

5-15-2008

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Recommended Citation

Virgil Wiebe *For Whom the Little Bells Toll: Recent Judgments by International Tribunals on the Legality of Cluster Munitions*, 35 Pepp. L. Rev. Iss. 4 (2008)

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For Whom the Little Bells Toll: Recent Judgments by International Tribunals on the Legality of Cluster Munitions

Virgil Wiebe*

No man is an island, entire of itself; every man is a piece of the continent, a part of the main [A]ny man's death diminishes me, because I am involved in mankind, and therefore never send to know for whom the bell tolls; it tolls for thee.

John Donne, Devotions upon Emergent Occasions (1624)¹

Citizens of the Sibenik municipality have been warned to be cautious on account of a large number of unexploded so-called zvoncici [little bell] devices, which are spread around after missiles filled with cluster bombs fell in the area.

Croatian News Report, March 1993²

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Thanks to David Koplow (Georgetown University Law Center), Tom Berg (University of St. Thomas Law School), Alex Whiting (Harvard University Law School), Nisha Valabhji (ICTY Office of the Prosecutor), Mark Hiznay (Human Rights Watch), Robin Collins (Mouvement Fédéraliste Mondial – Canada), Richard Moyes (Landmine Action UK), John Borrie (UN Institute for Disarmament Research), and Brian Rappert (University of Essex) for comments and/or information for earlier drafts of this article. Carrie Burton and Kerstin Hansen of the University of St. Thomas and Irene Tzinis of Mennonite Central Committee provided invaluable research assistance.

1. JOHN DONNE, DEVOTIONS UPON EMERGENT OCCASIONS TOGETHER WITH DEATH'S DUELL 108-09 (10th ed. 1925).

2. *Croatian Radio: 23 Wounded in Missile Attack on Sibenik*, (BBC Broadcasts, Mar. 24, 1993).

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For reference to cluster munitions as *zvončici* in the Milan Martić case discussed in this article, see UN ICTY Press Release, *Sažetak Presude Raspravnog Vijeća Milanu Martiću*, June 12, 2007, available at <http://www.un.org/icty/bhs/latest/press/p1162-t-summary.htm>.

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I. INTRODUCTION

“Little bells” is a Serbo-Croatian reference to cluster bomblets.³ Two international tribunals recently have found defendants liable for civilian deaths caused by cluster munitions. These decisions may herald a turning point in the regulation of these weapons. In 2004, the Eritrea-Ethiopia Claims Commission (“EECC”) held Eritrea liable for the deaths of civilians killed in cluster munition strikes on Mekele, Ethiopia on June 5, 1998 (the “Eritrea judgment”).⁴ On June 12, 2007, the International Criminal Tribunal for the Former Yugoslavia (“ICTY”) held the former president of the now-defunct Serbian Republic of Krajina criminally liable for deaths and injuries resulting from cluster munition rocket attacks on Zagreb, Croatia on May 2 and 3, 1995 (the “Martić judgment”).⁵

Cluster munitions spread large numbers of smaller bomblets, often referred to as submunitions, over wide areas often the size of several football fields.⁶ They are dropped from the air, delivered in artillery shells, or

3. *Croatian Radio*, *supra* note 2.

4. Partial Award, Central Front (Eri. v. Eth), Ethiopia’s Claim 2, 43 I.L.M. 1275, 1294-96 (Eritrea-Ethiopia Claims Comm’n Apr. 28, 2004) [hereinafter Partial Award-Ethiopia], available at [http://www.pca-cpa.org/upload/files/ET%20Partial%20Award\(1\).pdf](http://www.pca-cpa.org/upload/files/ET%20Partial%20Award(1).pdf).

5. Prosecutor v. Martić, Case No. IT-95-11-T, Judgment, ¶¶ 456-73 (June 12, 2007), available at <http://www.un.org/icty/martic/trialc/judgement/mar-tjud070612e.pdf>.

6. See Federation of American Scientists, *Multiple Launch Rocket System*, <http://www.fas.org/man/dod-101/sys/land/m26.htm> (last visited Oct. 23, 2007).

packed into rocket warheads.⁷ In many cases, a significant percentage of the bomblets fail to explode on impact, creating virtual minefields of unexploded ordnance.⁸

Cluster bombs came back onto the world stage during the 2006 war between Israel and Hezbollah, with both sides of the conflict deploying the weapons in irresponsible ways.⁹ By early 2007, momentum had gathered for a treaty banning cluster bombs.¹⁰ Efforts are also underway at the national level to regulate cluster munition use.¹¹ The Eritrea and *Martić* judgments have much to contribute to the current debate over how to eliminate or limit the humanitarian impact of cluster munitions.

These cases are the only ones to date to address several humanitarian law issues in the debate over cluster munition regulation. Adjudicators grappled with whether the characteristics of cluster munitions can be used as evidence of intent to attack civilians or of indiscriminate and disproportionate attacks; what precautions users of these weapons must take in advance; and what role foreknowledge about the wide-area nature and landmine-like effects of cluster munitions have on culpability.

While both judgments held the defendants liable, they present a study in contrasts. Both cases addressed the deaths of civilians in densely populated areas. The EECC did not overtly question the use of cluster munitions near civilian areas, but the ICTY did. The EECC dismissed charges of intentional targeting of civilians; the ICTY used the very nature of cluster munitions as evidence of intent to target civilians (and in the alternative held that the cluster munitions were indiscriminate and disproportionate as used). Both the EECC and the ICTY held that commanders should act to prevent future strikes when they have foreknowledge about the adverse humanitarian effects of weaponry in actual combat usage.

