

16 The 1980 Certain Conventional Weapons Convention

16.o. Introduction

Two multinational treaties, particularly, have a potential impact on combatants. Violation of either the 1954 Hague Convention for the Protection of Cultural Property (Chapter 15) or the 1980 Convention on Certain Conventional Weapons (CCW) could lead to war crimes charges against soldiers in the field. This chapter examines the CCW, the full title of which is the “Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May be Deemed to be Excessively Injurious or to Have Indiscriminate Effects.” In the maze of law of armed conflict/international humanitarian law (LOAC/IHL) acronyms, do not confuse the CCW, the Certain Conventional Weapons treaty, with the CWC, the Chemical Weapons Convention (Chapter 17).

Antipersonnel landmines, white phosphorus munitions, laser weapons, flamethrowers, cluster bombs, improvised explosive devices (IEDs) – these weapons and munitions are all subjects of, or are implicated by, the CCW, which seeks to define their lawful and unlawful uses.

Restrictions on weapons are hardly a modern conception. “The epic poem *Mahabharatha*, [200 B.C.–200 A.D.] forbids the use of ‘hyper-destructive’ weapons: ‘Arjuna, observing the laws of war, refrained from using the *pasupathastra* . . . because when the fight was restricted to ordinary conventional weapons, the use of extraordinary or unconventional types was not even moral, let alone in conformity with religion or the recognized rules of warfare.’”¹ We twenty-first-century mortals may not know what the *pasupathastra* was but, out of humanitarian concerns, it went unused in combat.* The Lateran Council of 1132 attempted to outlaw the crossbow and arbalest by declaring them ‘unchristian’ weapons.² In his 1625 masterwork, *De Jure Belli ac Pacis*, Grotius writes,

¹ Leslie C. Green, *Essays on the Modern Law of War*, 2d ed. (Ardsley, NY: Transnational, 1999), 330, citing Nagendra Singh, “The Distinguishable Characteristics of the Concept of the Law as it Developed in Ancient India,” in *Liber Amicorum for Lord Wilberforce* (1987), 93.

* The *pasupathastra*, also spelled *pashupatastra*, was Siva’s mythological personal weapon, capable of destroying all beings and creation itself.

² G.I.A.D. Draper, “The Interaction of Christianity and Chivalry in the Historical Development of the Law of War,” 5 *Int’l Rev. of the Red Cross* (1965), 3, 19. W. Hays Parks, “Conventional Weapons and Weapons Reviews,” in 8 *Yearbook of IHL* (2005), 55, 61: “The author could buy a meal in a fine restaurant were he given one euro for every time he has heard a lecture on the law of war related to weapons begin with reference to the condemnation and banning of the crossbow by the second Lateran Council in 1139. Seldom does the lecturer acknowledge it was an arms control failure, or explain why.”

“Different in a degree from poisoning [of an enemy] . . . is the poisoning of javelins. This is a doubling of the causes of death . . . But this is also contrary to the law of nations . . .”³ The 1868 St. Petersburg Declaration Renouncing the Use in War of Certain Explosive Projectiles, banned the use of explosive rounds against individuals, and dum-dum bullets are prohibited by Declaration IV.3 of the 1899 Hague Peace Conference.⁴ In a similar vein, the League of Nations sponsored a 1932–1934 Disarmament Conference.

There were efforts at regulating or prohibiting weapons or weapons systems in the post-World War I era, including military aircraft, submarines, machineguns, chemical and bacteriological weapons and incendiary weapons. Each endeavour proved either unsuccessful or of limited success, either because each weapon or weapon system had proven military value and/or due to government and popular skepticism of arms control agreements . . .⁵

After World War II, the influence of the International Committee of the Red Cross (ICRC) grew strong. It proposed draft rules that would limit or ban weapons it perceived as being particularly dangerous to civilian populations, or having indiscriminate effect; weapons such as incendiaries, chemical weapons, and landmines.⁶ The U.S.–Vietnam conflict, in which American use of napalm, flechettes, cluster bombs, and exotic weapons was widely publicized, initiated the weapons debate anew.

With a weapons treaty in mind, the ICRC hosted weapons limitation conferences in 1974, 1976, and 1977, but the ICRC was concerned that involvement in a weapons-related treaty would detract from its humanitarian role and, furthermore, that its involvement might force an acknowledgment of the LOAC/IHL core concept of military necessity, which the ICRC has long avoided. As the conferences ended, the participants resolved that further negotiations be conducted under the auspices of the United Nations (UN). Those UN-sponsored negotiations did continue, in 1979 and 1980. Throughout the many conferences, “[g]overnments were not prepared to conclude that pre-existing weapons caused superfluous injury or adopt new rules that prohibited employment of historically lawful weapons against combatants. Last-minute resolution of difficult issues, particularly relating to incendiary weapons, resulted in the adoption of a foundation treaty and three protocols on 10 October 1980.”⁷ As the title indicates, the 1980 Convention applies only to conventional weapons. Chemical, biological, and nuclear weapons are outside its scope.

16.1. The 1980 U.N. Certain Conventional Weapons Convention

The CCW and its five protocols (two further protocols have been added to the original three) rests on three fundamental principles of customary international law: The right of

³ Hugo Grotius, *De Jure Belli Ac Pacis*, vol. two, Francis W. Kelsey trans. (Buffalo, NY: William Hein reprint, 1995), Book III, Chapter IV, XVII, 652–3.

⁴ “. . . The contracting Parties agree to abstain from the use of bullets which expand or flatten easily in the human body, such as bullets with a hard envelope which does not entirely cover the core or is pierced with incisions. . . .” There were twenty-four original signatories. Today, the prohibition is considered customary law.

⁵ Parks, “Conventional Weapons and Weapons Reviews,” *supra*, note 2, at 67–8.

⁶ Robert J. Mathews, “The 1980 Convention on Certain Conventional Weapons: A Useful Framework Despite Earlier Disappointments,” 844 *Int'l Rev. of the Red Cross* (2001), 991, 992.

⁷ Parks, “Conventional Weapons and Weapons Reviews,” *supra*, note 2, at 76.

a belligerent to adopt means of warfare is not unlimited, belligerents must always distinguish between civilians and combatants, and weapons calculated to cause unnecessary suffering are prohibited.

Exploding bullets and bayonets with serrated edges are examples of weapons and munitions that cause unnecessary suffering. They increase suffering without increasing military advantage. “[A] weapon is not banned on the ground of ‘superfluous injury or unnecessary suffering’ merely because it causes ‘great’ or even ‘horrendous’ suffering or injury.”⁸ The distinction is between injury and suffering that is avoidable and that which is unavoidable.

The 1980 CCW’s brief foundational, or framework, treaty, eleven articles in length, is merely a preambular introduction to the protocols that follow, restating accepted noncontroversial basics of LOAC/IHL: Every state has the duty to refrain from the threat or use of force against other states; the right of parties to an armed conflict to choose methods or means of warfare is not unlimited; and, in cases not covered by the Convention or other agreements, civilians and combatants remain protected by international law principles derived from established custom, principles of humanity, and the dictates of public conscience – the Martens clause. (Chapter 2, section 2.7.1.)

Initially, the foundation treaty specified that the CCW and its three protocols applied only in common Article 2 “situations,” including 1977 Additional Protocol I CARs conflicts. (Chapter 4, section 4.2.1.3.1.) In December 2001, the scope of application of the Convention’s protocols was amended to include common Article 3 situations. (Article 1.2). The foundation treaty, like the 1949 Geneva Conventions, specifies that, should one party to an armed conflict not be bound by the CCW or one of its protocols, other parties to the conflict who have ratified the treaty and that protocol remain bound (Article 7.1).

To become a party to the CCW, states must ratify the foundation treaty *and* two or more of the three Protocols (Article 4.3). As of this writing there are five Protocols. Ratification of two of them still remains the requirement for accession. The foundation treaty provides for amendment of the Convention (Article 8.1) and for “additional protocols relating to other categories of conventional weapons not covered” by existing protocols (Article 8.2). In future years, additional protocols will no doubt be added.

The Convention’s foundation treaty has been ratified by 108 states, with state accessions continually added at a modest rate. The United States ratified the foundation treaty in 1995.

In its original form, the CCW fell short of hopes of states that wanted to ban or restrict a range of conventional weapons. Ratifications by African states were (and continue to be) slow. Lacking compliance-monitoring provisions or sanctions for violations, the CCW was initially “a major disappointment for its proponents, who felt that military considerations had been given much greater priority than humanitarian concerns.”⁹ The provisions for amendment and added protocols were put to use to meet those initial disappointments.

In 1996, Protocol II was amended, constituting a material advance over the original version. Further Review Conferences led to new CCW additions. In 1995, a fourth

⁸ Yoram Dinstein, *The Conduct of Hostilities Under the Law of International Armed Conflict* (Cambridge: Cambridge University Press, 2004), 59. Footnote omitted.

⁹ Mathews, “The 1980 Convention on Certain Conventional Weapons,” *supra*, note 6, at 996.

protocol on blinding lasers was adopted, and in 2003 a fifth protocol, on explosive remnants of war, was added. Proponents continue to press for further restrictions and bans on a variety of weapons and munitions – anti-vehicle mines, naval mines, fuel-air explosives, flechettes, and depleted-uranium munitions, for example.

