

THE LATEST NUCLEAR WAR: DOES THE USE OF DEPLETED URANIUM ARMAMENTS AND ARMORS CONSTITUTE A WAR CRIME?

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“Depleted uranium is a crime against God and humanity.” – Dr. Doug Rokke¹

“They used these weird bombs that put up smoke like a mushroom cloud. Then small pieces fall from the air with long tails of smoke behind them.’ . . . [P]ieces of these bombs exploded into large fires that burnt [*sic*] the skin even when water was thrown on the burns.” – Abu Sabah, Fallujah refugee²

“[T]he average Iraqi woman giving birth no longer says, ‘Is it a boy or a girl?’ She asks, ‘Is the baby normal . . . [?]’” – Rep. Jim McDermott³

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I. THE DANGERS OF DEPLETED URANIUM

The use of depleted uranium as an agent to create stronger armaments and improve the armor of tanks has become the source of much protest in the United States (U.S.) and abroad.⁴ The U.S. initially used depleted

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1. Saby Ghoshray, *When Does Collateral Damage Rise to the Level of a War Crime?: Expanding the Adequacy of Laws of War Against Contemporary Human Rights Discourse*, 41 CREIGHTON L. REV. 679, 703 (2008).

2. *Id.* at 700 (alterations in originals).

3. ROB NIXON, *SLOW VIOLENCE AND THE ENVIRONMENTALISM OF THE POOR* 201 (2011).

4. Ghoshray, *supra* note 1, at 697.

uranium during the first Gulf War in 1991.⁵ Subsequently, NATO allies used depleted uranium in NATO actions in Serbia, Kosovo, Bosnia, and Montenegro.⁶ Each time the U.S. used these particular weapons, the U.S. Department of Defense failed to warn either soldiers or civilians of the dangers of exposure to depleted uranium.⁷ In addition to its own use, the U.S. has also provided or sold depleted uranium munitions to other states.⁸

Depleted uranium is a by-product of the uranium enrichment process.⁹ Uranium is a naturally occurring metal found in the earth.¹⁰ It is a heavy, silver-white metal that is more plentiful than mercury or silver.¹¹ However, all 14 uranium isotopes contained within uranium are radioactive.¹² This radiation of depleted uranium can last for more than two billion years—a dark thought when considering the lives of those affected and the health of the environment.¹³ Furthermore, the half-life of depleted uranium is 4.5 billion years, effectively becoming a part of the environment forever.¹⁴ Because of this radioactivity, uranium and compounds derived from uranium are highly toxic from both a chemical and radiological perspective.¹⁵

In the 1950s, U.S. government agencies began the search for profitable ways to dispose of the growing stockpiles of depleted uranium waste.¹⁶ Although agencies explored other avenues, the extreme density of depleted uranium attracted the attention of military weapons manufacturers.¹⁷ By the 1970s, military manufacturers began to create depleted uranium armaments. By the 1980s, manufacturers utilized depleted uranium in tank armor.¹⁸ In fact, a half-century of nuclear production has left the U.S. Department of Defense with more than one billion pounds of nuclear waste in storage.¹⁹

5. Dan Fahey, *The Final Word on Depleted Uranium*, 25 FLETCHER F. WORLD AFF. 189, 191 (2001).

6. *Id.*

7. *Id.*

8. Dennis W. Mills, *Uranium Munitions = Depleted Uranium*, DEPLETED URANIUM, http://www.vfp109rcc.org/depleted_uranium.htm (last visited Dec. 10, 2016).

9. Jeremy T. Burton, *Depleted Morality: Yugoslavia v. Ten NATO Members and Depleted Uranium*, 19 WIS. INT'L. L.J. 17, 26 (2000).

10. *Id.*

11. *Id.*

12. *Id.*

13. Goshray, *supra* note 1, at 702.

14. NIXON, *supra* note 3, at 201.

15. *Id.* at 204.

16. Fahey, *supra* note 5, at 190.

17. *Id.*

18. *Id.*

19. NIXON, *supra* note 3, at 211–12.

Thus, using nuclear waste in armaments has many attractive elements from the perspective of the U.S. government. For instance, the Department of Defense is able to rid itself of waste that would be difficult and expensive to dispose of through the proper channels.²⁰ Instead, the Department turns the waste into usable weaponry. Typically, depleted uranium waste is stored in large, metal cylinders as uranium hexafluoride.²¹ Unfortunately, these cylinders are stored outdoors, exposed to the elements, and must be maintained to prevent leakage and corrosion.²² The maintenance of these storage units and potential clean-up costs increasingly burden the government.²³ Instead, the government chose to pursue weapon production with this waste. Weapon manufacturers cut their production costs by using the depleted uranium, and the Department of Defense rids itself of a waste product that would certainly raise extensive public policy concerns in the U.S.²⁴ By increasing its arsenal of depleted uranium weapons, the U.S. is effectively exporting nuclear waste to foreign soil.²⁵ The use of depleted uranium in armaments therefore becomes a cheap, irresponsible, and deadly form of waste removal for the U.S.

However, the U.S. and its allies seem to be aware of the dangers associated with exposure. For instance, in 1979 depleted uranium particles escaped from the National Lead Industries factory near Albany, New York.²⁶ The factory was manufacturing depleted uranium weapons for the military.²⁷ The particles traveled 26 miles until a nuclear physicist discovered them.²⁸ The factory shut down after releasing a mere 0.85 pounds of depleted uranium dust into the air every month.²⁹ The subsequent remediation of contaminated properties cost over 100 million dollars.³⁰

In 1995, the U.S. Army magazine, *Armor*, contained an article concerning the risks associated with exposure to these weapons.³¹ It read:

20. *Id.* at 212.

21. *Frequently Asked Questions*, DEPLETED UF6 MGMT. INFO. NETWORK, <http://web.ead.anl.gov/uranium/faq/index.cfm> (last visited Dec. 10, 2016) [hereinafter DEPLETED UF6 FAQs].

22. *Id.*

23. *Id.*

24. NIXON, *supra* note 3, at 212.

25. *Id.* at 211–12.

26. Doug Westerman, *Depleted Uranium – Far Worse than 9/11*, GLOBAL RES. (May 3, 2006), <http://www.globalresearch.ca/depleted-uranium-far-worse-than-9-11/2374>.