The *Martić* judgment breaks important new ground by using cluster munitions' characteristics to hold the defendant guilty for deaths, lasting

7. See Federation of American Scientists, *Cluster Bombs*, <http://www.fas.org/man/dod-101/sys/dumb/cluster.htm> (last visited Oct. 23, 2007) (discussing air dropped cluster munitions); Human Rights Watch, *Memorandum to CCW Delegates: A Global Overview of Explosive Submunitions* (May 2002), available at <http://www.hrw.org/background/arms/submunitions.pdf> (discussing different types of cluster munitions, as well as failure rates).

8. Human Rights Watch, *supra* note 7.

9. Human Rights Watch, *United States: Cut Off Cluster Munition Sales to Israel*, <http://hrw.org/english/docs/2007/01/29/usint15212.htm> (Jan. 29, 2007).

10. See, e.g., Bonnie Docherty, *The Time Is Now: A Historical Argument for a Cluster Munitions Convention*, 20 HARV. HUM. RTS. J. 53 (2007).

11. See, e.g., Statement of Sen. Patrick Leahy on The Cluster Munitions Civilian Protection Act of 2007, Feb. 14, 2007, available at <http://leahy.senate.gov/press/200702/021407a.html>. A one-year moratorium on the export of cluster munitions by the US military was passed in late 2007 as part of the FY 2008 Omnibus Appropriations Act. Friends Committee for National Legislation, *Congress Passes Cluster Bomb Export Moratorium*, Dec. 20, 2007, <http://www.fcnl.org/press/releases/clusteruscb1122007.htm>. President Bush signed the Act into law on Dec. 26, 2007. See Consolidated Appropriations Act, 2008, Pub. L. No. 110-161, 121 Stat 1844.

injuries, and destruction caused by cluster munitions. At the same time, the ICTY missed the opportunity to further extend international law in the area of longer term effects of unexploded ordnance left behind when cluster munitions are used.

This article analyzes the two judgments in great detail, considering both the evidence presented as well as additional information publicly available at the time of the attacks. Section II briefly introduces relevant international humanitarian law.¹² Sections III and IV present the holding and an analysis of the Eritrea case.¹³ Sections V through VII present the holding and an analysis of the *Martić* case.¹⁴ Section VIII presents lessons to be learned from the cases.¹⁵ The conclusion addresses why these two cases cannot be written off as anomalies.¹⁶

II. A BRIEF REVIEW OF RELEVANT INTERNATIONAL HUMANITARIAN LAW

These decisions address relevant international humanitarian law principles. These principles find their clearest exposition in the 1977 Additional Protocol I to the Geneva Conventions, portions of which have been recognized as constituting customary international law. What follows is the briefest of primers.

A. *Distinction*

Additional Protocol I of the Geneva Conventions lays out the principle of requiring belligerents to distinguish between civilian and military objects and generally has been recognized as embodying customary international law.¹⁷

Article 51(2) from Additional Protocol I (applying to international conflicts) and Article 13(2) from Additional Protocol II (applying to internal

12. See *infra* notes 17-33 and accompanying text.

13. See *infra* notes 34-124 and accompanying text.

14. See *infra* notes 125-332 and accompanying text.

15. See *infra* notes 333-96 and accompanying text.

16. See *infra* notes 397-402 and accompanying text.

17. "In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian population and combatants and between civilian objects and military objectives and accordingly shall direct their operations only against military objectives." Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, art. 48, Dec. 12, 1977, 1125 U.N.T.S. 3 [hereinafter Geneva Protocol I].

conflicts) lay out the basic rule against making civilians and civilian populations the object of attack.¹⁸

Article 51(6) of Additional Protocol I attempts to outlaw reprisals against civilians.¹⁹ Because reprisals usually cannot be directed against the party responsible for the earlier attack, reprisals often simply lead to a spiral of violence.²⁰ Unfortunately, the provisions of Article 51(6) may not have reached the level of customary international law, allowing those not a party to Additional Protocol I to claim the “right” to reprisal when the following criteria are met:²¹

“*subsidiarity* (failure of all other available means); *notice* (formal warning of the planned action), *proportionality* (the damage and suffering inflicted on the adverse party not to exceed the level of damage and suffering resulting from its unlawful conduct), *temporary character* (termination of the reprisal when the adversary stops violating the law).”²²

B. Discrimination

The discrimination principle stresses that care must be taken in the selection of targets, as well as the means and methods of attack, to limit the damage to civilians even when legitimately targeting military objectives.

Article 51(4) of Additional Protocol I states that “[i]ndiscriminate attacks are prohibited” and defines indiscriminate attacks as follows:

- (a) those which are not directed at a specific military objective;

18. “The civilian population as such, as well as individual civilians, shall not be the object of attack. Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited.” Geneva Protocol I, *supra* note 17, art. 51(2); Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of Non-International Armed Conflicts, art. 13(2), June 8, 1977, 1125 U.N.T.S. 609 [hereinafter Geneva Protocol II] (the language of Additional Protocol I, Article 51(2) and Additional Protocol II, Article 13(2) are identical).

19. Geneva Protocol I, *supra* note 17, art. 51(6).

20. Frits Kalshoven, *Reprisals*, in CRIMES OF WAR 309 (Roy Gutmann & David Rieff eds., 1999), available at <http://www.crimesofwar.org/thebook/reprisal.html> (last visited Oct. 23, 2007).

These features have led to a trend to ban reprisals wherever possible. As a result, all four Geneva Conventions of 1949 categorically prohibit reprisals against the persons and objects they are designed to protect. Likewise, Article 20, which concludes the part of Additional Protocol I of 1977 on the wounded, sick, and shipwrecked, prohibits reprisals against the persons and objects protected by that part.

Id.