SIDEBAR. Hays Parks, the U.S. Representative to several ICRC Conferences on weapons, relates an instructive account illustrating the need for judge advocates and other combatants to be aware of weapons-related legal issues. “[I]n January 2006 a US Army sniper in Iraq went to an ammunition supply point to draw ammunition for his rifle. The ammunition is the 7.62 . . . open-tip M118LR (for ‘Long Range’) cartridge in use by snipers in each of the four U.S. military services. It contains a tiny aperture at its nose for external ballistics, i.e., enhanced long range accuracy. The aperture is not a ‘hollow point’ as that term has been associated with the 1899 Hague Declaration Concerning Expanding Bullets. It contains no skiving or other characteristics that would cause it to ‘expand or flatten easily,’ as prohibited by the [Hague Declaration]. Legal reviews supported by wound ballistic tests have confirmed the legality of open-tip designs¹⁰ . . . Open-tip rifle ammunition is in the inventory and has been employed by snipers in the military services of several nations because of its superior long range accuracy.”

“An individual unaware of the legal review of the M118LR [bullet] opened one of the boxes the sniper was receiving, incorrectly identified the ammunition as a ‘hollow point’ and refused to issue the ammunition to the sniper. The issue was brought to the attention of the staff judge advocate of the sniper’s command . . . A copy of the legal review [of M118LR ammunition] was forwarded electronically to the staff judge advocate . . . reconfirming its legality, coordinated with and concurred in by the Offices of the Judge Advocates General of the Army, Navy and Air Force, and the Office of the Staff Judge Advocate to the Commandant of the Marine Corps. The issue was resolved quickly because legal reviews had been conducted.”¹¹

Had the staff judge advocate been aware of the legal review (written by Hays Parks, of course), she could have avoided an issue that drew negative international press coverage of purported U.S. use of “hollow point” ammunition, as well as harming the career of the sniper, who (until the issue was resolved) was relieved of duty for alleged use of unlawful ammunition.¹²

16.1.1. *CCW Protocol I, Concerning Nondetectable Fragments*

CCW Protocol I, along with Protocols II and III, came into force in 1980, at the same time as the foundation treaty. Protocol I reads in its entirety, “It is prohibited to use any weapon the primary effect of which is to injure by fragments which in the human body escape detection by X-rays.”

CCW framers feared the production and use of glass bullets, and the difficulty in treating wounds involving them, for which X-rays would be useless. There was almost

¹⁰ “Memorandum for Commander, United States Army Special Operations Command; Subject: Sniper Use of Open-Tip Ammunition,” (Sept. 23, 1985), 86 *The Army Lawyer* (Feb. 1991).

¹¹ Parks, “Conventional Weapons and Weapons Reviews,” *supra*, note 2, at 106–7. Footnotes omitted.

¹² Bill Gertz and Rowan Scarborough, “Sniper Rounds,” *Washington Times*, Jan. 20, 2006.

no evidence of any effort to develop such bullets, but the framers were also concerned about munitions possibly causing injury by nondetectable plastic or wood fragments that could impede medical treatment and increase unnecessary suffering. In the U.S.–Vietnam conflict, there had been criticism of U.S. cluster bomb submunitions that employed plastic pieces in the arming mechanism. On detonation, small plastic shards could go undetected in X-rays of troops and civilians wounded by them. (The text of Protocol I specifies that it is concerned with weapons *the primary effect of which* is to injure by fragments. The primary effect of cluster bombs surely is not to injure by fragments.)

Protocol I banned a weapon that did not exist and “[i]t was adopted without any controversy.”¹³ Indeed, when the CCW opened for signature, no weapon using nondetectable fragments as a wounding or lethal agent was under development. “It is tempting to observe that this was the main reason for the virtually instantaneous and unanimous consent to Protocol I.”¹⁴

So far, CCW Protocol I has been ratified by 105 states, including the United States. Additional states ratify each year. It may be argued that the ban now represents customary international law, although there is no state practice to support that position.

16.1.2. CCW Protocol II, Concerning Mines and Booby-Traps*

Protocol II’s full title is “Protocol in Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices.” Much like Protocol I, Protocol II pushed on an open door. “Protocol II . . . does not prohibit their use per se, but does prohibit use which is indiscriminate or directed against civilians.”¹⁵ The drafting of the Protocol was relatively straightforward and noncontentious, perhaps because it follows generally accepted military doctrine for the employment of antipersonnel landmines.¹⁶

Landmines were first used in significant numbers by Confederates in the U.S. Civil War, when they were known as “torpedoes.” Since that time, until the late twentieth century, their use in armed conflicts has grown exponentially. Protocol II does not apply to all landmines, but to antipersonnel mines and, apparently, antivehicle mines. Antiship mines, whether at sea or in inland waterways, are expressly excluded from coverage. Nor are Claymore mines – above-ground, tripwire, or command detonated antipersonnel mines – covered.¹⁷

An antipersonnel “mine” is a munition placed under, on, or near the ground; “primarily designed to be exploded” by pressure, proximity, or contact with a person or vehicle;

¹³ Jean-Marie Henckaerts and Louise Doswald-Beck, eds., *Customary International Humanitarian Law*, vol. I, *Rules* (Cambridge: Cambridge University Press, 2005), Rule 79, at 275.

¹⁴ David Turns, “Weapons in the ICRC Study on Customary International Humanitarian Law,” 11–2 *J. of Conflict & Security L.* 201, 227.

* When Protocol II is quoted here, the reference is to Protocol II as amended on May 3, 1996. See Chapter 16, section 16.1.2.1.

¹⁵ Adam Roberts and Richard Guelff, *Documents on the Laws of War*, 3d ed. (Oxford: Oxford University Press, 2000), 517.

¹⁶ Parks, “Conventional Weapons and Weapons Reviews,” *supra*, note 2, at 77.

¹⁷ A command-detonated munition is remotely detonated by an individual observing the kill zone. Protocol II, Art. 5.6, is the Claymore exception. It describes Claymore-like mines, saying they are exempt from the restrictions on marked minefields (Art. 5.2.(a)) if they are emplaced for no longer than seventy-two hours and remain in proximity to the unit using them, and civilians are kept clear – all characteristic of Claymores.

and designed to injure or kill people (Articles 2.1, 2.3). This definition would include antitank and antivehicle mines, as well as antipersonnel mines. “Thus, where reference is made throughout the treaty to ‘mines’ it is understood that such reference applies to both anti-personnel and anti-vehicle mines.”¹⁸ The definitional term, “primarily designed” was added to clarify that antitank mines with antihandling elements are not included in the definition of antipersonnel mines – a critical issue in U.S. Senate advice and consent debates. U.S. Army mine doctrine was to lay antipersonnel and antitank minefields together, to hinder enemy personnel from detecting and removing antitank mines. Now, individual antitank mines must be equipped with antihandling features.¹⁹

A booby-trap, in contrast, is any apparently harmless object designed, constructed, or adapted to kill or injure, which detonates when a person disturbs or approaches it (Article 2.4). A pair of binoculars, for instance, that has been filled with explosives that detonate when the binoculars are picked up is a booby-trap. Booby-traps commonly alert friendly troops to the presence of hostile soldiers, hamper mine-removal efforts, and delay an enemy advance. “In the opinion of a number of experts, the use of booby-traps for some of those purposes was militarily essential.”²⁰ Even when used in ways conforming to the Protocol, booby-traps remain subject to the principle of distinction.

“Other devices” include “improvised explosive devices designed to kill, injure or damage and which are actuated manually, by remote control or automatically after a lapse of time” (Article 2.5). IEDs became notorious in the U.S.–Iraq war. The CCW is one of their earliest references. “Other devices” also include the command-detonated Claymore antipersonnel mines.

When, or what, use of antipersonnel mines, booby-traps, or IEDs is prohibited by Protocol II? They may not be designed to detonate upon contact with a mine detector (Article 3.5), they may not be undetectable (Article 4),²¹ they may not be employed against a civilian population or civilian objects (Article 3.7), and they may not be deployed indiscriminately (Article 3.8). Civilian objects that may not be booby-trapped include medical supplies, gravesites, and cultural or religious property.²² “All feasible precautions shall be taken to protect civilians from the effects of weapons to which this Article [3] applies.” These are among the more significant of the numerous Protocol II restrictions on the use of antipersonnel mines.

Booby-traps, those above-ground apparently harmless objects, are addressed in Article 7. Booby-trapping of the wounded or dead is prohibited, as is booby-trapping children’s toys or other objects specially designed for children’s feeding, health, hygiene, clothing, or education. Religious objects may not be booby-trapped, nor may historic monuments or places of worship or cultural objects.

A confusing prohibition (Article 7.2) forbids booby-trapping “apparently harmless portable objects . . . specifically designed and constructed to contain explosive material.”

¹⁸ Maj. Michael Lacey, “Passage of Amended Protocol II,” *The Army Lawyer* (March 2000), 7–8.

¹⁹ *Id.*, at 9.

