

From Norm to Practice: Comparative Case Studies on International Mechanisms for Wartime Environmental Restitution

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Abstract The objective of this study was to understand different international mechanisms that were established to help mitigate wartime environmental damage. Two questions were addressed: 1) does the role of the defendant as the “aggressor” or “intervening force” influence the legal standing of a claimant or defendant when determining liability for post-conflict environmental cleanup, and 2) which remediation method is more successful: a direct payout system to individual claimants or a mediated payout to a central clean-up agency? This study focuses on two case studies: 1) the United Nations Compensation Commission (UNCC) as a direct payout system for Iraqi oil spills in Kuwait during the Gulf War from 1990 to 1991 and 2) the United Nations Environmental Programme (UNEP) Clean-Up Programme as a mediated remediation agency after North Atlantic Treaty Organization (NATO) bombings of industrial sites during Kosovo War in 1999. Iraq’s role as an “invader” of Kuwait in the Gulf War resulted in the Security Council’s decision to hold Iraq liable for environmental compensation based on customary international laws. Conversely, NATO was framed as an “intervening force” and therefore was not liable for environmental compensation under international law. The resulting restitution depended on voluntary clean-up efforts lead by the United Nations Environmental Programme (UNEP) Clean-Up Programme in Kosovo. Both the UNCC and the UNEP Kosovo Program faced significant operational challenges from timeliness to funding, to assessment for both baseline data and restoration efforts.

Introduction

The environment has been both used and victimized by war since ancient times. In 1346 the Tartars launched an early form of biological warfare by catapulting plagued carcasses on the city of Kaffa, which may have subsequently helped spread the Black Plague in Europe (Hersh 1968). The Allied troops also performed “dam-busting” campaigns during World War II by demolishing two major dams in the Ruhr Valley that greatly damaged the surrounding natural ecosystems (Hourcle 2001). A more recent and infamous atrocity occurred in the Vietnam War, during which U.S. military sprayed 21 million gallons of Agent Orange and other defoliants between 1962 and 1971 (Toohey 2005). The defoliants destroyed over six million acres of pristine forest, and exposed Vietnamese veterans and their children to severe, long-term health problems (Toohey 2005).

Despite serious health and ecological consequences of using the environment as a military weapon, few international laws addressed these issues directly until after the Vietnam War. Two perspectives on environmental damage are included in international law today. The first perspective pertains to damage to natural resources that are privately or commonly owned, including civilian buildings and property. The second is “pure ecological” damage, which impacts natural resources either not appropriated to the individual (unowned) or have an ecological value that exceeds personal interests of the owner (Brans 2001).

Before the 1970s, war laws that addressed environmental damage emphasized the human environment in terms of civilian or common property, and did not include language that directly expressed concern for the natural environment. The Laws of War, which were established in the Hague Convention in 1907, include four customary principles¹ that nations traditionally used and still use to justify their rationale for armed conflict. These principles of necessity, proportionality, discrimination, and humanity loosely set the parameters so that

¹ “A rule is customary if it reflects state practice and when there exists a conviction in the international community that such practice is required as a matter of law. While treaties only bind those States which have ratified them, customary law norms are binding on all States.” (ICRC 2005).

any attack should justify necessity in gaining military advantage, should avoid excessive damage especially on civilians and civilian property (Falk 1992). The later 1949 Geneva Convention contains similar provisions that forbid occupying forces from destroying civilian property, but these rules also do not directly provide environmental protection for pure ecological resources.

Only after witnessing grave ecological devastation from the Vietnam War and a nuclear crisis threat from the Cold War did the international community convene to strengthen environmental war law. In the aftermath of the Vietnam War, a more comprehensive definition of the environment as both owned and common resources was established in international law. For example, 1977 witnessed the passage of two landmark treaties: Protocol I to the Geneva Conventions (Protocol I)² and the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD)³. Protocol I was established as a direct international response to the extreme ecological damage caused by spraying Agent Orange, and was the first formal international war document that explicitly includes the term “environment.” ENMOD is a joint United States and Soviet Union initiative to limit geophysical warfare, which primarily addresses the use of the environment as a military weapon (Hulme 1996). Both Protocol I and ENMOD contain clauses that prohibit the employment of methods that would cause “widespread, “long-term,” and “severe damage” to the natural environment.”⁴

While the international legal framework on war and the environment has expanded over the past fifty years, these treaties and customary rules have been arbitrarily and inconsistently enforced (Schmitt 2000; Falk 2000). Many scholars attribute the lack of implementation to the piecemeal and vague construct of environmental law as it pertains to war, which make it

² Protocol Additional to the Geneva Conventions and Relating to the Protection of Victims of International Armed Conflict, Aug. 12, 1949, 1125 U.N.T.S. 3, 26. (Protocol I).

³ Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, Dec. 10, 1976, 31 U.S.T.S. 333. (ENMOD).

⁴ Protocol I, *supra* note 2 Articles 35(3) and 55. Also see ENMOD, *supra* note 4, Article 1.

difficult for practical application (McManus 2006; Owen 1998; Sharp 1999). For example, while ENMOD defines the terms “widespread” as an area of several hundred square kilometers and “long-lasting” as a period of months, it does not state whether these standards refer to an individual act or to a group of acts (Schmitt 2000). In addition to challenges in language and interpretation, three fundamental issues further hinder the implementation of international war law: priority, funding, and force (Hourcle 2001). Despite general recognition of the need for environmental protection, environmental concerns are seldom prioritized among humanitarian atrocities that occur during wartime (Bruch and Austin 2000). It is also challenging to hold a nation economically liable for the environmental degradation it inflicts upon another nation, since the aggressor often lacks the will and/or capacity to provide compensation. Even if there is potential for economic liability, prosecutorial restrictions embedded in all international statutes pose a significant barrier to the enforcement of environmental war laws on sovereign states who do not ratify them. For instance, Vietnamese victims of Agent Orange failed to obtain compensation from U.S. producers under the 1925 Biological Weapons Convention, since the U.S. did not formally ratify it until after the Vietnam War.⁵

Responding to the difficulty of making nations accountable for wartime environmental destruction, many legal scholars have explored the possibility of prosecuting selected individuals instead. This approach would establish environmental degradation as a crime against humanity in the Rome Statute⁶, which guides actions of the new International Criminal Court (ICC) (Sharp 1999; Weinstein 2005; Lopez 2007). However, the ICC has not made any charges under such crimes as of this writing in April, 2008. The United

⁵ “Agent Orange” Product Liability Litigation. Memorandum, Order and Judgment. 10 March, 2005.

⁶ Article 8 of the Rome Statute prohibits an individual to “intentionally launching an attack in the knowledge that such attack will cause . . . widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.” July 17, 1998, U.N. Doc. A/CONF.183/9, 37 I.L.M. 999, 1006. (17 July, 1998), available at <http://www.un.org/law/icc/statute/romefra.htm> (last visited 8 Oct. 2007).

Nations panel over Serious Criminal Offences in East Timor⁷ is the only one in which individuals could be convicted for environmental destruction as a unique crime, but there have been no prosecutions yet either (Weinstein 2005).

Problem and Approach Given a myriad of legal restrictions in international war law and its limited success, under what circumstances and methods would international environmental law be applied in order to seek environmental restitution? Since there are only a few international cases regarding this topic, many scholars have studied the efficacy and the inadequacies of each case in its failure or success (Falk 1992; Hulme 1997; Owen 1998; Falk 2000; Schmitt 2000;). But the issue of how prescriptive laws such as Protocol I and ENMOD may be implemented universally, especially against the winner, is almost always ignored (Bruch and Austin 2000). In an attempt to fulfill this literature gap, I ask two fundamental questions that have not been thoroughly discussed in literature. First, does the role of the defendant as the “aggressor” or “intervening forces” influence the legality of a claimant or defendant when determining liability? Second, which remediation method is more successful: a direct payout system to individual claimants or a mediated payout to a clean-up agency? Answering these questions will provide a better understanding of how best to navigate in the existing legal framework, in order to hold a party legally accountable for wartime environmental damage. Additionally, answering these questions will also help gain knowledge on an optimal international mechanism for seeking effective post-conflict environmental remediation.

I have identified two cases for this study: 1) the Iraqi oil spill and oil fires in Kuwait, and 2) the NATO bombardment of military industrial plants in the 1999 Kosovo War. These two cases were chosen because they are both international in nature, and have well

⁷ Agreement On the Establishment of Panels with Exclusive Jurisdiction over Serious Criminal Offenses in East Timor, U.N. Transitional Administration in East Timor, art. 6.1(b)(iv), U.N. Doc. UNTAET/REG/2000/15 (2000) (pursuant to U.N. SCOR Res. 1272), available at <http://www.un.org/peace/etimor/untaetR/Reg0015E.pdf> (last visited 8 Oct. 2007).

documented damage on the natural ecosystem. They both have also evoked and attempted to use international law in seeking environmental compensation with divergent results.