27. *Id.*

28. *Id.*

29. *Id.*

30. *Id.*

31. Fahey, *supra* note 5, at 190–91.

If you find radioactive DU [depleted uranium] contamination on a vehicle, move the vehicle to a site away from water sources, food storage, or eating areas, and occupied bivouac sites . . . Of course, always keep personnel away from contaminated equipment or terrain unless required to complete the mission.³²

The U.S. government also notes that the kidney is highly susceptible to damage from uranium.³³ Furthermore, a 1991 U.S. Nuclear Defense Agency report condemned depleted uranium weapons as a “serious health threat.”³⁴

Scientists at the U.S. Armed Forces Radiobiology Research Institute further studied the effects of depleted uranium by implanting it in organic tissue.³⁵ The study implanted rats with depleted uranium metal and identified four key health concerns: cancer, immune system damage, central nervous system damage, and damage to reproductive systems.³⁶ Another U.S. Army-funded study by the Lovelace Respiratory Research Institute found depleted uranium fragments caused cancer when implanted in the muscles of rats.³⁷

However, the U.S. and its allies have continued to use depleted uranium extensively, regardless of the potential effects on soldiers and civilians. A non-governmental organization (NGO) report to the United Nations Commission on Human Rights found allied forces used 800 tons of depleted uranium munitions in the Gulf War.³⁸ The report, titled “Human Rights and Toxics: Depleted Uranium and the Gulf War,” explained shell casings were still present throughout the region in civilian locales.³⁹ Even worse, “[t]housands of children in Iraq suffer from illness related to depleted uranium . . . children and animals in the area are being born with serious congenital anomalies and disabilities associated with low grade radiation poisoning.”⁴⁰

Further criticism of the use of depleted uranium came from the chief of the Russian army’s environmental safety department, Major General Boris Alekseyev, for “using the shells with depleted uranium in operation Desert

32. *Id.*

33. Burton, *supra* note 9, at 27.

34. Marjorie Cohn, *Human Rights: Casualty of the War on Terror*, 25 T. JEFFERSON L. REV. 317, 337 (2003) (citing Marjorie Cohn, *The Myth of Humanitarian Intervention in Kosovo*, in LESSONS OF KOSOVO: THE DANGERS OF HUMANITARIAN INTERVENTION 133 (Aleksandar Jokic ed., 2003)).

35. Fahey, *supra* note 5, at 191.

36. *Id.*

37. *Id.*

38. Burton, *supra* note 9, at 30.

39. *Id.*

40. *Id.*

Storm in Iraq [and leaving] 20 to 25% of the American and British personnel involved with diseases and abnormalities at the genetic level.”⁴¹ In response, the Ministry of Defence in London denied any extreme risks with the use of depleted uranium, comparing it to lead exposure.⁴² In supplement, the Department of Defense in the U.S. conducted numerous projects to offer evidence contradicting the Russian criticism.⁴³ The Department went so far as to frequently rely upon other agency findings denying any harmful health effects resulting from exposure to depleted uranium.⁴⁴

Although the U.S. military used these weapons extensively, no proper training and procedure in education for soldiers on the potential effects took place. One soldier in Iraq and Kuwait recounted a typical scene within his tank division:

We had 52 tanks on line. We engaged Iraqi tanks, personnel carriers, trucks, bunkers—anything in our path. After everything was over we went back through the areas we had shot up and climbed all over the vehicles we had destroyed. We wanted to see the damage our tanks had done, and we were looking for souvenirs. I knew we were shooting DU rounds, but we were never told to stay away from the vehicles that were hit by DU rounds. We were dipping [chewing tobacco], smoking, and eating without having washed our hands. Right after the war we saw lots of guys from other units climbing on the vehicles that we had shot with DU rounds.⁴⁵

Somehow, the commanders of these Gulf War troops failed to warn their own soldiers to avoid contact with contaminated equipment.⁴⁶ This lack of warning is even more inexcusable when considering the civilian populations still surrounded by ruined armaments and waste left by the depleted uranium arms and armor.⁴⁷ Children living in countries plagued by this waste have long been playing on destroyed equipment and in contaminated areas.⁴⁸ This is horrifying given what Christian Science Monitor staff reporter Scott Peterson discovered when he checked a

41. *Id.* at 31–32 (alteration in original).

42. *Id.* at 32.

43. *Id.*

44. Fahey, *supra* note 5, at 192.

45. *Id.* (alteration in original).

46. *Id.*

47. *Id.* at 194.

48. *Id.*

destroyed tank on which children were playing.⁴⁹ While wearing a mask and protective gear, he approached the tank and saw the Geiger counter read 1,000 times the normal background radiation.⁵⁰ Adults in these areas have even scavenged destroyed equipment for usable parts and for scrap metal.⁵¹

Unfortunately, there is no immediate remedy for those that have developed illnesses due to depleted uranium exposure⁵²—specifically, the men and women serving in the military.⁵³ One reason for this is the lack of government-embraced data directly linking exposure to particles of depleted uranium to illnesses such as cancer or leukemia.⁵⁴ As noted by former veteran and Executive Director of Veterans for Common Sense, Charles Sheehan-Miles,

[t]he result of that has been a scenario where if you are Gulf War veteran [sic] who climbed into a burning tank and got a lung full of depleted uranium particles and developed lung cancer today, there is no remedy at all. Because the scientific data is not there, there is no way to get compensation through the government or the Department of Veterans Affairs for that health problem. So that's a big stumbling block for people who got sick.⁵⁵

Veterans that may have developed illnesses due to uranium exposure are left without a remedy and without answers. In the Gulf War alone, approximately 100,000 veterans were exposed to depleted uranium.⁵⁶ Ten years later, correlative data shows a 37% chance that those veterans have disabilities today.⁵⁷ The data for civilians in these countries remains unknown.

In the second war in Iraq, the Pentagon and the United Nations (U.N.) estimate between 1,100 and 2,200 tons of depleted uranium shells were used in “Operation Iraqi Freedom.”⁵⁸ However, the U.S. refuses to disclose the location of these operations or allow a team from the U.N. Environmental Program to study the effects of depleted uranium use in

49. Westerman, *supra* note 26.

50. *Id.*

51. Fahey, *supra* note 5, at 194.

52. Symposium, *The International Responses to the Environmental Impacts of War*, 17 GEO. INT'L ENVTL. L. REV. 565, 631 (2005) [hereinafter *Impacts of War*].

53. *Id.*

54. *Id.*

55. *Id.*

56. *Id.* at 632.