21. *Id.* “While these bans are generally accepted as entirely justified, the provisions in Articles 51 through 55 of Additional Protocol I prohibiting reprisals against civilians and civilian objects are highly controversial, and some States have entered reservations to their treaty ratifications.” *Id.*

22. *Id.* (emphasis added). “A reprisal may be ‘in kind’ (violating the same or a narrowly related rule of the laws of armed conflict) or ‘not in kind’ (violating a nonrelated rule).” *Id.*

(b) those which employ a method or means of combat which cannot be directed at a specific military objective; or

(c) those which 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.²³

Article 51(5) goes on to define indiscriminate attacks, which consist of “an attack by bombardment by any methods or means which treats as a single military objective a number of clearly separated and distinct military objectives located in a city, town, village or other area containing a similar concentration of civilians or civilian objects.”²⁴

One must also answer the question of just what constitute civilian populations or objects, as opposed to military objectives. William Fenrick has succinctly summarized the law concerning military objectives, describing them as

“(i) combatants; (ii) civilians taking a direct part in hostilities; and (iii) in so far as objects are concerned, those objects which by their nature, location, purpose or use make an effective contribution to military action and whose total or partial destruction, capture or neutralisation in the circumstances ruling at the time, offers a definite military advantage.”²⁵

Objects normally used for civilian purposes should be presumed to be so used, unless they meet the above criteria.²⁶ According to the recent codification of customary international humanitarian law by the Red Cross, “[c]ivilian objects are all objects that are not military objectives”²⁷ and

23. Geneva Protocol I, *supra* note 17, art. 51(4).

24. *Id.* art. 51(5)(a).

25. William J. Fenrick, *The Prosecution of Unlawful Attack Cases Before the ICTY*, 7 Y.B. INT'L. HUM. L. 153, 170 (2004) (citing Geneva Protocol I, *supra* note 17 art. 43, 48, 51(3), 52(2)). The definition of military objective found in Article 52 has been widely accepted and may be seen as constituting customary international law. *Id.* at 172 (citing JEAN-MARIE HENCKAERTS & LOUISE DOSWALD-BECK, CUSTOMARY INTERNATIONAL HUMANITARIAN LAW: VOL. I: RULES 29-32 (2005)).

26. Geneva Protocol I, *supra* note 17, art. 52(3). The non-exclusive list of examples includes places of worship, houses or other dwellings, and schools. *Id.*

27. HENCKAERTS & DOSWALD-BECK, *supra* note 25, at 32.

“[c]ivilians are persons who are not members of the armed forces. The civilian population comprises all persons who are civilians.”²⁸

The situation gets a bit more complicated when, as in the cases considered here, civilians are located near military objectives. While there is no treaty governing this situation, the position of many countries matches that of Australia: “The presence of noncombatants in or around a military objective does not change its nature as a military objective. Noncombatants in the vicinity of a military objective must share the danger to which the military objective is exposed.”²⁹ Means of communication are generally considered to be legitimate military targets. Airfields have been identified as such by many countries.³⁰

C. Proportionality

Proportionality, a closely related principle of discrimination, holds that the anticipated collateral damage from an otherwise legitimate attack cannot be excessive in relation to any anticipated military advantage.³¹ How this macabre calculus of war must be calibrated has been the subject of much debate.

D. Taking Reasonable Precautions

Parties to a conflict are obligated to take precautions in planning attacks in order to spare civilians, civilian populations, and civilian objects. This includes choosing weapons with the purpose of minimizing damage to civilians and civilian objects.³² Those being attacked must protect civilians

28. *Id.* at 17.

29. JEAN-MARIE HENCKAERTS & LOUISE DOSWALD-BECK, CUSTOMARY INTERNATIONAL LAW: VOL. II, PART I 228 (2005) (quoting AUSTRALIA, DEFENCE FORCE MANUAL § 526 (1994)); *see also id.* at 227-32.

30. *Id.* at 211-14.

31. “[A]n attack which may 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” is indiscriminate. Geneva Protocol I, *supra* note 17, art. 51(5)(b).

32. *Id.* art. 57. The Article is entitled “Precautions in Attack” and specifies the following:

1. In the conduct of military operations, constant care shall be taken to spare the civilian population, civilians and civilian objects.
2. With respect to attacks, the following precautions shall be taken:
 - (a) those who plan or decide upon an attack shall:
 - (i) do everything feasible to verify that the objectives to be attacked are neither civilians nor civilian objects and are not subject to special protection but are military objectives within the meaning of paragraph 2 of Article 52 and that it is not prohibited by the provisions of this Protocol to attack them;
 - (ii) take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing,

“to the maximum extent feasible,” including moving people away from military targets and not locating military objectives in populated areas.³³ These principles provide a useful backdrop to more detailed consideration of the cases.

III. THE 1998 ATTACK ON MEKELE, ETHIOPIA: FIRE RAINING FROM THE SKY

“I don’t remember how it came, but it felt like fire was raining from the sky,” said Tewhaba Berhe “My baby was outside playing when she got hit. She was playing with other children.” Helen, 4,

-
- incidental loss of civilian life, injury to civilians and damage to civilian objects;
 - (iii) refrain from deciding to launch any attack which may 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;
 - (b) an attack shall be cancelled or suspended if it becomes apparent that the objective is not a military one or is subject to special protection or that the attack may 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;
 - (c) effective advance warning shall be given of attacks which may affect the civilian population, unless circumstances do not permit.
 - 3. When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.
 - 4. In the conduct of military operations at sea or in the air, each Party to the conflict shall, in conformity with its rights and duties under the rules of international law applicable in armed conflict, take all reasonable precautions to avoid losses of civilian lives and damage to civilian objects.
 - 5. No provision of this article may be construed as authorizing any attacks against the civilian population, civilians or civilian objects.

Id.

- 33. Geneva Protocol I, *supra* note 17, art. 58. Article 58 provides: Precautions against the effects of attacks The Parties to the conflict shall, to the maximum extent feasible:
 - (a) without prejudice to Article 49 of the Fourth Convention [prohibiting mass forcible transfers and deportations], endeavour to remove the civilian population, individual civilians and civilian objects under their control from the vicinity of military objectives;
 - (b) avoid locating military objectives within or near densely populated areas;
 - (c) take the other necessary precautions to protect the civilian population, individual civilians and civilian objects under their control against the dangers resulting from military operations.