Purpose The purpose of this thesis is to research legal as well as operational strengths and weaknesses of different international mechanisms that have been established to help restore and mitigate wartime environmental damage. Legality for each case was evaluated in the context of holding the attacking nation(s) legally responsible for using international law. Legality was also evaluated in the context of the legal justification for establishing restitution mechanisms, namely the UNCC and the UNEP Clean-Up Programme in Kosovo (The Clean-up Programme). Success or efficacy of each restitution mechanism was based on timeliness of compensation and cleanup, relative amount restored from wartime environmental damage, and the degree of inter-agency cooperation in bringing long-term remediation. Specifically, the first goal is to describe the Iraq and Kosovo cases, and evaluate their successes and limitations in using international law to gain restitution for environmental harm. The second goal is to compare the relative success of the UNCC as a direct liability system for the Iraq oil spills to the UNEP-mediated international cleanup that resolved immediate environmental threats in Kosovo.

Hypotheses While international law provides universal accountability for any nation that damages the environment, formal liability is only applied to the “losers” of war regardless of who performed the damage. Therefore the role a nation is perceived to play in war is also determinant of decisions for liability. In order to answer my questions, I will be testing the following hypotheses:

- 1) NATO countries escaped liability for environmental damages in Kosovo by framing their roles as “intervening forces for humanitarian concern.” Conversely, Iraq is universally framed as the aggressor or “invading force” as it initiated attack on Kuwait, and therefore is obligated to pay compensation to Kuwait.
- 2) My second hypothesis is that although a direct payout system in the Iraq case provides

sufficient monetary compensation to environmental claims, it is less successful in restoring the environment compared to international clean up efforts after in Kosovo.

Methods

In order to conduct my research, I gained background knowledge of the environmental issues in Kuwait and Kosovo through extensive research of UNEP environmental assessment reports, international law documents, book and journal publishing, literary reviews, as well as other related cases. A qualitative, or descriptive analysis for the two cases was formed that revealed the actors and power dynamics involved in the evaluation for environmental damage, the differences in legal and institutional approach via international law for restitution, and the resulting restoration methods (through local and international instruments, a compensation fund, or both) that took place. Both primary and secondary sources regarding customary and conventional international environmental law, international law on warfare, as well as international law in general. Examples of the source documents I studied were UNEP environmental assessment reports, United Nations Security Council resolutions, official publications by the UNCC, as well as treaty texts of Protocol I, ENMOD, and Hague Conventions. Reports by other international, regional and private environmental assessment teams regarding environmental damage and restitution done in the two cases have also been reviewed. The secondary sources I studied included books and scholarly articles that evaluated the legality and restitution efficacy regarding the cases as well as respective restitution mechanisms.

Although literature reviews are critical for setting up a structural understanding of the study at hand, they may not capture the human factor, or the politics, in international law that shaped the two restitution mechanisms. In addition to researching source documents and relevant secondary literature, I also attended an UNCC conference, where I gained valuable knowledge about the institution's operations as well as established contact for further

conversations. I also contacted and interviewed several professors and professionals who were affiliated with the UNCC or the Clean-Up Programme. By speaking with these experts I gained more insight to the political reasons behind the establishment of these restitution mechanisms, as well as the normative factors that affected the way they were conducted. Interviews were conducted via open-ended questions, in order to minimize over-simplified or biased answers. Please see the attached interview questions (Attachment A). Due to the political sensitivity of the two cases, the content of the interviews were conducted and evaluated in order to ensure maximum privacy of the interviewees. Therefore relevant information or quotes extracted from the experts did not directly cite the name of the expert(s).