57. *Id.*

58. Cohn, *supra* note 34, at 336.

Iraq.⁵⁹ U.S. congressman, doctor, and child psychiatrist Jim McDermott visited Iraq in 2002.⁶⁰ He spoke to Congress, recounting, “the average Iraqi woman giving birth no longer says, ‘Is it a boy or a girl?’ She asks, ‘Is the baby normal or abnormal[?]’”⁶¹ Children are most directly at risk due to harm from lingering depleted uranium.⁶² They are 10 to 20 times more sensitive than adults to the risk of cancer associated with the radiation.⁶³ In 2002, 11 years after the first Gulf War, Basra hospitals reported a tenfold increase in birth defects and miscarriages.⁶⁴

The government defends using depleted uranium, arguing that it may save lives due to its increased effectiveness at protecting allied armor and destroying enemy armor.⁶⁵ However, this seems to be an overstatement by the U.S. government to legitimize further use of depleted uranium. For instance, most of the tanks destroyed during the first Gulf War were actually destroyed by conventional means.⁶⁶

The dense, arrow-like rod of depleted uranium in these armaments is able to punch and burn its way through enemy armor.⁶⁷ However, the energy and force of the impact causes roughly 20% of the depleted uranium piece to vaporize into fine dust, contaminating the impact site.⁶⁸ At the same time, up to 70% of the projectile may burn on impact, creating a firestorm of depleted uranium particles.⁶⁹ The impact of one depleted uranium tank round against an armored target will create roughly one kilogram of depleted uranium dust.⁷⁰

II. SHOULD THE USE OF DEPLETED URANIUM BE ILLEGAL?

Multiple arguments criticize depleted uranium’s use for arms and armaments. Use of depleted uranium weapons may (1) be excessive force against other combatants,⁷¹ (2) constitute an indiscriminate attack,⁷² (3)

59. *Id.*

60. NIXON, *supra* note 3, at 219.

61. *Id.*

62. *Id.*

63. *Id.*

64. *Id.*

65. *Impacts of War*, *supra* note 52, at 630.

66. *Id.*

67. Mills, *supra* note 8.

68. Fahey, *supra* note 5, at 190.

69. Mills, *supra* note 8, at 1.

70. *Id.*

71. Burton, *supra* note 9, at 38.

72. *Id.*

have immediate and long-term effects on civilian populations,⁷³ and (4) destroy the natural environment.⁷⁴ The U.N. could address any of these issues before the International Court of Justice.⁷⁵ However, these issues remain unaddressed due to the recent withdrawal by the U.S. from the Optional Protocol to the Vienna Convention on Consular Relations Concerning the Compulsory Settlement of Disputes.⁷⁶ The withdrawal occurred in 2005 under the Bush administration; Secretary Rice stated that the U.S. objected to the protocol's interpretation.⁷⁷ However, this withdrawal does not leave the international community powerless to determine the legality of depleted uranium.

To first ascertain why the U.N. has yet to act on the continued use of depleted uranium, one must address (1) what is a war crime, and (2) why the use of depleted uranium armaments should be considered a war crime.

The U.S. government defines a war crime as:

[A]ny conduct—

(1) defined as a grave breach in any of the international conventions signed at Geneva 12 August 1949, or any protocol to such convention to which the United States is a party;

(2) prohibited by Article 23, 25, 27, or 28 of the Annex to the Hague Convention IV, Respecting the Laws and Customs of War on Land, signed 18 October 1907;

(3) which constitutes a grave breach of common Article 3 (as defined in subsection (d)) when committed in the context of and in association with an armed conflict not of an international character; or

(4) of a person who, in relation to an armed conflict and contrary to the provisions of the Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices as amended at Geneva on 3 May 1996 (Protocol II as amended on 3 May 1996), when the United States is a party to

73. *Id.*

74. *Id.*

75. John Quigley, *The United States' Withdrawal from International Court of Justice Jurisdiction in Consular Cases: Reasons and Consequences*, 19 DUKE J. COMP. & INT'L L. 263, 263 (2009).

76. *Id.*

77. *Id.* at 271.

such Protocol, willfully kills or causes serious injury to civilians.⁷⁸

U.S. law first concedes to the definitions laid out in the Geneva Convention, or any protocol to the Convention of which the U.S. is a party.⁷⁹ Next, the definition incorporates those actions prohibited by certain articles in the Annex to the Hague Convention.⁸⁰ Line three references a subsection of the statute itself, outlining prohibited conduct such as torture and biological experiments.⁸¹ Lastly, line four references Protocol II of the Convention.⁸² The language of the statute binds the U.S. to certain international legal norms, but there are more that will be discussed below to which the U.S. is not a party.⁸³ However, the U.S. may still be bound by the current international custom and sentiment.

Article 23 of the Hague Convention IV states: “It is especially forbidden to employ poison or poisoned weapons; to kill or wound treacherously individuals belonging to the hostile nation or army; . . . to employ arms, projectiles or material calculated to cause unnecessary suffering”⁸⁴ The use of depleted uranium by member states, specifically the most recent use by the United Kingdom and U.S. in Iraq, contradicts the language of the Hague Convention. Not only does this provision directly apply to individuals belonging to the “army,” but also to individuals belonging to the “hostile nation.”⁸⁵ This interpretation may not be conventional, but it does include citizens of a hostile nation, not merely active military. Yet, arguments by the U.S. and its allies legitimizing depleted uranium continue to rule the day.

One argument by the states using depleted uranium armaments is that any killing or harm toward civilians is accidental:⁸⁶ merely an unfortunate outcome of a necessary military operation. If any harm toward civilians is classified as accidental, and the U.N. or others are convinced by this argument, it is unlikely that the U.N. will challenge that classification. Accidental killings of civilians do not constitute war crimes.⁸⁷ Therefore,

78. 18 U.S.C. § 2441 (2012).

79. *Id.*

80. *Id.*

81. *Id.*

82. *Id.*

83. *See infra* Part III (noting that the U.S. is party to neither Protocol I of the Geneva Convention nor the Rome Statute of the International Criminal Court).

84. Ghoshray, *supra* note 1 at 701 n.89 (quoting Hague Convention IV Respecting the Laws and Customs of War on Land art. 23, Oct. 18, 1907, 36 Stat. 2227, 1 Bevans 631).

85. *Id.*

86. *Id.* at 685–86.

87. *Id.* at 686.

media campaigns in these user-states can be manipulated to present harm toward civilians as a legitimate military exercise against a combatant target.⁸⁸ Therefore, the states exercise some sort of control over public perception of the military exercises to maintain a more favorable view of the entire conflict.

