the environmental situation in Iraq and Afghanistan is understanding the way environmental damage is discussed. Numerous interpretations of the environmental consequences of both wars exist in media counts, academic literature, and analyses from governments and NGOs. Using such interpretations, culpability for ecological damage could equally be shared by numerous participants in the conflicts.

So the better question to ask might be who is impacted most by ecological consequences. Are the people of Iraq and Afghanistan hardest hit? Do populations outside of each country have legitimate claims of transnational harm, either from the U.S., its allies, the governments of Iraq and Afghanistan, or non-state actors such as Al Qaeda? Are these actors even represented in the

47 Andrew J. Grotto, “Iraq's hot properties,” *Bulletin of the Atomic Scientist* Jan/Feb 2006., 62.

48 *Ibid.*

discourse of environmental consequences of military action? Finally, is there too much of an anthropocentric focus on damages to populations, societies and states? Could a case legitimately make claims regarding the rights of non-human species of animals and plants?

Few address this last question. Clearly, it is one of the more difficult to address. Not only can we not communicate with nonhuman species — a topic many readers might dismiss as ludicrous — even if we could, where would they be placed when it comes to discussing their rights? Questions of citizenship and rights are already challenging enough for humans. Must we be limited to consistently breaking down discussions of our responsibilities to the environment to its measurable value to humans? Much of this paper, let alone outside scholarship, approaches environmental degradation by examining it in light of human impacts. The examples given of historic environmental destruction at the outset of this discussion specifically focused on the transgenerational harm caused or potentially caused by environmental destruction. This is unlikely to change, as Christopher Stone notes when he points out that a truly revolutionary environmental treat would “at not trivial cost, [shelter] an endangered species of plant or insect of no prospective benefit to humankind, now or in the future ... to safeguard a species even when the cost of doing so exceeds ... some use value, presently unknown, in the future.”⁴⁹

It's clear that the military prioritizes immediate human impacts when responding to environmental concerns. In theater, as late as April 2007 it continued to treat its environmental responsibilities differently than it would its obligations in the United States.⁵⁰ When political battles between Congress and the White House again again left uncertainty in funding, the Army decided to suspend environmental cleanup programs, except those that

49 Christopher D. Stone, “The Environment in Wartime: An Overview,” in *The Environmental Consequences of War*, ed. Austin and Bruch, 18

50

addressed specific safety or health concerns, or the Army's obligation to support military families.⁵¹ Such news lends credence to arguments that military planners in the United States do not view environmental considerations on the same plane as other protections, leaving long-term health and future generations potentially at risk.

Additionally, the fact that the Army seems to operate with a different set of principles in so-called “contingency” situations than support missions suggests that rights are not being considered equitably. As the above case notes, the army delayed cleanups in active bases but not at bases being closed or realigned. Such a decision leaves populations around active bases, as well as soldiers stationed at them, at greater risk to environmental impacts, except those that can be explicitly connected to immediate health and safety concerns.⁵²

Short of the previously mentioned looting or poor infrastructure development cases used for illustrative purposes, this paper has not referred to descriptions of specific environmental conditions in Iraq and Afghanistan. As I have noted previously, the *Iraq Desk Report* and the UNEP's post-conflict assessments detail the challenges facing each country's natural environment, especially as regards overall health.

Instead, this paper has addressed the more theoretical and legal questions bogging down discussions of enforcing environmental norms. It has described the history of environmental degradation in conflict and noted that significant questions exist about the culpability for environmental degradation resulting from the U.S.-led and NATO (in Afghanistan) invasions and occupations of these countries. These questions arise from suggestions that there are or have been multiple players involved in the fate of these countries, and it is difficult to confine

51 “Fight Over Iraq War Funding Bill Could Delay Some Cleanups, Army Says,” *Environmental Policy Alert* 24 No. 10, May 9, 2007.

52 *Ibid*

responsibility for protecting the ecology and climate of these regions to individual parties, specific international organizations, or specific governments.

Despite these challenges, as I have shown, prominent legal scholars have tackled the issue of international enforcement of environmental norms. Clearly, there is a role for international law in efforts to combat environmental harm. Whether or not such law is intertwined with discussions of international security or if it takes a more untraditional, revolutionary approach remains to be seen and will depend upon the willingness of international institutions to continue to study the relationship between conflict and the environment, and upon states to press for and agree to binding treaties governing both the measurable and immeasurable impacts of war on the natural world.