Results

My first hypothesis that Iraq's role as an "invader" or "aggressor" of Kuwait in the 1991 Gulf War resulted in the Security Council's decision to hold Iraq liable for environmental compensation was supported. This liability was based on customary international laws on war, which once violated led to payment of reparations such as environmental compensation. Resolutions 687 and 692 of the Security Council further solidified Iraq's obligation to pay reparations, and thus established the UNCC. Conversely, while NATO also breached the same customary laws in attacking Kosovo, it escaped liability for environmental damages in Kosovo because it was internationally recognized as an "intervening force." However, my second hypothesis that the UNEP Kosovo Clean-Up Programme is more effective compared to the UNCC in their efforts for environmental restitution was not confirmed. Although the UNCC's direct payout system awarded a large monetary compensation to environmental claims, it was difficult to access whether it was more successful in restoring the environment compared to UNEP-led clean up efforts after in Kosovo. Instead, evaluation of the success of the UNCC versus the Clean-Up Programme based on timeliness, amount restored, and interagency cooperation did not clearly indicate the relative efficacy of the two systems.

Specifically, although money was distributed over a much greater timeframe in UNCC than in the UNEP Kosovo Case, neither the UNCC claims nor the UNEP Kosovo Program received the amount of compensation sought for. Additionally, both the UNCC and the UNEP Kosovo Program faced significant challenges in funding environmental remediation efforts, as well as monitoring and assessing both baseline damage as well as how much restoration was done.

The UNCC The Invasion of Kuwait (the Invasion) occurred over a seven-month period from 1990 to 1991, during which Iraq occupied and severely damaged public and private property as well as the natural environment. Environmental damage resulted mainly from the destruction of more than 700 oil wells in Kuwait, as well as the discharge of approximately 6-8 million barrels of oil from Kuwait and Iraq into the Persian Gulf (Price *et al.* 1994). The hostilities also resulted in damage to ecosystems, including damages to plants, wildlife, and soil caused by the military action by both Kuwait and Iraq (Omar *et al.* 2001; Price *et al.* 1994). Environmental damages were widespread and affected not only Kuwait and Iraq, but also nearby countries such as Iran, Saudi Arabia, and Turkey (Gomez 2001).

Establishing Legal Liability Following the Invasion, the United Nations Security Council (the Security Council) held Iraq “liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources...as a result of its unlawful invasion of Kuwait” in Resolution 687.⁸ By explicitly condemning Iraq in its attack on Kuwait, the Security Council established Iraq as the aggressor who is in violation of *jus ad bellum*, or law relating to the use of force (Low and Hodgkinson 2005). The Security Council reaffirmed its position under Resolution 692 (1991) by asserting that Iraq pay for

⁸ Paragraph 16 of Resolution 687 states: “Iraq, without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, which will be addressed through the normal mechanisms, is liable under international law for any direct loss, damage, including environmental damage and the depletion of natural resources, or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait.” United Nations Security Council, Resolution 687. Adopted by the Security Council at its 2981st meeting, on 26 March 1991.

property and resource damage during the invasion of Kuwait via its oil revenues.⁹ Resolution 692 also established the United Nations Compensation Commission (UNCC) to assess and award compensation to individual claims, which were submitted by governments and international organizations on behalf of nationals, corporations, and/or themselves. Specifically, Category “F4” consisted of governmental claims for environmental damage and the depletion of natural resources in the Persian Gulf region (F4 Claims) (UNCC 2007).

The Commission conducted its work by first establishing causation between claims to environmental damages caused by either party (Iraq or Kuwait) during the Gulf War, in order to hold Iraq accountable for compensation. The Commission, its “Criteria for Claims”¹⁰, then ascertains the type of environmental claim submitted, which includes losses or expenses resulting from: a) abatement and prevention of environmental damage, including expenses directly relating to fighting oil fires and stemming the flow of oil coastal and international waters; b) reasonable measures already taken to clean and restores the environment or future measures which can be documented as reasonably necessary to clean and restore the environment; c) reasonable monitoring and assessment of the environmental damage for the purposes of evaluating and abating the harm and restoring the environment; d) reasonable monitoring of public health and performing medical screenings for the purpose of investigation and combating increased health risks as a result of the environmental damage; and e) depletion of or damage to natural resources. A monetary award is delegated after the establishment of causation and assessment of the claim.

Although the Security Council established Resolution 687 in accordance with international law in general, its decision does not refer to a specific law(s) in establishing the legality of the UNCC. Many experts have debated the issue of the legality of the UNCC using both customary and conventional international laws that have either a direct or indirect

⁹ S.C. Res. 692, U.N. SCOR, 46th Sess., 2987th mtg., U.N. Doc. S/RES/692 (1991), reprinted in 30 I.L.M. 864 (1991). Resolution 692 was adopted May 20, 1991, 14-0, with Cuba abstaining.