However, these attacks must be premeditated to ensure their proper execution. This idea conflicts with the very nature of what is “accidental” or would be an acceptable loss. Generally, collateral damage has become a governmental excuse for military operations with no discretion between targets, but merely constitutes strikes to an area rather than another military force.⁸⁹ Collateral damage itself is an act that is accepted in times of war, protected under the Laws of Armed Conflict and the Uniform Code of Military Justice.⁹⁰ In effect, governments can use collateral damage as an all-inclusive phrase to pardon their intentional indiscretions against populations other than militaries.⁹¹

Yet, a government’s choice to use depleted uranium in its armaments cannot be considered accidental. It is an intentional choice of which weapons to employ. These are not situations in which a missile goes wrong and hits an incorrectly programmed target.⁹² The attacks are well-coordinated, pinpoint strikes that also sow chaos among civilian populations.⁹³ This intentional use of depleted uranium armaments will cause long-term harm to the targeted populace. Governments continue to frame the collateral damage that depleted uranium weapons inflict upon civilian populations and the environment as “accidental.”⁹⁴ By doing so, history easily forgets and dismisses these disasters, preventing legitimate discussion on how to prevent or mitigate such damage.⁹⁵ However, some critics argue that problems exist in developing a proper framework to analyze the accidental killings in times of war.⁹⁶

Regardless, this unprovoked military might against civilians is an act of military aggression, and inconsistent with the guiding principles of the Laws of War.⁹⁷ According to Protocol I in Article 51(2) of the Geneva Convention, “[t]he civilian population . . . shall not be the object of [an]

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.*

92. NIXON, *supra* note 3, at 220.

93. *Id.*

94. *Id.* at 65.

95. *Id.* at 65–66.

96. Goshray, *supra* note 1, at 688.

97. *Id.*

attack. Acts or threats of violence the primary purpose of which is to spread the terror among the civilian population are prohibited.”⁹⁸ The Protocol also establishes that “[c]ivilian objects shall not be the objects of attack.”⁹⁹ It would be difficult to classify the effects of depleted uranium as an attack on civilian objects, even from an environmental perspective. Further, because of the long-term nature and gradual increase of depleted uranium’s effects,¹⁰⁰ it would be difficult to make the argument that the act’s primary purpose was to spread terror among civilians. The weapons’ initial use, such that they smoke and burn, is still similar to other weapons that are also contemporarily used in war.¹⁰¹

However, this intentional use of depleted uranium causes long-term damage to the civilian population and environment. Therefore, the governments employing these armaments should be held accountable.¹⁰² This usage blatantly disregards the civilians’ and soldiers’ health alike. The Geneva Convention prohibits indiscriminate attacks such as these. Accordingly, Article 51(4)(b) considers attacks indiscriminate if they “employ a method or means of combat which cannot be directed at a specific military objective . . .”¹⁰³ Attacks are also considered indiscriminate if they “employ a method or means of combat the effects of which cannot be limited as required by this Protocol; and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.”¹⁰⁴ In the case of depleted uranium armaments, the attacks can never be directed solely at a specific military target. Due to the nature of the weapons, radiologically and chemically, the lingering harm cannot be contained nor directed.¹⁰⁵

Yet from the beginning of depleted uranium’s use, the U.S. government has skirted around the issue. When questioned about the use and danger of depleted uranium in Yugoslavia, NATO would not answer the international community’s concerns.¹⁰⁶ On March 31, 1999, Pentagon spokesman Kenneth Bacon declined to comment on the use of depleted uranium.¹⁰⁷ Reports emerged later in 1999 that NATO had been using depleted uranium rounds, but refused to cooperate with the U.N. in creating

98. *Id.* at 689 (quoting Geneva Convention, Protocol I).

99. *Id.* (alteration in original).

100. *Id.* at 701.

101. *Id.* at 700.

102. *Id.* at 689.

103. Burton, *supra* note 9, at 36.

104. *Id.*

105. *Id.* at 26–27.

106. *Id.* at 37.

107. *Id.*

an environmental impact study.¹⁰⁸ Even more shocking are the statements by John Hanchette, professor of journalism at St. Bonaventure University and former editor of USA Today.¹⁰⁹ He stated that he was ready to publish a story about depleted uranium effects on civilians and soldiers multiple times.¹¹⁰ Yet, each time he was ready to publish, the Pentagon phoned him and told him not to print the story.¹¹¹ The U.S. and allies continue to mislead and ignore international bodies like the U.N., reducing the U.N.'s ability to properly address the issue of depleted uranium.¹¹² It is unlikely that the use of depleted uranium will cease if there is no international action from the U.N. or other individual states.¹¹³

III. THE PROPORTIONALITY PRINCIPLE

The principle of proportionality provides the strongest protection available in customary international law.¹¹⁴ This principle should be used to remove depleted uranium from use in warfare. Article 51(5)(b) of Protocol I enumerates the following restrictions on any military actions that “[m]ay be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”¹¹⁵ However, the U.S. is not a party to this particular protocol. In fact, only three countries have signed, but not yet ratified, the protocol: Iran, Pakistan, and the U.S.¹¹⁶ In contrast, there are currently 174 parties to Protocol I through ratification, acceptance, or accession.¹¹⁷ The widespread acceptance of this protocol and its reinforcement of proportionality support the argument that the protocol protections have become customary international law.¹¹⁸ In such a case, the U.S. could no longer deny these protections due to having not ratified the protocol.

108. *Id.*

109. Westerman, *supra* note 26.

110. *Id.*

111. *Id.*

112. Burton, *supra* note 9, at 38.

113. *Id.* at 38.

114. Goshray, *supra* note 1, at 692.

115. *Id.*

116. INT’L COMM. OF THE RED CROSS [ICRC], *Treaties and States Parties to Such Treaties: Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts (Protocol I)* (June 8, 1977), <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/vwTreatiesByCountry.xsp> [hereinafter *Treaties and States Parties*].

117. *Id.*

118. INT’L COMM. OF THE RED CROSS [ICRC], *Customary International Humanitarian Law: Nuclear Weapons*, https://ihl-databases.icrc.org/customary-ihl/eng/docs/v1_cha_chapter22_nuwe (last visited Dec. 10, 2016).

As discussed above, scientists and military personnel alike have debated the advantages of depleted uranium armaments.¹¹⁹ According to the address given by Mr. Sheehan-Miles, the government tends to overstate these armaments' effectiveness,¹²⁰ which is likely fueled by the government's base desire to maintain cheap waste disposal. The present uncertainties surrounding the concrete military advantages gained by using depleted uranium weapons should serve to dissuade militaries from using such weapons. The risk of harming both civilian and veteran populations should be enough to have an international ban on depleted uranium's use.