²⁰ *Conference of Government Experts on the Use of Certain Conventional Weapons* (Geneva: ICRC, 1975), 68.

²¹ Protocol II’s 1980 version did not prohibit nondetectable mines, leading several enterprising states to produce nondetectable antipersonnel mines encased in plastic. A nonbinding technical annex to Amended Protocol II requires all antipersonnel mines to have at least eight grams of iron in a single mass to ensure they register on mine detectors.

²² Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, *supra*, note 13, Rule 80, at 278.

“In other words, ‘a belligerent may booby-trap a camera, but it may not manufacture booby-traps which appear to be cameras’.”²³ You may booby-trap as many cameras as you can find, but you may not employ factory-made exploding cameras.

Protocol II also addresses the required recording and marking of minefields, and their removal following hostilities (Article 3.2). It addresses remotely delivered antipersonnel mines – those delivered by air, or artillery – with slightly fewer restrictions than those on manually emplaced mines. American forces rely heavily on remotely delivered mines, so this provision is significant to the United States. In a provision urged by the United States, Protocol II requires that remotely delivered mines contain self-destructing or self-deactivating mechanisms (Article 6.3). The 1992 amendment to Protocol II, besides making it applicable to common Article 3 armed conflicts, in addition to common Article 2 conflicts, requires state Parties to provide for penal sanctions for persons who willfully kill or seriously injure civilians through misuse of antipersonnel mines or booby-traps (Article 14.2).

Although Protocol II is not customary law,²⁴ it is significant because it affirms the lawfulness of the use of mines, booby-traps, and other devices against combatants, “i.e., that their injury, often severe, frequently fatal, does not constitute superfluous injury.”²⁵ The United States ratified Protocol II, with reservations, in 1995. Ninety-one other states have also ratified, with new accessions each year.

16.1.2.1. CCW Amended Mines Protocol II

After the CCW came into effect, it slowly gathered ratifications, but there was dissatisfaction with some provisions, particularly those relating to Protocol II antipersonnel landmines. After more than ten years, further negotiations led to Amended Protocol II, which strengthens and clarifies many of the initial Protocol II provisions. The United States has ratified the 1996 Amended Mines Protocol II. As of this writing, ninety-one other states have also ratified it. Negotiations on some changes were hard-fought, reflecting the disappointment of several states in the original Protocol and their desire to strengthen and tighten its provisions. Other states, satisfied with the original terms, argued to maintain the flexibility that the provisions represented.

The Amended Protocol extends the original Protocol’s scope of application to non-international armed conflicts (Article 1). Internal armed conflicts, like those in Cambodia and Angola, see the greatest use of antipersonnel mines and the highest number of civilian casualties. The Amended Protocol defines mines with greater detail and applies more stringent rules regarding their use (Articles 2–7). It also introduces prohibitions and limits on the transfer of antipersonnel mines (Article 8), and requires ratifying states to implement domestic law to deal with Protocol violations (Article 14). “Amended Protocol II, while representing an advance . . . has also been criticized . . . [It] ‘still fails to prohibit mines that do not self-destruct within a given period, and [does not ban] remotely-delivered mines. It also still lacks substantive verification or compliance mechanisms . . .’”²⁶

²³ Dinstein, *The Conduct of Hostilities*, supra, note 8, at 65. Citation omitted.

²⁴ Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, supra, note 13, Rule 81, at 282.

²⁵ Parks, “Conventional Weapons and Weapons Reviews,” supra, note 2, at 77.

²⁶ Roberts and Guelff, *Documents on the Laws of War*, supra, note 15, at 518, quoting a publication of the UN Dept. of Public Information.

16.1.2.2. The 1997 Ottawa Convention

CCW Protocol II should not be confused with the 1997 Ottawa Convention, which applies only to antipersonnel landmines.²⁷ Under Ottawa's stricter terms, state Parties undertake "never under any circumstances" to use antipersonnel landmines or to develop, produce, transfer, or acquire them. It also requires Parties to destroy existing stocks of antipersonnel mines. With 156 state Parties, and more added each year, the Ottawa Convention is approaching customary status (except for states that have been persistent objectors, like the United States). The United States believes that the Ottawa Convention fails to balance legitimate military requirements with humanitarian concerns.²⁸ Even in light of Ottawa, Protocol II, as amended in 1996, has vitality; it specifies limitations on the use of antitank mines, booby-traps, and other devices not addressed by the Ottawa Convention. Between Amended Protocol II and the Ottawa Convention, "[t]here is every reason to believe that the prohibition of anti-personnel mines will gradually be endorsed by customary international law."²⁹

SIDEBAR. The Ottawa Convention has a unique history and may point the way to future modifications of LOAC/IHL – to the consternation of major military powers. In 1992, disappointed with the outcome of Amended Protocol II, Ms. Jody Williams formed the International Campaign to Ban Landmines (ICBL), which was no more than a loose coalition of similarly minded small non-governmental organizations (NGOs) around the world. With no NGO experience, the ICBL pressed for national, then regional, then international measures to ban antipersonnel landmines altogether. In 1996, Canada hosted an ICBL meeting in Ottawa. The Canadian Foreign Minister, Lloyd Axworthy, challenged the group to write a simple, unambiguous ban treaty within one year which, surprisingly enough, the ICBL did. NGO groups from small and mid-sized states, working outside normal diplomatic channels, and not subject to the military objections of major warfighting states, combined to produce the Ottawa Treaty. In 1997, Ms. Williams shared the Nobel Peace Prize with the group she founded, the ICBL.³⁰ The Ottawa model could be the route to future LOAC/IHL modifications. Similar negotiating tactics were used in arriving at the 2008 Dublin Convention on Cluster Munitions.

16.1.2.3. U.S. Antipersonnel Landmines Policy

Recent U.S. practice with regard to antipersonnel landmines has been convoluted and burdened by domestic politics. In 1996, President Bill Clinton announced that the United States would no longer employ non-self-destructing antipersonnel mines, except

²⁷ Formal title: 1997 Ottawa Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction.

²⁸ John R. Crook, ed., "Contemporary Practice of the United States Relating to International Law," 102-1 *AJIL* (Jan. 2008), 190.

²⁹ Dinstein, *The Conduct of Hostilities*, supra, note 8, at 69.

³⁰ <http://nobelprize.org/nobel-prizes/peace/articles/williams/index.html>.

for training purposes, and on the Korean Peninsula to defend the demilitarized zone.³¹ In 1992, the United States banned the export of antipersonnel landmines and committed to employing no “persistent” (i.e., without self-destructing or self-deactivating mechanisms) landmines after 2010,³² and “ended use of all non-detectable anti-personnel and anti-vehicle landmines in 2005.”³³ That was followed, in 2004, by an announcement committing the United States “not to use any persistent landmines – neither anti-personnel nor anti-vehicle – anywhere after 2010.”³⁴ U.S. policy has been amended several times, and may be yet again. The controlling U.S. law (as opposed to policy) on antipersonnel landmines is the U.S.-ratified 1980 CCW Amended Mines Protocol II.

16.1.3. CCW Protocol III, Concerning Incendiary Weapons

It is prohibited in all circumstances to make any military objective located within a concentration of civilians the object of attack by air-delivered incendiary weapons. Using napalm against military targets located within concentrations of civilians, such as towns and villages, is also prohibited (Article 2). This “prohibits the type of attacks on cities that were common during the Second World War.”³⁵

Protocol III, entitled, “Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons,” like Protocol II on antipersonnel landmines, does not prohibit entirely the use of incendiary weapons. Again, history was a driving force in the Protocol’s creation.

The US Air Force’s use of napalm bombs in Vietnam had reinforced international concern about incendiary weapons. While some states at the 1970–80 weapons conference demanded a complete ban on such weapons, this was opposed by others . . . Arguments in favour of such weapons included their utility in ‘close air support’ . . . without causing disastrous collateral damage that would be caused by explosives.³⁶

Protocol III’s definition of “incendiary weapon,” contained in Article 1.1, is broad:

“Incendiary weapon” means any weapon or munition which is primarily designed to set fire to objects or to cause burn injury to persons through the action of flame, heat, or combustion thereof, produced by a chemical action . . .

- (a) Incendiary weapons can take the form of, for example, flame throwers . . . shells, rockets, grenades, mines, bombs . . .
- (b) Incendiary weapons do not include:
 - (i) munitions which may have incidental incendiary effects, such as illuminants, tracers, smoke or signaling systems;
 - (ii) munitions designed to combine penetration, blast or fragmentation effect, such as armour-piercing projectiles, fragmentation shells, explosive bombs and similar combined-effects munitions in which the incendiary effect is not specifically designed to cause burn injury to persons . . .

³¹ Statement by President Clinton, “U.S. Announces Anti-Personnel Landmine Policy (May 16, 1996), available at: <http://www.pub.whitehouse.gov/uri-res/12R?:pdi://oma.eop.gov.us/1996/5/16/7.text.1> >.

³² Crook, “Contemporary Practice of the United States Relating to International Law,” *supra*, note 28.

³³ *Id.*, at 190.

³⁴ U.S. Dept. of State announcement of Feb. 27, 2004, available at: <http://www.state.gov/t/pm/wra/c11735.htm>.