¹⁰ Criteria for Additional Categories of Claims, S/AC.26/1991/7 (4 December 1991), Decision 7, paragraph 35.

relevance to wartime environmental damage. International laws that contain language that directly address wartime environmental damage are Protocol I to the Geneva Conventions (Protocol I) and The Convention on the Prohibition of Military or Other Hostile Use of Environmental Modification Techniques (ENMOD). However, Iraq cannot be held responsible under these laws: neither Protocol I nor ENMOD has been accepted as customary law¹¹, and have not been ratified by Iraq. Instead, there is a general consensus that Iraq's obligation to pay reparations as an invader is most clearly justified under established customary international law, specifically Article 23 of the Hague Convention and Article 53 of the Geneva IV Convention. Article 23 of the Hague Convention "prohibits the destruction of enemy property in wartime," and similarly Article 53 of the Geneva IV Convention restricted the destruction of an occupied place by occupying forces (Rex 1991). Iraq's violation of its legal obligations under Resolution 687, based on customary law, therefore resulted in compensation or reparation, or its liability to pay Kuwait and other countries for environmental damage occurred.

Efficacy The Security Council decided that the 30% of the proceeds from Iraqi oil sales would be allocated to go to the UNCC to pay damage claimants under Resolution 705¹². The UNCC set a claim-filing window for A to D claims from July 1992 to December 1993, during this time 2.3 million claims were filed. Although claims criteria were established in 1991, money was not distributed until ten years later in five installments, between June 2001 and June 2005 (UNCC 2007). According to a UNCC Environmental Commissioner, the UNCC was originally set up to process individual claims before government claims. Since the environmental claims were all submitted by governments, they were processed only after

¹¹ See note 1 for a general definition of customary law.

¹² See S.C. Res. 705, U.N. SCOR, 46th Sess., 3004th mtg., PP 1-2, U.N. Doc. S/RES/705 (1991), reprinted in 30 I.L.M. 1703, 1715 (1991). Resolution 705 was adopted August 15, 1991.

individual claims had been assessed and awarded compensation¹³. A total compensation of \$5.26 billion was rewarded to the F4 claimants, with \$1.13 billion (21.5% of awarded) paid to date. The UNCC has completed all environmental claims processes as of 2005, and payments are still ongoing (UNCC 2007). While numerous reports had assessed and monitored the environmental damages done, no comprehensive data on amount restored thus far from wartime damage was found. The UNCC established a system that records the usage of the claims awarded, but these findings have not been made public as of this writing.

In terms of inter-agency cooperation, the UNCC collaborated with the UNEP for the monitoring and assessment of the first installments. The UNCC also hired private and public consultants to perform third-party evaluation of the evidence for environmental damage submitted under the F4 claims. However, the UNCC was established to process damage claims and distribute payments, not to collaborate with other institutional cleanup efforts.

UNEP Kosovo Clean-Up Program The 1999 Kosovo War occurred between the former Federal Republic of Yugoslavia (FRY) (now Serbia and Montenegro) and the North Atlantic Treaty Organization states (NATO), during which NATO issued systematic bombing campaigns that destroyed more than 80 oil refineries and industrial facilities in Kosovo. The campaign led to a tremendous release of poisonous gases and chemicals that contaminated regional air, soil, as well as the Danube River and the Black Sea (UNEP 1999).

Establishing Legal Liability As a result of the bombardments, Yugoslavia filed a case against NATO before the International Court of Justice (ICJ), using the environmental provisions in Protocol I. However, the ICJ dismissed Protocol I due to the uncertain legal standings of the “widespread” and “severe” clauses. In addition, the ICJ asserted that

¹³ The set up of the UNCC claims process was influenced by the Iran-U.S. Claims Tribunal (IUCT), which was a private bi-lateral commission that charged Iran with private claims post-Iranian revolution in 1979-1980. According to the interviewed commissioner, the IUCT had processed government claims prior to individual claims, which left many individual claims unresolved. Having learned from the IUCT, the UNCC reversed the order of claims processed in efforts to compensate individuals first. Also see Browser 1992 and Owen 1998.