By invoking the principle of proportionality, governments planning these attacks would be forced to actively minimize the risks to civilians and civilian objects.¹²¹ Article 57(2)(a)(ii) of Protocol I further elucidates that these militaries must, "take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects."¹²² Therefore, the principal of proportionality would work to reduce collateral damage by determining its proportion to the intended military objective.¹²³ The military could argue that using depleted uranium creates more efficient weapons and saves soldiers' lives; however, that argument is subject to debate.¹²⁴

The argument may also be that depleted uranium weapons are simply more effective, yet the accounts of Mr. Sheehan-Miles explain that tungsten rounds were the major workhorses of the U.S. military.¹²⁵ Evidence presented by the numerous sources describing the horror that depleted uranium exposure causes contradicts both of these arguments. As Judge Higgins explains in her dissent to the Nuclear Advisory Opinion, "[t]hus even a legitimate target may not be attacked if the collateral civilian casualties would be disproportionate to the specific military gain from the attack."¹²⁶ Taken in conjunction with the account of Sheehan-Miles,¹²⁷ the more important objective of the military attack should be to avoid civilian casualties while directing the attack toward concrete military targets.

119. *Impacts of War*, *supra* note 52, at 630.

120. *Id.*

121. Goshroy, *supra* note 1, at 693.

122. *Id.*

123. *Id.*

124. *Impacts of War*, *supra* note 52, at 630–31.

125. *Id.*

126. Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. Rep. 95, at 226 (July 8) (Higgins, J., dissenting), <http://www.icj-cij.org/docket/files/95/7525.pdf>.

127. *See supra* Part I (citing Sheehan-Miles's view that the U.S. government provides no remedy for sickness caused by depleted uranium particles because scientific data is lacking).

This raises a new debate on how military attacks and operations should be evaluated in relation to possible collateral damage, including civilian population damage. One approach Dr. Ghoshray posited is not to evaluate the legality of military action by the number of actual losses, but by using a balancing test.¹²⁸ This balancing test would weigh the anticipated military advantage against the expected civilian casualties.¹²⁹ This also seems to be the more appropriate test, especially given the nature of depleted uranium as discussed in Part I.¹³⁰ In fact, the UK Atomic Energy Authority estimated that the depleted uranium left in Iraq after the first Gulf War could cause 500,000 potential deaths.¹³¹ That number can only be compounded after additional conflicts in Iraq in which the U.S. used depleted uranium weapons. For instance, in 2004, the Italian Military Health Observatory stated that depleted uranium exposure killed 109 Italian soldiers.¹³² That number represents 3.6% of the 3,000 soldiers sent.¹³³ If that percentage was applied to the Iraqi population with similar exposure, the death toll could exceed 936,000.¹³⁴ It has been difficult to fully understand the casualties and atrocities depleted uranium caused wherever it was utilized. As Sheehan-Miles stated, the research is not there.¹³⁵ Additionally, studies that do exist are ignored.¹³⁶ The U.S. published a brief estimate—a “guess,” as Sheehan-Miles described—approximating that 100,000 Gulf War veterans suffered depleted uranium exposure.¹³⁷ The Veteran Affairs disability database showed a 37% increase in those veterans’ likelihood of disability.¹³⁸ However, other than a few studies done by Iraqi doctors and a few independent agencies,¹³⁹ there has been no in-depth study of the potential hazards of these munitions.

The principle of proportionality is not an exact science.¹⁴⁰ Therefore, rather than counting up the civilian losses after an event, the weight of anticipated losses should guide military targeting. It would be nearly impossible to have a comprehensive count of civilians affected by depleted uranium. What governments and militaries do know, however, is that this

128. Ghoshray, *supra* note 1, at 694.

129. *Id.*

130. *See supra* Part I (noting depleted uranium’s detrimental effects).

131. Westerman, *supra* note 26.

132. *Id.*

133. *Id.*

134. *Id.*

135. *Impacts of War*, *supra* note 52, at 631.

136. *Id.* at 632 (dismissing other studies for their lack of precision).

137. *Id.*

138. *Id.*

139. *Impacts of War*, *supra* note 52, at 630–31.

140. Ghoshray, *supra* note 1, at 694.

substance is both toxic and radioactive.¹⁴¹ Ironically, the U.S. most recently used these weapons in a war that began with the intent to find and destroy nuclear weapons of mass destruction.¹⁴²

The proportionality principle should be used to outlaw depleted uranium weapons. While Gulf War veterans suffer from Gulf War sickness, children in Iraq are also increasingly born with defects and cancers.¹⁴³ The so-called advantages from using depleted uranium armaments and armor—increased tank armor and penetrating ability of shells—should never outweigh the grisly reality of what is happening to those exposed, long after the conflict has ended. Two billion years is certainly a long time for individuals and the environment to suffer for a short-term advantage.¹⁴⁴ Militaries using depleted uranium weapons instruct their soldiers to wear masks and protective gear, but the soldiers are still underequipped.¹⁴⁵ As a result, the militaries and civilians of the invaded state are underequipped.¹⁴⁶ To date, the U.S. military has never confronted an opponent that also used depleted uranium weapons.¹⁴⁷ Therefore, all depleted uranium exposure experienced by both civilian populations and the U.S. military resulted from the U.S. military itself.¹⁴⁸

The Rome Statute of the International Criminal Court further clarifies these concepts. Article 8, paragraph 2(b)(iv) states the elements of a military exercise constituting a war crime as: (1) the belligerent force launched an attack, such that, (2) the attack would cause incidental deaths or injury to civilians, damage civilian objects or cause widespread long-term and severe damage to the natural environment, while, (3) the attacker knew the attack would result in excessive collateral damage, such that, (4) the extent of collateral damage would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.¹⁴⁹

Although the U.S. is not a party to this statute, these elements listed above have risen to the status of customary international law and must be met. The Rome Statute is fairly recent, being first introduced in 1998 and not entering into force until July 1, 2002.¹⁵⁰ Although recent, the Statute has been met with rapid and widespread acceptance. The Statute currently has

141. Westerman, *supra* note 26.

142. Ghoshray, *supra* note 1, at 701.

143. *Id.* at 702.

144. *Id.* at 702–03.

145. *Id.*

146. *Id.* at 703.