Id.

*was the second-youngest victim . . . [S]he lay in critical condition in the local hospital, a bandage the size of an adult's hand taped over the shrapnel wound in her abdomen.*³⁴

The 1998 lethal cluster bomb attack on Mekele by Eritrean aircraft at the outbreak of hostilities with Ethiopia killed scores of civilians and fanned the flames of the conflict.³⁵ Before addressing the claim arising from that incident at the EECC after the war, the article discusses the context of the attack.

Following the decades-long civil war to expel the communist regime in Ethiopia, Eritrea had split from the rest of Ethiopia in a relatively amicable fashion in the early 1990s.³⁶ Left unresolved was the exact demarcation of the border between the two countries.³⁷ From May 1998 until early 2000, Eritrea and Ethiopia engaged in a border war resulting in deaths, injuries, and expulsions of large numbers of civilians on both sides of the border.³⁸

IV. THE ERITREA-ETHIOPIA CLAIMS COMMISSION HOLDS ERITREA ACCOUNTABLE FOR CLUSTER BOMB DEATHS AND INJURIES.

A. *The Creation of the Eritrea-Ethiopia Claims Commission (EECC) and Applicable Humanitarian Law*

Following the conflict, the two countries established the EECC to resolve cross-accusations of international law violations.³⁹ The Commission is charged with “applying relevant rules of international law,”⁴⁰ drawn from the following sources:

34. Karl Vick, *School Attack by Eritrea Shocks Ethiopians*, WASH. POST, June 8, 1998, at A1 (quoting a victim account of cluster bomb strike by an Eritrean warplane on Mekele, Ethiopia on June 5, 1998, and reporting on Eritrean planes that bombed Ethiopia, hitting an elementary school and reportedly killing forty-eight people).

35. *Ethiopia, Eritrea Peace Plan Rejected*, DALLAS MORNING NEWS, June 20, 1998, at 12A.

36. CEDRIC BARNES, WRITENET INDEPENDENT ANALYSIS, ETHIOPIA: A SOCIOPOLITICAL ASSESSMENT 12 (May 2006) (commissioned by UN High Comm'r for Refugees), available at <http://www.unhcr.org/publ/RSDCOI/44f29d704.pdf>.

37. *Id.*

38. See generally ASSEFAW BARIAGABER, WRITENET INDEPENDENT ANALYSIS, ERITREA: CONFLICT AND INVOLUNTARY POPULATION DISPLACEMENT 1-11 (July 2000) (commissioned by UN High Comm'r for Refugees) available at <http://www.unhcr.org/cgi-bin/texis/vtx/refworld/rwmain?docid=3ae6a6c90>; see also BARNES, *supra* note 36, at 11-12.

39. Agreement Between the Government of the Federal Democratic Republic of Ethiopia and the Government of the State of Eritrea, Dec. 12, 2000, 40 I.L.M. 260 (2001) [hereinafter EECC Agreement], available at <http://www.pca-cpa.org/upload/files/E-E%20Agreement.html>. The EECC operates under the auspices of the Permanent Court of Arbitration (“PCA”) at the Hague. Permanent Court of Arbitration, http://www.pca-cpa.org/shownews.asp?nws_id=14&pag_id=1261&ac=view (last visited Oct. 23, 2007).

40. EECC Agreement, *supra* note 39, art. 5(13).

1. International conventions, whether general or particular, establishing rules expressly recognized by the parties;
2. International custom, as evidence of a general practice accepted as law;
3. The general principles of law recognized by civilized nations;
4. Judicial and arbitral decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.⁴¹

The Commission determined that the Geneva Conventions of 1949 and relevant portions of 1977 Additional Protocol I constituted customary international law applicable to the conflict,⁴² along with the Hague Regulations of 1907.⁴³ It also held that “there are elements in Protocol II of 1980 [of the Conventional Weapons Treaty (“CCW”)], such as those concerning recording of mine fields and prohibition of indiscriminate use, that express customary international law. Those rules reflect fundamental humanitarian law obligations of discrimination and protection of civilians.”⁴⁴

B. *The Decision of April 28, 2004*

Ethiopia included allegations about the Mekele attack in its second claim against Eritrea.⁴⁵ The decision of April 24, 2004 involved more

41. See *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 13 (Eritrea-Ethiopia Claims Comm’n Apr. 28, 2004). (citing EECC Rules of Procedure, art. 19(2), <http://www.pca-cpa.org/upload/files/Rules%20of%20Procedure.PDF>).

42. *Id.* ¶¶ 15, 17; Geneva Convention for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field, Aug. 12, 1949, 6 U.S.T. 3114, 75 U.N.T.S. 31; Geneva Convention for the Amelioration of the Condition of Wounded, Sick and Shipwrecked Members of Armed Forces at Sea, Aug. 12, 1949, 6 U.S.T. 3217, 75 U.N.T.S. 85; Geneva Convention Relative to the Treatment of Prisoners of War, Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135; Geneva Convention Relative to the Protection of Civilian Persons in Time of War, Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 287. The EECC noted that both parties treated “key provisions [of Protocol I] governing the conduct of attacks and other relevant matters in this Case as reflecting customary rules binding between them.” *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 17. The EECC stated that “most of the provisions of Protocol I were expressions of customary international humanitarian law.” *Id.*

43. *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 16 (citing the Hague Convention (IV) Respecting the Laws and Customs of War on Land and Annexed Regulations, Oct. 18, 1907, 36 Stat. 2277).

44. *Id.* ¶ 18 (citing Protocol on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices, Oct. 10, 1980, 1342 U.N.T.S. 168, reprinted in 19 I.L.M. 1523, 1529-54 (1980)).