³⁵ U.K. Ministry of Defence, *The Manual of the Law of Armed Conflict* (Oxford: Oxford University Press, 2004), para. 6.12, fn. 41, at 110.

³⁶ Roberts and Guelff, *Documents on the Laws of War*, *supra*, note 15, at 517.

One might question Protocol III's utility, given the gaps in its application. It does not ban napalm or flamethrowers, both clearly incendiaries and, under the Protocol, both remain lawful weapons. "It is of interest to note that the experts the ICRC had brought together [in 1974, before negotiations were moved to the U.N.] were hopelessly divided on the question of whether the use of napalm was permissible or not . . ." ³⁷

The response is that any lawful weapon can be used in an unlawful way. Recognizing that there are legitimate instances of military necessity justifying the use of incendiaries, Protocol III defines the ways in which incendiaries may **not** be used. They may not be used directly against civilians or concentrations of civilians, or directly against civilian objects. Incendiary attacks on plant cover, such as forests, are prohibited unless the plant cover is used to cover or conceal combatants or military objects (Article 2.4).³⁸ Unlike civilians, combatants are not protected by the Protocol. "Use of weapons such as napalm and flamethrowers against combatant personnel [is] governed by the unnecessary suffering principle so that they should not be used directly against personnel but against armoured vehicles, bunkers, and built-up emplacements, even though personnel inside may be burnt . . ." ³⁹

"Protocol III contributed little from a practical standpoint inasmuch as its rules generally paraphrase pre-existing rules for all weapons. This was no surprise, given centuries of state practice of employment of fire as an anti-materiel and anti-personnel weapon."⁴⁰ Still, its reiteration of civilian protection is valuable. Protocol III has been ratified by 103 states, so far. The United States ratified in 2008.

16.1.4. CCW Protocol IV, Concerning Blinding Laser Weapons

Protocol IV, adopted in October 1995, prohibits the use and the transfer of weapons that cause permanent blindness. Concern had been building for some years over advances in laser-based weaponry, with human-rights groups calling for its ban.⁴¹ Weapons that blind are not new.

One of the most enduring images of the first World War was a photograph of a line of blinded soldiers being led from the battlefield after being exposed to phosgene gas. The inhumanity and cruelty . . . presented by the photo helped produce an outcry of world public opinion [against weapons that blind] . . . Recent developments in laser technology have made the proliferation of these weapons – many as small as a rifle – a real possibility.⁴²

Lasers offer the malignant possibility of blinding without the difficulties of storing dangerous chemical agents or the dangers to friendly troops presented by changes in wind direction. Their moral issues aside, "[t]he possibility of laser weapons capable

³⁷ Frits Kalshoven, *Reflections on the Law of War* (Leiden: Martinus Nijhoff, 2007), 381.

³⁸ 1980 CCW, Art. 2.4. This limited restriction is perhaps compensated for by the more rigorous provisions of the 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD Convention), although only seventy-three states, including the United States, have ratified the ENMOD Convention.

³⁹ U.K. Ministry of Defence, *The Manual of the Law of Armed Conflict*, supra, note 35, para. 6.12.6, at 112.

⁴⁰ Parks, "Conventional Weapons and Weapons Reviews," supra, note 2, at 78.

⁴¹ A.P., "Laser beams that could blind soldiers draw vitriol of human-rights groups," *Washington Times*, May 22, 1995, A6.

⁴² Lane Evans, "Laser Warfare's Blinding Effect," *Christian Science Monitor*, Aug. 15, 1995, 20.

of producing sudden and irreversible blindness in large numbers of battlefield personnel presents difficult, if not catastrophic, consequences, both for the individuals themselves and the societies to which they will return . . . Of all the various battlefield injuries, blindness of combatants would be by far the most serious, both to the soldier and to his or her country.”⁴³

Protocol negotiations were complicated by the emergence of missile-disabling lasers, as well as target-marking and range-finding lasers, necessary for many precision-guided munitions that reduced collateral damage to new lows. “Therefore, from a humanitarian as well as military point of view, complete elimination of all lasers from military operations was not practical or even desirable.”⁴⁴ In 1986, when battlefield lasers were still viewed as science fiction, their complete elimination was proposed in a draft resolution submitted to the ICRC by Sweden and Switzerland.⁴⁵ Meetings of experts followed, discussing whether lasers were in the category of weapons causing unnecessary suffering, negating the need for a new protocol. Initially, the United States was of that camp. “The fact that lasers are not indiscriminate in nature and that the blinding lasers in question would not inflict death created a particular difficulty . . .” among the experts.⁴⁶

Spurred by Chinese and American commercially produced laser weapons about to be marketed to their armed forces, and laser weapons research being conducted by at least six other states,⁴⁷ a campaign was mounted by the ICRC, joined by NGOs (and several prominent American politicians) to adopt a new treaty. Protocol IV is the result, ratified by ninety-four states as of this writing, with new states accessioning each year. Despite occasional allegations of lasers used as unlawful weapons,⁴⁸ “[t]here are no known instances of blinding laser weapons being developed, deployed or used by any State.”⁴⁹

There are legitimate military uses for lasers besides target designators for precision-guided munitions. There are two laser target designator systems and five “dazzler” laser systems in the U.S. military inventory, to be used when deadly force is not called for. They are employed to “dazzle” or disorient individuals or groups of enemy combatants, and drivers of vehicles approaching checkpoints, by glare or flash blindness, akin to a strong photographic flash or a vehicle’s high-beam headlights. Each of the five dazzler systems “are green laser devices that deliver a limited amount of force, at a distance, without causing injury . . . and can be hand-carried or mounted on individual – and crew-served weapons.”⁵⁰ They have a range of 200 meters in daylight and 370 meters in darkness. If used improperly, for example at short ranges of fewer than twenty meters, dazzlers may cause lasting injury but, “[t]hese lasers, under standard conditions of use would not cause

⁴³ Dr. R. DeVour, “Possible Psychological and Societal Effects of Sudden Permanent Blindness of Military Personnel Caused by Battlefield Use of Laser Weapons,” in Louise Doswald-Beck, ed., *Blinding Weapons* (Geneva: ICRC, 1993), 46, 51.

⁴⁴ Roberts and Guelff, *Documents on the Laws of War*, supra, note 15, at 517.

⁴⁵ Louise Doswald-Beck, “New Protocol on Blinding Laser Weapons,” 312 *Int’l Rev. of the Red Cross* (May–June 1996), 272.

⁴⁶ *Id.*

⁴⁷ Turns, “Weapons in the ICRC Study,” supra, note 14, at 233.

⁴⁸ Bill Gertz, “Trial Aims To Tie Russia To Laser Attack,” *Washington Times*, Oct. 7, 2002, 8.

⁴⁹ *Id.*

⁵⁰ Richard B. Jackson, “Lasers Are Lawful as Non-Lethal Weapons,” *The Army Lawyer* (Aug. 2006), 15. This comprehensive article specifies U.S. lasers and their characteristics, capabilities, and effects, as well as their testing regime.

eye injury.”⁵¹ Like all weapons, dazzler lasers were reviewed and found in compliance with the 1980 CCW and other applicable LOAC/IHL treaties before entering the military inventory.

Laser systems may be employed against military objectives, such as military optical equipment – the sights on anti-aircraft or other guns, and laser range-finders, for instance – even though this may cause an incidental effect, such as blindness, for users of that equipment.⁵²

The scope of Protocol IV’s application, non-international conflicts as well as international, is unspecified in the Protocol. The framers clearly intended that it apply in both. The ICRC study on customary law determines the ban applicable in both,⁵³ although most commentators believe that insufficient time has passed to determine whether the ban on blinding lasers has become customary law.⁵⁴ An ICRC lawyer writes, “There can be no doubt that Protocol IV represents a major achievement. It is the first time since 1868 that a weapon has been prohibited before it has been used on the battlefield . . . [T]his Protocol represents a victory of civilization over barbarity.”⁵⁵

The United States ratified Protocol IV in 2008, joining ninety-four other ratifying states.

16.1.5. *CCW Protocol V, Concerning Explosive Remnants of War*

Explosive remnants of war are munitions fired or dropped during armed conflict that fail to explode, or that are abandoned on the battlefield – the deadly detritus of modern war. One regularly reads of unexploded bombs from wars long past, discovered in a European city during sewer repairs, or a cluster bomb submunition found on a children’s soccer pitch. In 2004, thirty years after the U.S.–Vietnam war ended, the United States increased the amount of aid from \$1,400,000 to \$2,500,000 to Laos for removal of unexploded American ordnance dropped on that country during the war.⁵⁶ “Protocol V establishes new rules that require the parties to a conflict to clear explosive remnants of war, to take measures to protect civilians from the effects of these weapons and to assist the efforts of international and non-governmental organizations (NGOs) working in these areas.”⁵⁷ Protocol V does not ban the production, use, or stockpiling of any weapon, however.

In 2000, the ICRC and a British NGO, Landmine Action, met to discuss the possibility of putting unexploded and abandoned landmines on the next CCW Review Conference agenda. A subsequent meeting noted that cluster bombs created explosive remnants, as well. At the 2001 Review Conference, delegates established a Group of Government

⁵¹ *Id.*, at 16.