147. Mills, *supra* note 8.

148. *Id.*

149. Rome Statute of the International Criminal Court, art. 8, ¶ 2(b)(i)–(iv), July 17, 1998.

150. *Id.*

123 parties: the majority have ratified the Statute, with a few becoming party through accession.¹⁵¹

No rigid formula exists for determining when a piece of international law passes into the realm of customary international law. Article 38(1)(b) of the Statute of the International Court of Justice describes customary international law as “evidence of a general practice accepted as law”¹⁵² Although the recent Rome Statute has not reached the same level of acceptance as the Statute of the International Court of Justice, it is still a powerful law that codifies already existing norms in international law. A military operation must meet multiple requirements under Article 8 to qualify as war crime.¹⁵³ First, there must be an actual attack.¹⁵⁴ Multiple attacks using depleted uranium have already been established. Second, the attacks must have also caused death and injury to civilians, as well as damage to the environment.¹⁵⁵ The test in this Statute becomes less clear when looking at the third element: the attacker must knowingly cause collateral damage.¹⁵⁶ Reports diverge on this point due to conflicting reports between groups like the U.N. and the user-states that intend to downplay the reality of depleted uranium.¹⁵⁷ Dr. Jawad Al-Ali of the Oncology Center at the largest hospital in Basra, Iraq stated that he was accused of “spreading propaganda” for Saddam Hussein after reporting the devastating effects of exposure to depleted uranium in Iraq.¹⁵⁸

However, it appears clear from the reports discussed above and accounts of military personnel that the U.S. knew that these weapons were capable of seriously damaging human health.¹⁵⁹ As U.S. Army Health Physicist Dr. Doug Rokke said after supervising the first cleanup of depleted uranium in 1991, “Depleted uranium is a crime against God and humanity.”¹⁶⁰

The fourth element is also the source of debate between humanitarian and human rights efforts and the militaries employing these weapons. As the U.S. argues, these weapons are used because they are more effective, and therefore they save lives.¹⁶¹ However, as Sheehan-Miles discussed, the

151. *Id.*

152. Statute of the International Court of Justice art. 38, ¶ 1(b) (adopted June 26, 1945; entered into force Oct. 24, 1945), <http://www.icj-cij.org/documents/?p1=4&p2=2>.

153. Rome Statute, *supra* note 149.

154. *Id.*

155. *Id.*

156. *Id.*

157. Westerman, *supra* note 26.

158. *Id.*

159. Ghoshray, *supra* note 1, at 701.

160. *Id.* at 703.

161. *Id.* at 702.

military conducted the majority of anti-tank operations effectively by the use of tungsten rounds.¹⁶² Weapons without depleted uranium were equally effective tools at defeating the enemy. There is no quantifiable evidence that suggests depleted uranium munitions provide a significant advantage during war operations. Thus, the question is whether the damage done to the civilian population should be regarded as excessive in relation to the effectiveness of the military objective, or if the depleted uranium weapons were necessary. In that respect, depleted uranium does not have a redemptive aspect. Allowing the use of depleted uranium to go unrestricted will only encourage future military operations to disregard its potential effects on civilians and the environment.¹⁶³

It would be reasonable to outlaw these weapons through an international measure. Following along the intent of the Rome Statute excerpt above, the Additional Protocol I of the Geneva Convention further lays a foundation to argue against depleted uranium. Relating to the use of weapons specifically, Articles 35 and 36 state:

1. In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited. 2. It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause *superfluous injury or unnecessary suffering*. 3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, *long-term and severe damage to the natural environment*.¹⁶⁴

When studying, developing, acquiring, or adopting a new weapon, a High Contracting Party must determine whether the Protocol or any other international law would prohibit the use of the new weapon.¹⁶⁵

First, this paragraph clearly establishes that a state's right to choose the methods or means of warfare is not unlimited.¹⁶⁶ This element further relates to the balancing test discussed above and the proportionality principle. The second sentence builds upon this general foundation by prohibiting the use of any weapons, projectiles, or other materials and

162. *Impacts of War*, *supra* note 52, at 630.

163. *Id.* at 638.

164. Geneva Convention, Protection of Victims of International Armed Conflicts (Protocol I) June 8, 1977, <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Article.xsp?action=openDocument&documentId=0DF4B935977689E8C12563CD0051DAE4> (emphasis added).

165. *Treaties and States Parties*, *supra* note 116.

166. *Id.*

methods that will cause superfluous injury, or unnecessary suffering.¹⁶⁷ The effects of depleted uranium fall within the meaning of superfluous injury or unnecessary suffering because of their present and continuous long-term effects on civilian populations.¹⁶⁸

Furthermore, the paragraph continues to state that long-term and severe damage to the environment is also prohibited.¹⁶⁹ Depleted uranium remains in the soil and the water sources of affected areas.¹⁷⁰ As a result, critics of depleted uranium argue that the environment will suffer due to the dust's toxic and radioactive nature.¹⁷¹ Once in the soil, depleted uranium can pollute the environment and create up to a hundredfold increase in uranium levels in ground water, according to the U.N. Environmental Program.¹⁷² As noted previously, the half-life of depleted uranium is approximately 4.5 billion years.¹⁷³ This extended half-life effectively means that the toxic and radioactive properties of the substance will remain in the environment forever.¹⁷⁴ The long-term presence of depleted uranium violates the protocol because the damage to the environment will increase unless the use of depleted uranium ceases.

Finally, the paragraph ends with a charge upon all states to determine whether their employment of a specific weapon would violate any of the aforementioned elements.¹⁷⁵ It appears that the U.S. has not fulfilled this obligation: the U.S. issues documents warning personnel of the dangers of depleted uranium, yet simultaneously insists the substance presents no notable risk. As discussed above, the U.S. is not a party to the Additional Protocol. However, the Protocol has become a widely accepted document with 174 parties. The U.S. is one of only three states that have signed, but not ratified the Protocol.¹⁷⁶ The Geneva Convention itself is customary international law, and the Additional Protocol I should also be regarded as such. Indeed, Protocol I reaffirms elements contained within the original four Geneva Conventions that are already customary international law and binding among all states, regardless of ratification or acceptance.¹⁷⁷

167. *Id.*

168. *Id.*

169. *Id.*

170. Mills, *supra* note 8.

171. *Id.*

172. *Id.*

173. *Id.*

174. *Id.*

175. *Treaties and States Parties*, *supra* note 116.