Yugoslavia was not a party to it when hostilities occurred and therefore was not obligated to try NATO states (Bruch and Austin 2000). Since Yugoslavia did not have legal standing before the ICJ, it was not able to hold NATO liable for environmental destruction. The resulting restitution depended on voluntary international clean-up efforts through the United Nations Environmental Programme (UNEP) Clean-Up Programme in Kosovo (The Clean-Up Programme). Specifically, in its report on *The Assessment and Cleanup of Serbia and Montenegro*, the UNEP states: “It was not UNEP’s original intention to itself undertake a major programme of remedial actions...however, UNEP was strongly urged to fulfill when it became clear that there was no obvious alternative coordinating body that would be broadly acceptable to all parties.” (UNEP 2004). Therefore the UNEP was created under an ad hoc situation when no other international assistance programmes and other enabling legal frameworks were available.

Efficacy In its Feasibility Study, UNEP identified four sites, or “hot spots,” that required urgent cleanup of environmental damage that would prevent or minimize threat to human health (Feasibility Study 2001). UNEP recommended a sum of US\$20 million in order to complete all twenty-seven projects proposed under the four sites (Feasibility Study 2001). However, a shortage of funding from the donor countries reduced the recommended amount to US\$12.5 million, and resulted in narrowing the selection to sixteen projects were granted immediate attention (UNEP 2004). Thus only 40.5% of the projects planned actually occurred. Due to the shortage of funding was due to a lack of commitment from donor countries. From August 2000 through 2004, UNEP implemented sixteen projects that assessed and mediated environmental clean up within the four “hot spots,” namely in Pancevo, Novi Sad, Kragujevac, and Bor. (UNEP 2004). Each hot spot contained various cleanup goals, such as remediation for groundwater, PCB, and soil contamination. While the amount of contaminants removed was documented in many projects, it was difficult to attribute the cause of contamination to the actual bombing of the site.

The Clean-Up Program was conducted primarily by UNEP in coordination with the United Nations Office for Project Services (UNOPS). The Clean-Up Program also collaborated with other international agencies such as the United Nations Development Program (UNDP), the Swiss Agency for Development and Cooperation (SDC), as well as national and local stakeholders in Serbia and Montenegro. Of the 400 contracts granted for environmental remediation projects, 300 were granted to local companies and institutions that accounted for 50% of the total value for the contracts (UNEP 2004).

Discussion

The UNCC set precedent in the realm of wartime restitution, because for the first time international law recognized that wartime environmental damage is compensable. However, Iraq's liability for environmental restitution was due to its unlawful invasion and occupation of Kuwait, and was not applied universally to other conflicts such as the Kosovo case. NATO's bombardment of Kosovo was internationally viewed as an "intervention" that did not result in occupation, and therefore was not subject to the same legal liability.

In comparing the timeliness and inter-agency cooperation of the two cases, The UNEP Kosovo Programme performed clean up at designated sites in a much more timely fashion than did the UNCC. This is due to different priorities in institutional setup between the two programs. The UNEP Kosovo Programme was designed as an post-conflict clean-up mechanism that depended on elaborate partnerships among government authorities, as well as public and private remediation teams. On the other hand, the role of the UNCC as a quasi-judiciary retribution system restricted its collaboration with others.

While the UNCC the UNEP both publicized some documents relating to environmental restitution, neither divulged comprehensive environmental data on the amount restored. This challenge in obtaining quantitative data can be attributed to two reasons. First, little or no baseline environmental assessment has been established prior to either conflict, which

made post-conflict assessment extremely difficult in attributing damage to wartime causes. This challenge was particularly great for the UNCC in its processing environmental claims, which had to first establish causation between environmental damages and the Gulf War, in order to confirm Iraq's responsibility for compensation. Second, details of assessment are proprietary, and have not been made available for public research.

Armed conflict brings inevitable environmental damage. Even though existing laws are inadequate to minimize damage, environmental restitution must be performed as rapidly and efficiently as possible. Throughout my research, I have learned that the most crucial elements to any kind of remediation are baseline data and funding. In order to obtain baseline information, states should devote money to baseline assessment of our natural ecosystems, especially since our environment is rapidly changing under the effects of global warming. Lastly, it is critical to think about how to improving existing environment restitution institutions so that they are legally binding to all states. This view of universal application of international law is shared by many interviewees as well as literature scholars (Lopez 2005; Bruch and Austin 2000). Legal liability for wartime damage has largely been decided through elites, but as we learn more about the devastating effects of war on the environment, more demand for accountability can also come from populations like civil society, as well as scientific and business communities. Perhaps an increased national cooperation and funding for a voluntary cleanup system such as the UNEP Post-Conflict Assessment Units is a first step toward environmental protection in war.