⁵² Art. 3. “Blinding as an incidental or collateral effect of the legitimate military employment of laser systems, including laser systems used against optical equipment, is not covered by the prohibition of this Protocol.”

⁵³ Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, supra, note 13, Rule 86, at 292.

⁵⁴ For example, Parks, “Conventional Weapons and Weapons Reviews,” supra, note 2, at 85, fn. 118; and Turns, “Weapons in the ICRC Study,” supra, note 14, at 233.

⁵⁵ Doswald-Beck, “New Protocol,” supra, note 45, at 272. Footnote omitted. In mentioning 1868, Doswald-Beck refers to the 1868 St. Petersburg Declaration that banned explosive projectiles under 400 grammes weight.

⁵⁶ Frederic J. Frommer, “U.S. Boosts Aid for Bomb Removal in Laos,” *Washington Post*, Dec. 27, 2004, A7.

⁵⁷ Louis Maresca, “A New Protocol on Explosive Remnants of War: The History and Negotiation of Protocol V to the 1980 Convention on Certain Conventional Weapons,” 856 *Int’l Rev. of the Red Cross* (Dec. 2004), 815.

Experts. An unusual feature of the Experts' meetings and state Parties' negotiations was that NGOs fully participated, "bringing their expertise and field-based experience to bear on the discussions."⁵⁸ In 2003 the CCW state Parties adopted Protocol V, consisting of eleven articles and a technical annex.

Throughout the Protocol, reference is made to obligations of the "High Contracting Party and party." "And party" refers to nonstate actors – armed opposition groups – rather than to states that have not ratified. Use of the term is an effort to clarify the Protocol's application to such groups,⁵⁹ a rather forlorn hope, one fears.

The Protocol applies in both international and non-international armed conflicts (Article 1.3) that arise *after* the Protocol's implementation (Article 1.4). Under Article 3, High Contracting Parties and parties are responsible for the clearance of explosive remnants from territory they control, and are bound to minimize risks associated with remnants until they can be cleared. Risk minimization involves, *inter alia*, surveys and marking dangerous areas. If a Party's explosive remnants are in an area the Party does not control, that Party is nevertheless obligated to assist, where feasible, in marking and clearing those remnants. Assistance may be in technical, material, financial, or personnel form.

Article 4.1 requires that information on abandoned explosive ordnance be recorded and retained, "to the maximum extent possible and as far as practicable," to be shared with other parties after the end of hostilities. Article 5 mandates "all feasible" precautions to protect civilians and civilian objects from the effects of explosive remnants.

Agreement on Article 7 was difficult. It gives Parties "the right" to seek and receive assistance from other Parties "in dealing with the problems posed by existing explosive remnants of war" and requires Parties "in a position to do so" to provide assistance. Article 8 specifies such assistance to include marking, clearing, removal, and destruction of explosive remnants; assisting in the care, rehabilitation, and social and economic reintegration of victims; contributing to UN trust funds to facilitate assistance; and exchanging equipment and scientific and technological information. Those rights are significant and broad, and they entail potentially heavy technical and financial burdens for those called upon to provide assistance. Some Parties, envisioning the possibility of making future requests for assistance to former enemy states, wanted the obligation requiring assistance to apply to *all* explosive remnants. Other Parties, foreseeing the possibility of receiving such requests from past foes, were concerned that the Protocol's language called on them to provide assistance regarding explosive ordnance from conflicts predating the Protocol. Article 7's elastic language, "where appropriate," "[if] in a position to do so," and "as necessary and feasible," represents compromise between the potential seekers and potential providers. "The qualifications in this article . . . show that it was intended to be a flexible provision and was not meant to be absolutely binding for the parties to earlier conflicts."⁶⁰ If a provision is "not absolutely binding," is it binding at all?

Protocol V was adopted in 2003, only moments ago in terms of international law, and fifty-four states have already ratified – the United States in 2008. Proponents of greater regulation were disappointed that Protocol V contained no language regarding acceptable munitions failure ("dud") rates, or requirements to destroy aging stockpiles. Nevertheless, the Protocol is a modest step forward in protections for civilians. Only a few

⁵⁸ *Id.*, at 834.

⁵⁹ *Id.*, at 829.

⁶⁰ *Id.*, at 830.

of the Protocol's provisions are mentioned here, some of them potential problem areas. The several inexact and ambiguous terms that were purposely inserted in contentious articles for the sake of consensus could prove to be escape hatches that will render the articles hollow. As with compliance with most LOAC/IHL agreements, Protocol V relies on the good faith and honest effort of ratifying states. Jaded cynicism might be forgiven, where non-state-organized armed groups – High Contracting Parties *and parties* – are addressed by the Protocol. Time will reveal the effectiveness of the Protocol's admirable high intentions.

16.2. Cluster Munitions

Cluster bombs, a type of cluster munition, are not banned weapons. Cluster bomb units (CBUs) do not fall under any of the five CCW protocols. "Although the effects of unexploded cluster bomblets are in some respects analogous to the effects of anti-personnel mines, they do not fall within the [Protocol II] definition of anti-personnel mine . . ." ⁶¹ Some CBU variants are incendiaries that fall under Protocol III, and unexploded CBU submunitions were a primary factor in Protocol V's adoption. Despite these close affinities to other Protocols, CBUs are "conventional" weapons not addressed by the CCW.

Opponents of CBUs point to the CCW foundation treaty's classic language "that the right of the parties to an armed conflict to choose methods or means of warfare is not unlimited" as an argument for their ban. Opponents' concern centers on the high ratio of unexploded CBU submunitions, or bomblets, left on former battlefields to maim and kill civilians years after the conflict ends. NGOs disappointed by Protocol V's outcome shifted their sights and joined forces with cluster bomb opponents, hoping that humanitarian impact could trump military utility.

"Employment of anti-personnel bomblets was not new. During World War I, the German Air Force employed the *Splitterbombe*, its 1kg . . . *Ifl-Mäuse* or *Ilf-Bomben*, for attack of enemy ground forces . . ." ⁶² In World War II, although the term "cluster bomb" had not been coined, the German Luftwaffe dropped "butterfly bomb" submunitions on the British port city of Grimsby. The United States used hundreds of thousands of four-pound M-50 incendiary bomblets similar to later incendiary CBUs to set fire to lightly constructed Japanese cities. ⁶³ Approximately 330,000 Japanese civilians were killed, another 476,000 injured in those bombings. ⁶⁴ By the time of the U.S.–Vietnam conflict, cluster bombs had been "perfected." They have been used in all major conflicts since, including Gulf War I (1990–1991), and in the Former Yugoslavia. During the 2006 Israeli incursion into Lebanon against Hezbollah, Israel employed an estimated four million CBU submunitions. ⁶⁵

CBUs are bombs, or artillery rounds, which, when dropped or fired, spin while in flight, opening at a predetermined height and rate of spin. Each opened spinning bomb canister disperses many, sometimes hundreds, of smaller submunitions, or bomblets, over a long and wide area of the ground. Dispersed like sand tossed onto a beach, each bomblet

⁶¹ Stuart Maslen, *Explosive Remnants of War* (Geneva: ICRC, 2000), 35.

⁶² Parks, "Conventional Weapons and Weapons Reviews," *supra*, note 2, at 76, fn. 81.

⁶³ Kenneth P. Werrell, *Blankets of Fire* (Washington: Smithsonian, 1996), 48.

⁶⁴ *The United States Strategic Bombing Surveys* (Maxwell AFB, AL: Air University Press reprint, 1987), 92.

⁶⁵ Handicap International, "Fatal Footprint: The Global Human Impact of Cluster Munitions, Preliminary Report," (Nov. 2006), 35, available at: http://www.handicap-international.org.uk/page_597.php.

results in a relatively small but deadly and destructive detonation. CBU's used as area-denial weapons are particularly effective against enemy infantry in the open, such as an attacking force of soldiers. There are incendiary CBU's, antipersonnel CBU's, antiarmor CBU's, runway-cratering CBU's, mine-laying CBU's, antielectrical CBU's, leaflet CBU's, and combined-effects CBU's;⁶⁶ they can be delivered by artillery, missile, or aircraft – low flying fighters or high-altitude bombers, via high-speed delivery or toss delivery. They employ contact fuses to explode on impact, air-burst fuses, or delayed-action fuses. Their military advantages are many.

A single 1,000-pound CBU may contain 202 bomblets, the bomblets often described in appearance and size as soft-drink cans or, in some models, hockey pucks or tennis balls. Bomblets are sometimes brightly colored to facilitate the location of duds, although children can be attracted to the colored objects, as well. The shape and size of the impact area is determined by the preset spin rate of the dispenser, resulting in an elliptical impact footprint measuring as much as 1,600 by 1,100 feet – a target footprint roughly five football fields long and three football fields wide.⁶⁷

The problem with CBU's is their “dud” rate, the number of submunitions in each bomb, missile, or artillery round that fail to detonate because of fuse or detonator failure. According to a manufacturer, the dud rate of one of the more widely used antipersonnel CBU's, the CBU-87, is about five percent. Some field reports, however, put the rate at up to twenty-three percent.⁶⁸ Given the high number of CBU's used in Gulf War I, for example, NGO estimates of as many as two million unexploded bomblets are credible.⁶⁹ Even though CBU's were never purposely used in or near populated areas, many dud bomblets were inevitably left on Kuwaiti and Iraqi battlefields. These explosives presented obvious problems of distinction and proportionality.⁷⁰ Hundreds of civilians were reportedly killed or maimed for years after the conflicts.