45. *Id.* ¶¶ 32, 101-13.

allegations than simply those concerning the attack on Mekele. Additional allegations included the rape of civilians, forced labor, the use of landmines, looting and property destruction, abductions, and other offenses.⁴⁶

1. The Events of June 5, 1995: Eritrea Cluster Bombs an Airport (Twice) and a School (Twice)

On June 5, 1998, the two countries exchanged air strikes, with Ethiopia hitting the Asmara airport and Eritrea bombing the Mekele airport. Military aircraft were housed at both airports and therefore according to the EECC the airports were “unquestionably legitimate military objectives under international humanitarian law.”⁴⁷ The claim arose not from the damage done to the Mekele airport, but was based upon the fact that “Eritrean aircraft also dropped cluster bombs that killed and wounded civilians and damaged property in the vicinity of the Ayder school and the surrounding neighborhood in Mekele town.”⁴⁸ Ethiopia stated that the bombings “killed fifty-three civilians, including twelve school children, and wounded 185 civilians, including forty-two school children.”⁴⁹

Four aircraft attacked Mekele, all approaching over “densely populated residential areas.”⁵⁰ The first aircraft “had no bombs and strafed the airport.”⁵¹ The second aircraft “dropped cluster bombs on or near the airport runway at about 3:30 p.m.”⁵² The dispute centered on the whether and to what extent the third and fourth “sorties” struck the Ayder School and neighborhood, which are located on the northwest side of town about seven kilometers from the airport.⁵³ Eritrea claimed only one accidental attack occurred, whereas Ethiopia claimed both of the last two attacks intentionally targeted civilians.⁵⁴

a. *The Third Sortie: Two Cluster Bombs Hit Ayder School at 5:00 p.m.*

The third plane dropped its “two cluster bombs over the Ayder School and neighborhood at about 5:00 p.m.”⁵⁵ Eritrea claimed to have targeted “anti-aircraft defenses northwest of the airfield and at least four kilometers from the Ayder neighborhood.”⁵⁶

46. See, e.g., *id.* ¶¶ 34-40, 65-66, 71, 85 & 95.

47. *Id.* ¶ 101.

48. *Id.*

49. *Id.*

50. *Id.* ¶ 103.

51. *Id.*

52. *Id.*

53. *Id.*

54. *Id.* ¶ 104.

55. *Id.* ¶ 103.

56. *Id.* ¶ 105. The pilot claimed success in hitting that target. *Id.*

b. *The Fourth Sortie: Another Cluster Bomb Hits the Ayder Neighborhood an Hour Later.*

The EECC found that the fourth plane dropped another cluster bomb on the Ayder neighborhood at about 6:00 p.m., despite Eritrea claiming that the fourth sortie successfully targeted the airport.⁵⁷ Eritrea also claimed that targeting civilians would have brought on reprisals.⁵⁸ Ethiopia claimed Eritrea deliberately and intentionally attacked the civilian area with both the third and fourth sorties.⁵⁹ Ethiopia argued that intentionality could be inferred based in part on the fact that cluster bombs from two different planes hit the civilian areas an hour apart.⁶⁰ The EECC found that two Eritrean planes had dropped cluster bombs on civilian areas an hour apart, but not necessarily intentionally.⁶¹

2. The Decision: Eritrea Failed to Take Feasible Precautions and is Held Liable

The Commission held Eritrea liable for “the deaths, wounds and physical damage to civilians and civilian objects”⁶² for “failing to take all feasible precautions to prevent two of its military aircraft from dropping cluster bombs in the vicinity of the Ayder School and its civilian neighborhood in the town of Mekele.”⁶³ The EECC relied upon Additional Protocol I, Article 57, “the essence of which is that all feasible precautions to prevent unintended injury to protected persons must be taken in choosing targets, in the choice of means and methods of attack and in the actual conduct of operations.”⁶⁴ The Commission did “not question either the . . . choice of Mekele airport as a target, or [Eritrea’s] choice of weapons.”⁶⁵

The EECC exercised considerable restraint in not finding intentional targeting of civilians by accepting the argument that Eritrea had reason to concentrate its limited air power on attacking the Ethiopian airport in order

57. *Id.* ¶¶ 105, 107.

58. *Id.* ¶ 106.

59. *Id.* ¶ 105.

60. *Id.* ¶¶ 102, 105, 106.

61. *Id.* ¶¶ 107, 108.

62. *Id.* ¶ 113.

63. *Id.* ¶ V.D.9.

64. *Id.* ¶ 110.

65. *Id.*

to avoid reprisals.⁶⁶ The commission also essentially found that incompetence proved there was no intent to bomb civilians—“utterly inexperienced” pilots and programmers could have resulted in mis-programmed computers or pilot errors.⁶⁷ In the commission’s words, “[f]easible precautions” do not include making “practically impossible” pilot choices when only a very few experienced personnel were available.⁶⁸

Eritrea conducted the operations poorly. Two runs did not come close to hitting their intended target, killing civilians instead. Eritrea exhibited a “lack of essential care,” compounded by a “failure to take appropriate actions afterwards to prevent future recurrence.”⁶⁹ The Eritrean Deputy Air Commander, who was aware at the time of news reports of the initial strike on civilian areas, limited his questioning of the first pilot and failed to question the second pilot who later bombed the same area.⁷⁰ Neither pilot was made available for questioning by the EECC.⁷¹ Eritrea presented no evidence that training or doctrine had been changed to prevent recurrence.⁷² The Commission could not determine why cluster bombs hit the Ayder neighborhood because Eritrea declined to provide relevant evidence.⁷³ The EECC drew “adverse inferences reinforcing the conclusions already indicated that not all feasible precautions were taken by Eritrea.”⁷⁴

3. Analysis of the Decision

a. Means of Attack: The EECC Should Have Considered Cluster Munitions Characteristics.