176. *Id.*

177. Cornelio Sommaruga, *Appeal by the International Committee of the Red Cross on the 20th Anniversary of the Adoption of the Additional Protocols of 1977*, INT'L REV. RED CROSS (Oct. 31, 1997), <https://www.icrc.org/eng/resources/documents/article/other/57jnuux.htm>.

The principle of proportionality, as well as supporting international agreements, should preclude any use of depleted uranium for combat purposes. The parameters of these international agreements should bind the U.S., even if they have not achieved ratification within the U.S. The long-term harm on veterans, civilian populations, and the environment should be self-evident such that weapons should not be utilized for warfare. Even without specific laws prohibiting depleted uranium, use of these weapons should be deemed unjust.

IV. THE MARTENS CLAUSE: A PERPETUAL SHIELD AGAINST WAR CRIMES AND HUMANITARIAN VIOLATIONS

Fyodor Fyodorovich Martens, born in 1845, was a Russian jurist, diplomat, and publicist who would eventually have an everlasting influence on humanitarian law and warfare.¹⁷⁸ Although the man came from quite humble beginnings, his time attending St. Petersburg University was well spent.¹⁷⁹ As Martens himself thought, the abolition of war and its ultimate end in the immediate or more distant future is a purely utopian ideal.¹⁸⁰ He was of the opinion that the only solution compatible with the “humane goals of law” was to limit the “horrors of war” by utilizing clearly-defined rules that all states would accept.¹⁸¹ These rules could prevent further human suffering during times of war—a prospect that was supported even before the horrors of World War I.¹⁸²

In 1899, Martens achieved an idealistic victory at the First World Peace Conference in The Hague, where he authored the Conference’s program.¹⁸³ Martens proposed a compromise between differing state opinions of whether occupied territories had an unlimited right of resistance.¹⁸⁴ His solution became known as the Martens Clause, and first appeared in the preamble of the 1899 Hague Convention (Hague II).¹⁸⁵ It read:

178. Vladimir Pustogarov, *Fyodor Fyodorovich Martens (1845-1909)- A Humanist of Modern Times*, INT’L REV. RED CROSS (June 30, 1996), <https://www.icrc.org/eng/resources/documents/article/other/57jn52.htm>.

179. *Id.*

180. *Id.*

181. *Id.*

182. *Id.*

183. *Id.*

184. *Id.*

185. Rupert Ticehurst, *The Martens Clause and the Laws of Armed Conflict*, INT’L REV. RED CROSS (Apr. 30, 1997), <https://www.icrc.org/eng/resources/documents/article/other/57jnhy.htm>.

Until a more complete code of the laws of war is issued, the High Contracting Parties think it right to declare that in cases not included in the Regulations adopted by them, *populations and belligerents remain under the protection and empire of the principles of international law*, as they result from the usages established between civilized nations, from the laws of humanity, and the requirements of the public conscience; . . .¹⁸⁶

The differences Martens intended to settle concerned force used against civilians that took up arms against an occupying force, and whether they should be treated as lawful combatants or *frans-tireurs*, subject to execution.¹⁸⁷ In that context, the Martens Clause is meant to put the protection of the human person as international law's ultimate objective.¹⁸⁸ Accordingly, the protection of human life with regard to the more recent conflicts in Iraq, Afghanistan, and the Balkans also are of paramount importance, codified by a piece of international law that dates back to 1899.

However, this language has undergone changes throughout the years of drafting and redrafting the laws of war. The language was modified in the Hague Convention of 1907 (Hague IV), reading:

Until a more complete code of the laws of war has been issued, the High Contracting Parties *deem it expedient* to declare that, in cases not included in the Regulations adopted by them, the inhabitants and the belligerents remain under the *protection and the rule of the principles of the law of nations*, as they result from the usages established among civilized peoples, from the laws of humanity, and the *dictates of the public conscience*.¹⁸⁹

Although the changes in the language seem minor, the language is strengthened through using the words “expedient” and “dictates.” “Expedient” strengthens the concept that, although a formal rule may not yet be established, the principles remain an underlying force of international law that do not require formal recognition. Further, the

186. Hague Convention 1899, 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, <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Article.xsp?action=openDocument&documentId=9FE084CDAC63D10FC12563CD00515C4D> (emphasis added).

187. Ticehurst, *supra* note 185.

188. Pustogarov, *supra* note 178.

189. Hague Convention 1907, Convention (IV) Respecting the Laws and Customs of War on Land, <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Article.xsp?action=openDocument&documentId=BD48EA8AD56596A3C12563CD0051653F> (emphasis added).

“dictates of the public conscience” requires that the international community act to protect human life when the general public views an action or practice to be against humanity.

This clause did not appear later in the Geneva Conventions of 1949, but did appear most recently in Protocol I.¹⁹⁰ This modification created an excerpt of the clause, to reaffirm its modern relevance: “Recalling that, in cases not covered by the law in force, the human person remains under the protection of the principles of humanity and the dictates of the public conscience.”¹⁹¹ Although, the 1949 Conventions did not include this clause, Protocol I included it for two reasons. First, although international law concerning warfare has become increasingly expansive and detailed, it is impossible for any single codification to encompass every possibility or every future development in warfare.¹⁹² Therefore, the Martens Clause denies that current law permits the use of a weapon merely because laws have not yet explicitly prohibited those weapons.¹⁹³ In the present case, this argument would apply to the use of depleted uranium armaments and armors in recent international conflicts. Although no current law or convention prohibits their use, the Martens Clause outlaws depleted uranium weapons, which cause everlasting harm to civilian and veteran populations.¹⁹⁴

Secondly, this clause supports the continuing applicability of pre-established principles from within the previous conventions.¹⁹⁵ These principles, found in conventions to which the U.S. is and will continue to be party, remain controlling regardless of future developments in military technology. Armed conflicts have used depleted uranium since 1990,¹⁹⁶ but its use does not escape the scrutiny of the laws and principles established since 1899 merely because it has not been identified by name.

The Martens Clause applies independently of the treaties and conventions that contain it.¹⁹⁷ The principles of international law apply in all armed conflicts, regardless of their contemporary nature;¹⁹⁸ the

190. INT'L COMM. OF THE RED CROSS [ICRC], COMMENTARY ON THE ADDITIONAL PROTOCOLS OF 8 JUNE 1977 TO THE GENEVA CONVENTIONS OF 12 AUGUST 1949, at 987 (Yves Sandoz et al. eds., 1987), http://www.loc.gov/tr/frd/Military_Law/pdf/Commentary_GC_Protocols.pdf [hereinafter COMMENTARY].