For years, NGOs, human rights groups, and the media protested the continued use of CBU's and called for their ban. The United States and Israel, only two of many states employing them, were most often the targets of protests.⁷¹ In 2008 the concerns of protesters had effect.

⁶⁶ “The CBU-87B ‘Combined Effects Munition’ contains 202 BLU-97 bomblets in each canister . . . The BLU-97 has three destructive capabilities . . . The primary charge is a shaped metal cone that, upon detonation of the bomblet, is converted into a molten slug to penetrate armoured vehicles or tanks . . . [T]he body of the BLU-97 fragments into scores of metal shards to kill or maim personnel or disable trucks over a radius of tens of meters. The third destructive element is an incendiary ring made of metal zirconium, which can start fires if petrol or diesel are located in the vicinity.” Maslen, *Explosive Remnants of War*, supra, note 61, at 7.

⁶⁷ Virgil Wiebe, “Footprints of Death: Cluster Bombs as Indiscriminate Weapons Under International Humanitarian Law,” 22 *Mich. J. Int'l L.* (2000), 85, 89. Other reports of coverage are more conservative.

⁶⁸ Thomas M. McDonnell, “Cluster Bombs Over Kosovo: A Violation of International Law?” 44 *Ariz. L. Rev.* (2002), 31, 51, 61.

⁶⁹ *Ticking Time Bombs: NATO's Use of Cluster Munitions in Yugoslavia*, Human Rights Watch Report 11–6(D), (June 1999), available at: http://www.hrw.org/legacy/reports/1999/nato2/nato995-01.htm#P77_13303

⁷⁰ Harvard Human Rights Clinic and Human Rights Watch, “Cluster Munitions and the Proportionality Test, Memorandum to the Delegates of the Convention on Conventional Weapons (May 19, 2008),” available at: <http://hrw.org/backgrounders/arms/armso408/>.

⁷¹ For example, William M. Arkin, “America Cluster Bombs Iraq,” *Washington Post*, Feb. 26, 2001; Thom Shanker, “Rights Group Faults U.S. Over Cluster Bombs,” *NY Times*, Dec. 12, 2003, A12; Isabel Kershner, “Israel Won't Prosecute for Use of Cluster Bombs in Lebanon,” *NY Times*, Dec. 25, 2007, A4; “Cluster Bombs, Made in America,” *NY Times*, June 1, 2008, Wk 11.

16.2.1. 2008 *Convention on Cluster Munitions*

In 2008, in Dublin, Ireland, the issue of CBUs was addressed by the Convention on Cluster Munitions, a multinational treaty that bans cluster munitions.

The movement for a cluster bomb ban began in earnest in 2003, when the CCW's Protocol V failed to restrict or ban them. "Widespread international disappointment at the weak outcome . . . contributed to emergence of a free-standing negotiation, the so-called 'Ottawa Process', outside the United Nations system and orthodox negotiating rules . . . very different from the technically oriented CCW in which big military powers were predominant."⁷² Loosely following the template of the ICBL's antilandmine process, cluster munition treaty negotiations commenced in Oslo in 2007 (the "Oslo process"), the final step of which was the Dublin Diplomatic Conference, in May 2008. More than one hundred states and numerous NGOs attended. The United States, Israel, and China were not represented. The Convention on Cluster Munitions, consisting of twenty-three articles, was agreed upon by 110 states. It is modeled on the Ottawa Convention on antipersonnel land mines, sometimes using the same language.

Under the Convention's Article 1, Parties agree never to use, produce, acquire, transfer, or stockpile cluster munitions. Excepted from the definition of cluster munitions are munitions that have fewer than ten submunitions, all having electronic self-destruction and self-deactivating mechanisms (Article 2.2 (c)). Article 3 requires Parties to destroy their CBU stockpiles not later than eight years after the Convention goes into force, although a four-year extension may be requested.⁷³ A "limited number" of CBUs and submunitions may be retained for training purposes (Article 2.6). Echoing CCW Protocol V, Parties to the Convention are required to clear and destroy cluster munition remnants in areas under their control within ten years of the Convention's entry into force (Article 4.1), with renewable five-year extensions available (Article 4.5). Article 5.1 is a novel provision, not included even in the Ottawa Convention on land mines, which requires state Parties to provide assistance, including medical care, rehabilitation, psychological support, and "social and Economic inclusion," to victims of cluster munitions. State Parties in a position to do so shall provide technical and financial assistance in implementing Convention obligations to other state Parties that are affected by cluster munitions (Article 6.2). Article 9 requires Parties to impose domestic penal sanctions for activities prohibited by the Convention. Article 21 is unique in that it encourages cooperation between states even if one of the states cooperated with is not a Party to the Convention.

As of this writing, seventy-nine states have signed the Convention, and twenty-four have ratified it. States having the majority of cluster munitions have, so far, avoided the Convention, choosing instead to address the humanitarian impact of their weapons through the CCW. For the major powers, without a substitute weapon, CBUs are too effective to consider giving up entirely. For those states, questions of cluster munitions' compliance or violation of distinction and proportionality will continue to be an issue, and NGOs, human rights groups, and media will continue to question their use and, when they are used, their lawfulness.

⁷² John Borrie, "The 'Long Year': Emerging International Efforts to Address the Humanitarian Impacts of Cluster Munitions, 2006–2007," in Timothy L.H. McCormack, ed., *YIHL*, vol. 10, 2007 (The Hague: Asser Press, 2009), 251, 256.

⁷³ The Convention will go into force six months after the thirtieth ratification or accession (Art. 17).

For states retaining cluster munitions, the issue of submunition failure rates must be addressed. CBUs *can* be manufactured with near zero dud rates, but the cost of a near-perfect weapon is considerably greater. The United States addressed the unacceptably high submunition failure rate in a 2008 policy statement.

16.2.2. U.S. Cluster Munitions Policy

The United States has consistently opposed calls to ban cluster munitions. “At the same time, the United States has pressed for international measures to increase the reliability of cluster munitions, to lessen the likelihood of postconflict casualties caused by unexploded submunitions.”⁷⁴ (The United States is one of the few states able to afford the high cost of manufacturing cluster munitions with the elevated standard of reliability it urges.)

In 2008, the Secretary of Defense announced a new U.S. policy on cluster munitions. After reciting the considerable combat benefits that cluster munitions provide, the statement notes, “Blanket elimination of cluster munitions is therefore unacceptable . . .” The announcement continues:

[T]he DoD policy establishes a new U.S. technical norm for cluster munitions, requiring that by the end of 2018, DoD will no longer use cluster munitions which, after arming, result in more than one percent unexploded ordnance . . . Additionally, cluster munitions sold or transferred by DoD after 2018 must meet this standard . . . As soon as possible, military departments will initiate removal from active inventory cluster munitions that exceed operational planning requirements . . . These excess munitions will be demilitarized as soon as practical . . . [T]hrough 2018, any U.S. use of cluster munitions that do not meet the one percent unexploded ordnance standard must be approved by the applicable combatant commander . . .⁷⁵

The statement concludes:

The new policy is viewed as a viable alternative to a complete ban proposal generated by the Oslo Process in Dublin . . . The new policy serves as the basis for the U.S. position in negotiations toward an international agreement at the U.N. Convention of Conventional Weapons . . . The United States has called for the completion of a new cluster munitions protocol . . . The CCW, unlike the Oslo process, includes all of the nations that produce and use cluster munitions, making any agreement reached there much more practically effective.⁷⁶

The United States believes that a new CCW protocol, with a broad national involvement, will result in a cluster munitions agreement easier to comply with than the Dublin Convention. In any case, cluster munitions, employed with care and with a low submunitions failure rate, are no more unlawful than artillery or high explosive bombs. Although some weapons are *per se* unlawful – poisons, dum-dum bullets, serrated edged weapons – most often it is a weapon’s *use* that determines its lawfulness.

⁷⁴ John R. Crook, ed., “Contemporary Practice of the United States Relating to International Law,” 102–4 *AJIL* (Oct. 2008), 889.

⁷⁵ U.S. Dept. of Defense News Release, “Cluster Munitions Policy Revised (July 09, 2008), available at: <http://www.defenselink.mil/Releases/Release.aspx?ReleaseID=12049>.