The EECC found liability while avoiding a finding of intentional targeting of civilians. It “acknowledge[d] the long odds against two consecutive sorties making precisely the same targeting error, particularly in view of Eritrea’s representation that the two aircraft’s [sic] computers were programmed for two different targets.”⁷⁵ The Commission came perilously close to endorsing utter incompetence by implying that it would have been “practically impossible” for Eritrea to adequately train enough pilots and programmers.⁷⁶ Such reasoning suggests that nations may escape liability

66. *Id.* ¶ 108.

67. *Id.* ¶ 109.

68. *Id.* ¶ 110.

69. *Id.*

70. *Id.* ¶ 111.

71. *Id.*

72. *Id.*

73. *Id.* ¶ 112.

74. *Id.* ¶ 112 & n.39 (citing *Corfu Channel (UK v. Alb.)*, 1949 I.C.J. 18 (April 9)).

75. *Id.* ¶ 109.

76. *Id.* ¶ 110.

when they acquire advanced technology but fail to make the effort to properly train enough military personnel in its use.

The EECC should have questioned Eritrea's choice of cluster munitions to attack targets near populated areas, based on the nature of the weapon itself. Such an approach would have reinforced the finding of a failure to take adequate precautions. Evidence of the nature of the weapon here could be used to question the means of attack without having to consider whether Eritrea intended to attack only civilians. Article 57(2)(a), subsections (ii) and (iii), dictate that attack planners must

(ii) 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 or civilian life, injury to civilians and damage to civilian objects [and/or]

(iii) refrain from deciding to launch any attack which may 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.⁷⁷

The Commission criticized the *methods* of attack (i.e., the "lack of essential care" in carrying out the attacks) while not taking issue with the *means* of attack.⁷⁸ Airports are legitimate military targets, and some types of cluster munitions might be considered appropriate weapons to attack airfields,⁷⁹ but the legitimacy of a target alone does not end the analysis. The means of attack, in this case cluster bombs, should have been questioned.

There has been at least one other case in which an attack on an airfield by air-dropped munitions resulted in significant civilian injuries in nearby civilian concentration.⁸⁰ On May 7, 1999, a NATO aircraft dropped cluster munitions over Nis, Serbia while targeting an airport.⁸¹ At least fourteen civilians were killed and twenty-eight injured when cluster submunitions fell

77. Geneva Protocol I, *supra* note 17, ch. IV art. 57(2)(a)(ii)-(iii).

78. Partial Award-Ethiopia, 43 I.L.M. 1275, ¶ 110 (Eritrea-Ethiopia Claims Comm'n Apr. 28, 2004).

79. See *infra* note 228.

80. For a more detailed consideration of the attack and additional references, see Virgil Wiebe, *Footprints of Death: Cluster Bombs as Indiscriminate Weapons Under International Humanitarian Law*, 22 MICH. J. INT'L L. 85, 140-42 (2000).

81. *Id.* at 140.

on three distinct civilian neighborhoods.⁸² NATO claimed equipment malfunction as a defense.⁸³ Cluster munition “duds” littered the area after the attack.⁸⁴ Human rights organizations sharply criticized NATO, not for target choice, but for weapon choice.⁸⁵ Using cluster bombs where the target was surrounded by civilian concentrations raised questions about whether all feasible precautions had been taken.⁸⁶

An arguable distinction between the Nis and Mekele attacks could be that the Mekele airport was more clearly separated from civilian concentrations than was the case in Nis.⁸⁷ But “accidents” in both cases resulted in massive civilian deaths and injuries in situations where a weapon known to have wide-area effects was nonetheless used against a target near civilians. If one accepts the argument that there was such a clear separation between Mekele and the airport, then the bombing of a civilian area with a cluster munition should lead to a rebuttable inference that the attack was illegal due to the wide-area effects. The CB-250-K cluster bomb used in the attack on Mekele⁸⁸ had a known wide-area effect and a known propensity to leave behind duds.⁸⁹

Information about the CB-250-K was publicly available *before* the attack in question.⁹⁰ The Cardoen company, the maker of the munition,

82. *Id.*

83. *Id.* at 141.

84. *Id.*

85. *Id.*

86. *Id.* at 140-42.

87. A satellite image of Mekele on Google Earth shows that at least five kilometers separate the edge of the airfield and the outskirts of Mekele, and there are little or no signs of habitation between them. Google Earth image of Mekele, Ethiopia (downloaded July 27, 2007) (on file with author). The image was downloaded in 2007, some eight years after the event in question. See *supra* note 34 and accompanying text. It is possible that land between the airport and the town has been cleared in the interim.

88. Photos taken after the attack showed that the weapons used were Cardoen CB-250-K cluster bombs. To review the photos go to Professor Virgil Wiebe’s Cluster Munitions Page, <http://courseweb.stthomas.edu/vowiebe/Professor%20Virgil%20Wiebe%27s%20Courseweb/EthiopiaEritreaPhotoGallery.html> (last visited Oct. 23, 2007). Ironically, the cluster munitions likely originated from Ethiopian acquisitions made in the 1980s. Leslie Crawford, *Chile Halts Cluster Bomb Sales to Ethiopia*, FIN. TIMES, Oct. 20, 1990, at 3; Michael S. Serrill, *Of Cluster Bombs and Kiwis*, TIME, Dec. 10, 1990, available at <http://www.time.com/time/magazine/article/0,9171,971909,00.html>; Olivia Ward, *Falashas Near End of 2,000-year Exile from Biblical Lands*, TORONTO STAR, May 25, 1991, at A8.

With the creation of Eritrea following the fall of Mengistu, Eritrea acquired equipment from Ethiopia and on the arms market. U.N. Office for the Coordination of Humanitarian Affairs Integrated Reg’l Info. Network for Cent. and E. Africa (IRIN), Eritrea-Ethiopia: IRIN Special Background Report (1998), available at <http://www.h-net.org/~africa/sources/ethiopia111298.html>.