191. *Id.* at 1337 (emphasis removed).

192. *Id.* at 38–39.

193. *Id.* at 39.

194. *Id.*

195. *Id.*

196. *Id.*

197. *Id.*

198. *Id.*

principles apply whether or not current treaty law provides for the particular case, and whether or not a specific treaty binds the parties to the conflict.¹⁹⁹

Varied interpretations of the Martens Clause exist, none necessarily more or less valid than the other. In its advisory opinion concerning the legality of the threat or use of nuclear weapons, the International Court of Justice made multiple references to the Martens Clause.²⁰⁰ The court first refers to this clause in the Hague Convention of 1899.²⁰¹ Subsequently, the court recounted interpretations of the Martens Clause that address the rapid changes in military technology over the decades since its creation.²⁰² In conformity with this principle, the court explained that even at its early stages, humanitarian law prohibited certain types of weapons.²⁰³ This prohibition was due to the weapons' indiscriminate effect on combatants and civilians, and their unnecessary harm.²⁰⁴ The court followed to say that if the use of a weapon does not comply with humanitarian law, neither does the threat of its use.²⁰⁵ The language is clear that weapons violating these established principles of law have no place in armed conflict—nor does the threat of such use. The clearly documented use of depleted uranium demonstrates indiscriminate effects on civilian populations and combatants.²⁰⁶

In quoting its *Corfu Channel* opinion, the court noted the “elementary considerations of humanity” are principles enshrined in the Hague and Geneva Conventions.²⁰⁷ The Martens Clause provides that these fundamental principles remain relevant, regardless of work addressing a specific weapon.²⁰⁸ The court continued to assess nuclear weapons as they were understood in light of World War II.²⁰⁹ Observing that simply because these weapons were not specifically included in the conferences of 1949 and 1974–77, the court would be incorrect to conclude that the established rules and principles of humanitarian law did not also apply to nuclear weapons.²¹⁰ International jurisprudence demonstrates that the Martens

199. *Id.*

200. Legality of the Threat or Use of Nuclear Weapons, 1996 I.C.J. Rep. 226, ¶¶ 78, 84, 87 (July 8), <http://www.icj-cij.org/docket/files/95/7495.pdf> [hereinafter Legality of the Threat or Nuclear Weapons].

201. *Id.*

202. *Id.* ¶ 78.

203. *Id.*

204. *Id.*

205. *Id.*

206. Fahey, *supra* note 5.

207. Legality of the Threat or Use of Nuclear Weapons, *supra* note 200, at ¶ 79.

208. *Id.* ¶¶ 83–84.

209. *Id.*

210. *Id.* ¶ 86.

Clause continues to be relevant in addressing modern-day concerns over weapons used in armed conflict.²¹¹

Additionally, U.S. jurisprudence has made use of the Martens Clause in the case *United States v. Krupp*.²¹² As part of the Nuremberg Trials, the tribunal quoted the exact language as it first appeared in the 1899 Hague Convention.²¹³ The U.S. tribunal stated that this clause was much more than a “pious declaration.”²¹⁴ The tribunal continued to describe what it referred to as a general clause as “making the usages established among civilised nations, the laws of humanity[,] and the dictates of public conscience into [a] legal yardstick”²¹⁵ The tribunal held that this “legal yardstick” applies if and when specific provisions of a convention or regulation do not cover certain cases occurring in warfare.²¹⁶ Accordingly, U.S. jurisprudence has also given a valid and vast interpretation to exactly how the Martens Clause must apply.²¹⁷ This jurisprudence arose when the U.S. first had insurmountable influence over the outcome of one of human history’s largest international conflicts. With this definition too, it is clear that when specific conventions or treaties are silent on an issue concerning the previously mentioned principles, the Martens Clause is the safeguard to protect against those failings.

At its most narrow, the Clause provides that customary international law continues to apply even after the adoption of a treaty norm.²¹⁸ The more appropriate and evident interpretation, however, holds that treaty law is always evolving and never fully complete. Therefore, something that is not expressly prohibited by our *jus in bello* jurisprudence does not become automatically permitted.²¹⁹ Further, the continued modification of the language lends supplemental evidence that the established principles of international law are meant to be persistent despite changes in time and circumstance.

Arguments in defense of technology such as depleted uranium often fall within a “military necessity” argument, as discussed above.²²⁰

211. *Id.* ¶ 87.

212. U.S. WAR CRIMES COMM., LAW REPORTS OF TRIALS OF WAR CRIMINALS, VOL. X: THE I.G. FARBEN AND KRUPP TRIALS 133 (1949), http://www.loc.gov/rr/frd/Military_Law/pdf/Law-Reports_Vol-10.pdf.

213. *Id.*

214. *Id.*

215. *Id.*

216. *Id.*

217. *Id.*

218. Ticehurst, *supra* note 185.

219. *Id.*

220. *See supra* Parts I and II (stating the government’s argument in defense of using depleted uranium, namely its “increased effectiveness at protecting allied armor and destroying enemy armor”);

However, military necessity offers no defense to the clause either. Military necessity is limited to measures that are essential to the success of an operation and are legal under the principles of international law; military necessity is always subject to the Martens Clause.²²¹ Regardless of whether depleted uranium is an effective weapon, the bounds of the Martens Clause snare its use due to depleted uranium's abhorrent and permanent effects on civilian and veteran populations.

V. CONCLUSION

Depleted uranium should never be used as a weapon. The devastation to the environment and the human population is evidenced by multiple reports of scientists and doctors in both the U.S. and abroad. However, the U.S. government continues to avoid the issue to maintain a thrifty way to dispose of its nuclear waste. Unfortunately, it is the men and women fighting in these wars and the innocent civilian populations who pay the ultimate price. The U.N. must move toward an absolute ban on depleted uranium weapons. The U.S. should admit its irresponsibility in using depleted uranium weapons and cooperate with the U.N. to see an international convention come to fruition.

Multiple international documents, as well as domestic sources, establish a strong history of enforcing humanitarian principles and fundamental rights during war. Regardless of technology or tactics, fundamental principles of international law prohibit indiscriminate and unnecessary harm toward civilian populations and combatants. The U.S. and other countries implementing depleted uranium weapons must not be on the wrong side of history again.

see also Impacts of War, *supra* note 52, at 630 (source indicating that the military "tends to overstate the effectiveness of the weapon to some extent").

221. COMMENTARY, *supra* note 190, at 399.