⁷⁶ *Id.*

16.3. A Legal Review of Weapons

The 1980 CCW requires that state Parties not field weapons containing nondetectable fragments and that laser weapons not cause permanent blindness. Customary international law mandates that ammunition not have certain characteristics – bullets with a tendency to yaw excessively in flight so as to wound with unnecessary suffering. Other weapons raise other questions. Are depleted uranium antiarmor rounds prohibited because the trace amounts of toxic uranium residue, left where rounds have impacted, may cause cancers and organ failures? Are combat shotguns unlawful because they create multiple wounds, or because the shot they fire flattens too easily in the human body, creating unnecessary suffering? How is a state to determine the answer to such questions? How can a commander know that the weapons issued to his soldiers, perhaps new weapons untested in combat, comply with the Geneva Conventions, the CCW, and other LOAC/IHL treaties?

He knows they comply because his government has a weapons legal review program in place. According to 1977 Additional Protocol I, Article 36: “In the study, development, acquisition or adoption of a new weapon, means or method of warfare, a High Contracting Party is under an obligation to determine whether its employment would, in some or all circumstances, be prohibited by the Protocol or by any other rule of international law applicable . . .” The legal testing obligation of Article 36 applies not only to states that manufacture weapons but to states that purchase them. In addition, “the purchaser should not blindly depend on the attitude of the seller or the manufacturer, but should proceed itself to evaluate the use of the weapon in question . . .”⁷⁷ Article 36 “implies the obligation to establish internal procedures for the purpose of elucidating the issue of legality [of new weapons] . . .”⁷⁸ All countries with modern armies have a process in place for the legal review of new methods of warfare and new weapons.⁷⁹ “[N]o single model for compliance with Article 36 exists. It is not a situation in which ‘one size fits all’, nor one in which one government’s weapons review programme would be suitable for another government.”⁸⁰

Although not a Party to Additional Protocol I, a U.S. weapons legal review process for land-based weapons is carried out by the Army, the Armed Forces’ agent for law of war issues. The pertinent Army Regulation directs that the Judge Advocate General of the Army “Reviews weapons or weapon systems in accordance with DOD Instruction . . . to determine whether the weapons or weapon systems or their intended use in combat are consistent with the obligations assumed by the United States Government under all applicable treaties and with customary international law.”⁸¹ Other Armed Forces branches review their branch-specific weapons.

⁷⁷ Yves Sandoz, Christophe Swinarski, and Bruno Zimmerman, eds., *Commentary on the Additional Protocols* (Geneva: ICRC/Martinus Nijhoff, 1987), 426.

⁷⁸ *Id.*, at 424.

⁷⁹ “Means and methods of warfare” is a nebulous phrase with no agreed-upon meaning. Parks includes in the term destruction of crops, blockade, and an artillery projectile that kills or injures in a new way. Parks, “Conventional Weapons and Weapons Reviews,” *supra*, note 2, at 119.

⁸⁰ *Id.*, at 107.

⁸¹ Army Regulation 27–53, *Review of Legality of Weapons Under International Law* (Jan. 1, 1979), para. 5.e. (1), available at: <http://www.fas.org/irp/doddir/army/ar27–53.pdf>

The arduous U.S. weapons review process results in a written published report indicating the weapon's conformance or nonconformance with LOAC/IHL.⁸² Although the assessment of a new weapon's characteristics and probable effects inevitably leaves room for subjective interpretation, the review process is impressively comprehensive.

16.4. Summary

It bears repeating that any weapon can be used in an unlawful way. Few weapons are unlawful in and of themselves. "It follows that in determining the lawfulness or otherwise of existing or new weapons, the main function of the [CCW's] principles may lie in their capacity to be used as guidelines."⁸³ Ironically, "neither the Convention nor its annexed protocols specifically deemed any weapons to be excessively injurious or to have indiscriminate effects."⁸⁴

Theodor Meron writes, "The tremendous progress in the humanization of the law of war brings into sharp relief the stark contrast between promises made in treaties and declarations . . . on the one hand, and the harsh, often barbaric practices actually employed on the battlefield."⁸⁵ The 1980 CCW is an effort to control those "harsh practices actually employed," and limit the suffering of combatants and civilians. Its loosely worded requirements, as in Protocol V, warn, however, against over-optimism. "Another source of possible concern is the extent to which the Protocol [and the CCW itself] can be implemented by non-State actors involved in the hostilities . . . [S]ecuring implementation and compliance among organized armed groups will be a major challenge."⁸⁶

CASES AND MATERIALS

PROSECUTOR V. MARTIĆ

IT-95-11-T (12 June 2007), footnotes omitted.

Introduction. From January 1991 to August 1995, Milan Martić, a civilian, held various positions within the Serbian Autonomous Region of Krajina and the Republic of Serbian Krajina. He serially was the Chief of Police of Knin and, in the Serbian Region of Krajina, the Secretary for Internal Affairs, the Minister of Defence, the Deputy Commander of the Territorial Defence, and the Minister of the Interior. He was eventually the President of the short-lived Republic of Serbian Krajina. His trial touches not only on the criminal use of cluster bombs, but indiscriminate targeting and its corollaries, violations of distinction, and the targeting of cultural objects.

⁸² Parks, "Conventional Weapons and Weapons Reviews," supra, note 2. Col. Parks, a long-time U.S. representative to international armaments conferences, describes in detail the review process at 107–42.

⁸³ Kalshoven, *Reflections on the Law of War*, supra, note 37, at 395.

⁸⁴ William Fenrick, "The Conventional Weapons Convention: A Modest but Useful Treaty," 279 *Int'l Rev. of the Red Cross* (1990), 498, 499.

⁸⁵ Theodor Meron, *The Humanization of International Law* (Leiden: Martinus Nijhoff, 2006), 85.

⁸⁶ Maresca, "A New Protocol on Explosive Remnants of War" supra, note 57, 835.

235. . . . Škabrnja [in south-western Croatia] had about 2,000 inhabitants and was almost exclusively Croat. There were three churches in and around Škabrnja, the church of the Assumption of the Virgin in the center of Škabrnja, St. Mary's Church in the hamlet of Ambar, and St. Luke's Church to the west of the centre of Škabrnja. In 1991, Nadin was located in the Benkovac municipality and was approximately three kilometers south-east of Škabrnja. Nadin, which was also almost exclusively Croat, had between 300 and 660 inhabitants, living in approximately 120 to 150 houses . . .

(b) Situation in Škabrnja, Nadin and Surroundings Prior to 18 November 1991

236. In August 1991, running water and electricity to Nadin had been switched off . . . In September 1991, Škabrnja and Nadin were shelled and subjected to aerial bombings, including cluster bombs . . .

(g) Destruction in Škabrnja and Nadin

263. As noted above, during the attack on 18 and 19 November 1991 cluster bombs were dropped on Škabrnja with resulting damage to buildings . . . Marko Miljanić testified that by 19 November 1991, 30 to 40% of the houses in Škabrnja had been "destroyed" and that also the church of the Assumption of the Virgin and the school had been "destroyed" . . .

264. . . . [B]y 1994 about 90 to 95% of Škabrnja was destroyed and the church of St. Mary in Ambar and church of St. Luke near the centre of Škabrnja were badly damaged. By October or November 1995, all the houses in Škabrnja and the church of the Assumption of the Virgin had been destroyed.

310. . . . Ivan Markulin, a bomb disposal technician and police officer, died when the bomblet he was trying to deactivate exploded outside Klaićeve Street Children's Hospital.

311. The Trial Chamber heard evidence from some of those who were injured on 3 May 1995 . . . Shortly after midday, 18 people, including Božica Lisak, were injured when bombs fell through the glass roof of the Croatian National Theater. Božica Lisak was severely injured by 27 pieces of shrapnel. Milan Smoljan was injured in his knee by bomblets . . .

460. In light of the totality of the evidence, the Trial Chamber finds beyond reasonable doubt that Milan Martić ordered the shelling of Zagreb on 2 and 3 May 1995.

(b) Military Targets in Zagreb and the Nature of the M/87 Orkan

461. . . . The Trial Chamber notes the report of 2 May 1995 from the SVK [Army of the Republic of Srpska] Main Staff to the VJ [Army of the Federal Republic of Yugoslavia] General Staff, which provides that the following targets in Zagreb were fired at by Orkan rockets on that day: the Ministry of Defence, the Presidential Palace and Zagreb/Plešo airport. The Trial Chamber notes that of these targets, the only one that was hit was the Zagreb/Plešo airport, where one bomblet landed in the parking lot . . . However, as will be shown below, the presence or otherwise of military targets in Zagreb is irrelevant in light of the nature of the M-87 Orkan.

462. The M-87 Orkan is a non-guided projectile, the primary military use of which is to target soldiers and armoured vehicles. Each rocket may contain either a cluster warhead

with 288 so-called bomblets or 24 anti-tank shells. The evidence shows that rockets with cluster warheads containing bomblets were launched in the attacks on Zagreb on 2 and 3 May 1995. Each bomblet contains 420 pellets of 3mm in diameter. The bomblets are ejected from the rocket at a height of 800–1,000m above the targeted area and explode upon impact, releasing the pellets. The maximum firing range of the M-87 Orkan is 50 kilometers. The dispersion error of the rocket at 800–1,000m in the air increases with the firing range. Fired from the maximum range, this error is about 1,000m in any direction. The area of dispersion of the bomblets on the ground is about two hectares. Each pellet has a lethal range of ten meters.