89. See *infra* notes 92, 96 and accompanying text.

90. “The [humanitarian law] evaluation has to be made on a case-by-case basis, taking the context into account under an honest and reasonable bona fide appraisal of the information available to the responsible person at the relevant time, and not on the basis of hindsight.” Marco Rossini, *Targeting and Contemporary Aerial Bombardment*, 54 INTL. & COMP. L. Q. 411, 434 (2005).

began producing cluster bombs in the early 1980s.⁹¹ Cardoen CB-250-K cluster bombs contain 240 PM-1 bomblets that can be dispersed over an elliptical footprint of up to 50,000m² (i.e., five hectares, or over 12 acres).⁹² An ellipse that size is 275m x 230m. The weapon is a “dumb” bomb in that after being dropped from the aircraft, there are no guidance systems that direct it to its target.⁹³

Each bomblet is only about forty centimeters in length and five centimeters in diameter.⁹⁴ Each bomblet can penetrate 150mm of steel armor, injure and kill people when its pre-fragmented casing explodes, and start fires as a result of its highly incendiary zirconium element.⁹⁵ The PM-1 bomblets have been known to have a “high failure rate.”⁹⁶ In well-publicized attacks, Sudan used cluster bombs (of Russian and Chilean design, including the PM-1) against civilian populations between 1995 and 2000.⁹⁷ The attacks killed and injured civilians and struck schools and hospitals. Unexploded duds denied access to land long after the attacks.⁹⁸

These weapons’ characteristics should have been known to the Eritrean air force, but there is no indication that the EECC had this or similar information when it made its decision.⁹⁹ It is not possible to gain direct

91. See, e.g., David Harvey, *Chile's Defense Firms Provide Well For the Country's Need*, DEF. & FOREIGN AFF., May 1985, at 28.

92. According to one profile of the CB-250-K,

The CB-500 elliptical shaped footprint can cover an area of approximately 50,000km², including a central zone of severe destruction of some 20,000km², depending on operational release parameters such as fuze time setting . . . , release altitude, aircraft speed and dive angle. The CB-250-K is reported to have about the same destructive footprint, but has a larger range of delivery methods.

CB-500 & CB-250-K, JANES AIR LAUNCHED WEAPONS, Issue 27, June 1997, at 1. 50,000m² is equivalent to about the area of nine football or soccer fields.

93. The *Janes* article describes how the bomb is attached to aircraft with standard lugs and how the release speed and altitude affect bomblet dispersion. *Id.* No mention is made of any precision guidance systems for the canister itself. *Id.*

94. *Id.*

95. *Id.*

96. RAE MCGRATH, CLUSTER BOMBS: THE MILITARY EFFECTIVENESS AND IMPACT ON CIVILIANS OF CLUSTER MUNITIONS 38 (Richard Lloyd ed., 2000), available at http://www.landmineaction.org/resources/Cluster_Bombs.pdf (referring to a June 1996 attack on Chukudum, Sudan).

97. For a summary of such use, see Rebecca Rich, *Cluster Munition Use in Sudan*, in VIRGIL WIEBE & TITUS PEACHEY, THE MENNONITE CENTRAL COMMITTEE GLOBAL REPORT ON CLUSTER BOMB PRODUCTION AND USE (2000), available at <http://www.mcc.org/clusterbombs/resources/research/death/chapter4.html>.

98. MCGRATH, *supra* note 96; Rich, *supra* note 97.

99. The partial award decision does note that the Eritrean aircraft flown by the Air Force “allegedly had computerized aiming systems that are designed to release bombs at the proper time to hit a target when the pilot sees it aligned with a ‘heads up’ display in the cockpit.” Partial Award-

access to the evidence presented or even to the memorials presented by the parties.¹⁰⁰ Perhaps Ethiopia did not raise the nature of the weapon for fear that its own use of cluster munitions in the conflict might come into question.¹⁰¹

The Commission rightly criticized the Eritrean commander for not doing enough after the first strike and the reports of civilian injuries. The second attack could have been called off in compliance with Additional Protocol Art. 57(2)(b), which calls for cancellation or suspension of an attack when disproportionate civilian damage can be expected.¹⁰²

The Commission therefore indirectly took into account the nature of the weapon as used—its landing on civilian areas and doing so much damage should have been acknowledged and acted upon. Had the EECC explicitly identified the means of attack as a source of the failure to take adequate precautions, it would have driven home more effectively the need for such precautions.

Ethiopia, 43 I.L.M. 1275, ¶ 103(1) (Eritrea-Ethiopia Claims Comm'n Apr. 28, 2004). The Eritrean government also claimed that the bomb release computer had been set to hit military targets. *Id.* ¶ 105.

100. According to counsel for both parties in the case, the memorials submitted by the parties are confidential pursuant to Commission policy. E-mail from Ed Rowe, International Law and Dispute Resolution Counsel, Hunton & Williams Law Firm, to Virgil Wiebe, Director of Clinical Education and Associate Professor, University of St. Thomas Law School (July 18, 2006, 14:47:00 CST) (Mr. Rowe also noted, at least partially incorrectly, that “Ethiopia’s case was not based on the legality of cluster bombs, but as the liability award indicated, on Eritrea’s intentional bombing of the elementary school twice.”) (copy on file with author); *see also*, E-mail from Lea Brillmayer, Howard M. Holtzmann Professor of International Law, Yale Law School, to Virgil Wiebe, Director of Clinical Education and Associate Professor, University of St. Thomas Law School (July 11, 2006, 06:45:00 CST) (on file with author). A review of the Rules of Procedure reveals no such explicit rule. The closest analogue seems to be a rule stating that “[h]earings shall be held *in camera* unless the parties agree otherwise.” R. OF PROC. art. 13(5), *available at* <http://www.pca-cpa.org/upload/files/Rules%20of%20Procedure.PDF>.