Future Research Quantitative data regarding the distribution of money to individual claims in the UNCC and project sites in the UNEP Clean-Up Program have yet been collected. Future research will include obtaining relevant quantitative data, and conducting more informal as well as formal interviews for wider perspectives. Future research is also needed for establishing an optimal international remediation agency, for example by assessing the efficacy of the UNEP Post-Conflict Team in various study areas.

Acknowledgments

Many thanks to my thesis advisor, Kate O'Neill, professor of Environmental Sciences, Policy and Management department at UC Berkeley, Cymie Payne of Boalt Law School, Julia Klee, Peter Sand, and Roeland Kortas. Special thanks to Shannon May and Gabrielle Wong-Parodi of Environmental Sciences 196.

References

- Akehurst, Michael Barton. *An Introduction to Modern International Law*. New York: Atherton Press. 1997.
- Baker, Betsy. "Legal Protections for the Environment in Times of Armed Conflict." *Va. J' Int'l L.* P.351 (1993).
- Biermann, Frank. "The Case for a World Environmental Organization." *Environment*. Vol. 42:9 P.22 (Nov. 2002).
- Brans, Edward H.P. Liability for Damage to Public Natural Resources: Standing, Damage and Damage Assessment. *International Environmental Law and Policy Series Vol. 61*. Kluwer Law International. 2001.
- Bruch, Carl E. and Austin, Jay E. "The Kosovo Conflict: A Case Study of Unresolved Issues." *The Environmental Consequences of War: Legal, Economic and Scientific Perspectives*. Cambridge University Press, 2000. pp.647-664.
- Cohan, John Alan. "Modes of Warfare and Evolving Standards of Environmental Protection Under the International Law of War." *15 Fla. J. Int'l L.* 481 (2003).
- Cohen, Kenneth A. Review of *Agent Orange on Trial: Mass Toxic Disasters in the Courts*, by Peter H. Schuck. *67 B.U.L. Rev.* 581. (May, 1987).
- Falk, Richard. *The Environmental Law of War: an Introduction, in Environmental Protection and the Law of War*. Glen Plant ed., 1992, pp. 84-85.
- Falk, Richard. "The Inadequacy of the Existing Legal Approach to Environmental Protection In Wartime." *The Environmental Consequences of War: Legal, Economic and Scientific Perspectives*. Cambridge University Press, 2000. pp.155-156.
- Hersh, Seymour M. *Chemical and Biological Warfare; America's Hidden Arsenal*. Bobbs-Merrill Co., 1968, p.3.

Hourcle, Laurent R. "The Environmental Law of War." 25 Vt. L. Rev. 653 (Spring, 2001)

Hulme, Karen. "Armed Conflict, Wanton Ecological Devastation and Scorched Earth Policies: Effective Protection and Preservation of the Natural Environment." *Journal of Conflict and Security Law*, 2: 45 – 81 (June, 1997).

ICRC. *ICRC Study on Customary Rules of International Humanitarian Law*. [Cambridge University Press](#), March 2005.

Lowe, Luan and Hodgkinson, David. "Compensation for Wartime Environmental Damage: Challenges to International Law after the Gulf War." *Vanderbelt Journal of International Law*. 35:22. 405-484. (1995).

Libera, Rosemary E. "Divide, Conquer, and Pay: Civil Compensation for Wartime Damages." 24 B.C. Int'l & Comp. L. Rev. 291. (Spring, 2001).

Lopez, Aurelie. "Criminal Liability for Environmental Damage Occurring in Times of Non-International Armed Conflict: Rights and Remedies." 18 *Fordham Env'tl. Law J.* 231. (Spring, 2007).

McManus, Keith. "Civil Liability for Wartime Environmental Damage: Adapting the United Nations Compensation Commission for the Iraq War." 33 B.C. Env'tl. Aff. L. Rev. 417 (2006).

Owen, Lea Carol. "Between Iraq and a Hard Place: The U.N. Compensation Commission and Its Treatment of Gulf War Claims." 31 *Vand. J. Transnat'l L.* 499 (March, 1998).

Price *et al.* "The 1991 Gulf War: Environmental Assessments of IUCN and Collaborators." A.R.G. Price, N. Downing, S.W. Fowler, J.T. Hardy, M. Le Tissier, C.P. Mathews, J.M. McGlade, P.A.H. Medley, B. Oregioni, J.W. Readman, C.M. Roberts, & J.T. Wrathall. (1994).