463. The evidence shows that the M-87 Orkan was fired on 2 and 3 May 1995 from the Vojnić area, near the Slavsko Polje, between 47 and 51 kilometers from Zagreb. However, the Trial Chamber notes the characteristics of the weapon, it being a non-guided high dispersion weapon. The Trial Chamber therefore concludes that the M-87 Orkan, by virtue of its characteristics and the firing range in this specific instance, was incapable of hitting specific targets. For these reasons, the Trial Chamber also finds that the M-87 is an indiscriminate weapon, the use of which in densely populated civilian areas, such as Zagreb, will result in the infliction of severe casualties. By 2 May 1995, the effects of firing the M-87 Orkan on Zagreb were known to those involved. Furthermore, before the decision was made to once again use this weapon on Zagreb on 3 May 1995, the full impact of using such an indiscriminate weapon was known beyond doubt as a result of the extensive media coverage on 2 May 1995 of the effects of the attack on Zagreb.

472. In examining the responsibility of Milan Martić for the crime of attacks on civilians under Article 3 [of the ICTY Statute], the Trial Chamber recalls that a direct attack on civilians may be inferred from the indiscriminate character of the weapon used. The Trial Chamber has previously found that the M-87 Orkan was incapable of hitting specific targets. The Trial Chamber has also found that these attacks resulted in the death and serious injury to the civilian population. Having regard in particular to the nature of the M-87 Orkan and the finding that Milan Martić knew of the effects of this weapon, the Trial Chamber finds that Milan Martić wilfully made the civilian population of Zagreb the object of this attack. Milan Martić therefore incurs individual criminal responsibility [for the] attacks in civilians under Article 3 [of the ICTY Statute].

519. The Trial Chamber sentences Milan Martić to a single sentence of thirty-five (35) years of imprisonment.

Conclusion. Although cluster munitions used by most western European and U.S. forces are delivered by guided weapon systems, countless nonguided rockets like the Orkan, which are easier and cheaper to produce, store, and maintain, are in the inventories of less advanced armed forces and some nonstate armed opposition groups.

WHITE PHOSPHORUS MUNITIONS

White phosphorous (WP), is a colorless, yellow, translucent, waxlike substance that spontaneously ignites upon exposure to oxygen, producing a yellow flame and a dense, bright white smoke. Although it has countless industrial uses, from soft drinks to toothpaste, WP is most often noted because it can be weaponized as an artillery round, bomb, mortar round, or

hand grenade. Upon ignition, WP burns until deprived of oxygen, producing effective smoke screens, as well as deep and painful second- and third-degree burns on human tissue.⁸⁷

On November 8, 2004, Italian public television aired a documentary film in which the United States was charged with using artillery-delivered WP against enemy human targets in the November 2004 battle for Fallujah, Iraq in violation of international law.⁸⁸ Four days later, the U.S. Department of State issued a denial of wrongful use, while confirming that WP had been sparingly used in Fallujah for illumination purposes.⁸⁹ Three months later, a report on the battle for Fallujah, written by U.S. Army artillery personnel, appeared in *Field Artillery* magazine. The authors wrote that WP “. . . proved to be an effective and versatile munition. We used it for screening missions . . . [and] as a potent psychological weapon against the insurgents in the trench lines and spider holes when we could not get effects on them with HE [high explosive rounds]. We fired “shake and bake” missions at the insurgents, using WP to flush them out and HE to take them out.”⁹⁰ An embarrassed Department of State retracted its prior denial, emphasizing that WP remains a lawful weapon. Of course, “The U.S. retraction fueled the controversy started by the allegations made in the Italian documentary about the illegal use of WP.”⁹¹

The initial question is whether WP is a chemical weapon, banned by the 1925 Geneva Protocol on the use of poisonous gases, or by the Gas Protocol’s successor treaty, the 1993 CWC. Is it banned by the 1980 CCW, Protocol III, relating to incendiary weapons? “[I]t is not altogether clear exactly what type of weapon WP constitutes: its principal component is a chemical, but the effect it produces on contact with human skin is to burn . . . which suggests that it is more in the nature of an incendiary weapon.”⁹²

Like virtually all weapons, WP contains chemicals, but chemical content does not make it a chemical weapon. To be a chemical weapon it must not only be chemical in nature, but its military uses must also be proscribed by the CWC. The primary military uses of WP munitions are to create smoke screens, provide illumination, and for incendiary purposes. These uses are permitted by the CWC as, “[m]ilitary purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare” (CWC, Article 11.9 (c)). In other words, a weapon’s primary military uses, not the weapon’s collateral effects, determine its character. A detonating antitank mine may kill nearby infantrymen. That fact does not make it an antipersonnel mine.

The argument that the use of WP munitions in Fallujah constituted a prohibited use of a chemical weapon is difficult to sustain because WP munitions can [lawfully] be used as incendiary weapons against enemy military targets . . . The “shake and bake” uses of WP munitions appear to have used the incendiary capacities of these munitions to dislodge insurgents from entrenched positions. The use does not reflect intent to kill or

⁸⁷ Agency for Toxic Substances and Disease Registry, “ToxFAQs for White Phosphorus,” (Sept. 1997), available at: <http://www.atsdr.cdc.gov/tfacts103.html>.

⁸⁸ Sigfrido Ranucci and Maurizio Torrealta, “Fallujah: The Hidden Massacre.”

⁸⁹ U.S. Dept. of State, “Did the U.S. Use Illegal Weapons in Fallujah?” at: <http://www.globalsecurity.org/military/library/report/2005/050127-fallujah.htm>: “The United States categorically denies the use of chemical weapons at anytime in Iraq, which includes the ongoing Fallujah operation.” The Nov. 12, 2004, Dept. of State press release has been removed from the agency’s Web site.

⁹⁰ Capt. James T. Cobb, 1st Lt. Christopher A. LaCour and SFC William H. Hight, “TF 2–2 in FSE AAR: Indirect Fires in the Battle of Fallujah,” *Field Artillery* (March–April 2005), 23, 26.

⁹¹ David P. Fidler, “The Use of White Phosphorus Munitions by U.S. Military Forces in Iraq,” *ASIL Insights* (6 Dec. 2005), at: <http://www.asil.org/insights051206.cfm>. This is a fine, brief legal analysis of the issue.

⁹² Tums, “Weapons in the ICRC Study,” *supra*, note 14, at 222–3.

incapacitate insurgents specifically by exposing them to the toxic chemicals produced in the fire and smoke generated by detonations of WP munitions.⁹³

By its nature WP is a chemical, but it is not a chemical weapon.⁹⁴

Is WP a toxic weapon? “In sum, there are a number of negative effects on human and animal physiology that occur, through various routes of exposure, as a direct result of WP chemical interactions. As a result . . . and using the definition of Article II (2) [of the Chemical Weapons Convention], WP could be classified as a ‘toxic chemical’ and thus it has the potential to be classed as a chemical weapon under Article II (1)(a).”⁹⁵ Again, however, WP’s usual uses, for illumination and as smokescreen, do not rely on its toxic properties, meaning it is not a prohibited toxic weapon.

Was the use of WP in Fallujah in violation of CCW Protocol III, which restricts, but does not ban, the use of incendiary munitions? Because the United States was not a Party to Protocol III during the time of the battle for Fallujah, the Protocol did not then bind the United States. Was the use of incendiary munitions against enemy personnel unlawful as a matter of customary international law? The ICRC Study of Customary IHL clearly suggests that, as to combatants, it is not.⁹⁶ Even if the United States had been a Party to CCW Protocol III, the “use of such munitions for marking, illuminating, screening, and (in certain circumstances) incendiary weapons against enemy targets has long been recognized as legitimate with full knowledge of its potential effects on the human body.”⁹⁷ Once more, WP’s usual uses do not rely on its incidental incendiary effect, and it is not a prohibited weapon for that reason.

There may be international public relations issues involved that militate against the use of WP, but there is no prohibition, customary or treaty-based, that makes the use of WP munitions, even when used directly against combatants, a violation of LOAC/IHL.⁹⁸ Without a showing that it was used directly against civilians, its use in Fallujah was lawful.

⁹³ Fidler, “The Use of White Phosphorus Munitions,” *supra*, note 91.

⁹⁴ 1993 Chemical Weapons Convention, Art. II (1)(a).

⁹⁵ I. J. MacLeod and A.P.V. Rogers, “The Use of White Phosphorous and the Law of War,” in Timothy L.H. McCormack, ed., *YIHL* (The Hague: Asser Press, 2009), 75, 90.

⁹⁶ Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, vol. I, *supra*, note 13, Rule 85, at 290–1: “It can be concluded from this practice that incendiary weapons may not be used against combatants if such use would cause unnecessary suffering, i.e., if it is feasible to use a less harmful weapon to render a combatant *hors de combat*.” This quotation suggests the ICRC’s agreement that, if a less harmful weapon is not available, WP may lawfully be used directly against enemy personnel.

⁹⁷ Fidler, “The Use of White Phosphorus Munitions by U.S. Military Forces in Iraq,” *supra*, note 91.

⁹⁸ MacLeod and A.P.V. Rogers, “The Use of White Phosphorous,” *supra*, note 95, at 93.