Schmitt, Michael N. "War and the Environment: Fault Lines in the Prescriptive Landscape." *The Environmental Consequences of War: Legal, Economic and Scientific Perspectives*.

(Cambridge University Press, Jay Austin & Carl Bruch eds., 2000.) pp.87-136.

Schuck, Peter H. "[The New Judicial Ideology of Tort Law.](#)"

Proceedings of the Academy of Political Science, Vol. 37, No. 1, New Directions in Liability Law. (1988), pp. 4-17.

Schwabach, Aaron. "Ecocide and Genocide in Iraq: International Law, the Marsh Arabs, and Environmental Damage in Non-International Conflicts." 15 *Colo. J. Int'l Env'tl. L. & Pol'y* 1 (Winter, 2004).

Sharp, Peter. "Propsects for Environmental Liability in the International Criminal Court." 18 *Va. Env'tl. L.J.* 217 (1999).

Stellman *et al.* "The extent and patterns of usage of Agent Orange and other herbicides in Viêt Nam", *Nature*, Volume 422, April 2003.

Toohey, Lisa. "Borders and Boundaries in International Law: Compensation for Agent Orange Damage in Vietnam." 13 *Willamette J. Int'l L. & Dispute Res.* 287 (2005).

United Nations Compensation Commission Website. <http://www2.unog.ch/uncc/> (26 July, 2007; 30 September, 2007).

United Nations Environmental Programme. *The Kosovo Conflict: Consequences for the Environment and Human Settlements*. Copyright UNEP. 1999.

United Nations Environmental Programme. *From Conflict to Sustainable Development: Assessment and Clean Up in Serbia and Montenegro*. Copyright UNEP. 2004.

Attachment A. Interview Questions

Research Criteria:

The purpose of this study is to understand the strengths and weaknesses of different international mechanisms that were established to help restore and mitigate wartime environmental damage. Two questions are asked in order to gain insight into both the legal standings and operational efficiencies of these mechanisms: 1) does the role of the defendant as the “aggressor” or “intervening forces” influence the legal standing of a claimant or defendant when determining liability for post-conflict environmental cleanup, and 2) which remediation method is more successful: a direct payout system to individual claimants or a mediated payout to a clean-up agency? I have chosen two case studies to focus my research on: 1) the United Nations Compensation Commission (UNCC) as a mediated payout system for Iraqi oil spills in Kuwait during the Gulf War from 1990 to 1991 and 2) the United Nations Environmental Programme (UNEP) Clean-Up Programme as a direct remediation system after North Atlantic Treaty Organization (NATO) bombings of industrial sites during Kosovo War in 1999. Success of these mechanisms is based on timeliness of cleanup, relative amount restored from wartime environmental damage, and the degree of inter-agency cooperation in bringing lasting remediation.

Open-ended Interview Format:

I. Questions Regarding the Legality and Efficacy of the UNCC/ UNEP Kosovo Programme

- 1) What is your current job title?
- 2) Please describe your affiliation with the UNCC/ UNEP Kosovo Programme and your general experiences working with the institution.
- 3) In your view, who were the key stakeholders (international institutions, national or local authorities, NGOs, private companies) in implementing international (environmental) law to establish the institution?
- 4) Please discuss the composition and efficacy of the environmental claims (F4 Claims) processed by the UNCC/ projects conducted by the UNEP Kosovo Programme. Specifically, what did the claims look like, how was the money delegated, and was there a budget analysis that monitored if the money delegated fulfilled the claims' goals?
- 4) To what extent did the UNCC/ UNEP Kosovo Programme collaborate with nations, other

institutions and organizations in processing the environmental claims/ conducting the projects?

6) In your view, were the F4 Claims/ Kosovo remediation projects successful in directing money to respective assessment and restoration efforts in the Gulf, in terms of the amount of money paid, collaboration with others, the amount of cleanup done, as well as timeliness? What were some key challenges to their success?

II. Questions Regarding International Environmental Law

1) What do you consider to be critical factors to the success of environmental law and war law, such as Protocol I to the Geneva Convention? What are the biggest obstacles and challenges?

2) What other relevant cases of international environmental damage exist now that should but is not receiving as much attention as the Gulf War oil spills?

3) What is your opinion on setting an international institution that would have the power to not only monitor, but also legally implement, restitution for the environment?

4) What do you consider to be critical components to ensure the success of an international post-war restoration organization if it is established?