101. HANDICAP INT’L, CIRCLE OF IMPACT: THE FATAL FOOTPRINT OF CLUSTER MUNITIONS ON PEOPLE AND COMMUNITIES 52 (2007) [hereinafter HANDICAP INT’L, CIRCLE OF IMPACT], *available at* http://www.handicap-international.us/fileadmin/files/reports/report_circleOfImpact.pdf. (documenting Ethiopian cluster munition uses in 1990 and during the 1998-2000 war by relying on UN data indicating thirty to forty strikes involving British and Russian submunitions); *see also*, *International Campaign to Ban Land Mines*, LANDMINE MONITOR (2002), *available at* <http://www.icbl.org/lm/2002/eritrea.html> (reporting that Ethiopian aircraft cluster bombed the Korokan refugee camp in May 2000). The Britain-based mine clearance organization, Halo Trust, cleared British manufactured BL-755 cluster munitions from Korokon in July 2002. *See* E-mail from Netsanet Habtemariam, UNMACC, to Virgil Wiebe, Director of Clinical Education and Associate Professor, University of St. Thomas Law School (July 18, 2006, 01:45:00 CST) (with attached .pdf file “Cluster Munitions Cleared”) (on file with author). The Ethiopian air force also dropped cluster bombs on Asmara, the capital of Eritrea, in the same month. Lucy Hannan, *Ethiopian MIGs Launch Raids on Eritrean Capital*, INDEPENDENT (London), May 30, 2000, at 11 (detailing an Ethiopian cluster bomb attack on Asmara).

102. Geneva Protocol I, *supra* note 17, art. 57(2)(b).

b. The Post-Event Failure to Take Remedial Measures Contributed to a Finding of Liability.

The failure to take remedial measures *after* an event to prevent future mishaps also contributed to the finding of liability. According to the decision, “The Commission received no evidence indicating any changes in Eritrean training or doctrine aimed at avoiding possible recurrence of what happened in the third and fourth sorties on June 5, 1998.”¹⁰³ In the words of one commentator, “[t]he absence of the requisite care was held to be compounded by the failure to take appropriate corrective action to prevent a recurrence of the mistakes.”¹⁰⁴

Such an approach finds a duty to take remedial actions after the fact in order to show that all feasible or reasonable precautions had been taken to protect civilian life under sections 2 and 4 of Additional Protocol Art. 57.¹⁰⁵ A government might argue that this approach unfairly uses inaction after the fact as evidence of *prior intent*, rather than focusing only on the defendant’s actions at the relevant time of the incidents (i.e., prior to and during the attacks).¹⁰⁶

Intent, however, is not the issue. The issue is the *feasibility* of precautionary measures, not the intent of the actor in whether or not to target civilians at the time of the action in question. A rule that assigns liability for a failure to take reasonable remedial actions after a grossly negligent action could have the salutary effect of encouraging governments to take actions to prevent deaths and injuries from cluster munitions in the future.¹⁰⁷

Broader application of such a rule holds promise to restrain and limit the use of cluster munitions, as it could require militaries to take corrective measures about known failings of systems under their control. A failure to take corrective measures indicates a general callousness towards life and may be probative of general carelessness.

The approach taken runs directly counter to that of the Federal Rules of Evidence under U.S. law. In a U.S. tort claim, evidence that a defendant took remedial actions after an incident generally cannot be used to prove

103. *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 111.

104. J. Romesh Weeramantry, *International Decision: Eritrea Ethiopia Claims Commission*, 99 AM. J. INT’L. L. 465, 470 (2005).

105. See Geneva Protocol I, *supra* note 17, art. 57(2),(4).

106. See Rossini, *supra* note 90.

107. For example, the U.S. and Dutch governments halted cluster munition use in May 1999 during the NATO action in Kosovo following two incidents of civilian deaths. Wiebe, *supra* note 80, at 131-33.

liability.¹⁰⁸ The stated social policy of exclusion is one of “encouraging people to take, or at least not discouraging them from taking, steps in furtherance of added safety.”¹⁰⁹ Commentators have taken issue with this approach, arguing that even if a defendant did not know about Rule 407, he would take steps to correct known problems if only to avoid future accidents and further exposure to liability.¹¹⁰ The EECC takes this a step further, suggesting that defendants who take remedial measures be rewarded—i.e., their post-injury actions would be seen as evidence of precautionary measures.

Remedial measures also might properly be used as evidence of the feasibility of precautionary measures in the first place. Under Federal Rule of Evidence 407, such evidence can be used to show that precautionary measures were feasible prior to the incident, particularly if the defendant claims they were not feasible.¹¹¹ Because Article 57 of Additional Protocol I is all about the feasibility of precautionary measures, the ability to take such measures after an action perhaps *should* be available as evidence of feasibility before the actions were taken if a defendant claims such actions were not feasible.

4. Why the Limited Decision?

a. The Parties Presented Wildly Divergent Accounts of the Facts.

The EECC adopted a relatively high “clear and convincing” standard of proof.¹¹² In the claims, both sides presented large numbers of sworn affidavits completely contradicting the facts asserted by the other side.¹¹³ According to one commentator, “[t]he high standard of proof and the presentation of such conflicting evidence may have worked together to produce fewer findings of responsibility than either side had expected.”¹¹⁴

108. FED. R. EVID. 407. Rule 407 states:

When, after an injury or harm allegedly caused by an event, measures are taken that, if taken previously, would have made the injury or harm less likely to occur, evidence of the subsequent measures is not admissible to prove negligence, culpable conduct, a defect in a product, a defect in a product's design, or a need for a warning or instruction. This rule does not require the exclusion of evidence of subsequent measures when offered for another purpose, such as proving ownership, control, or *feasibility of precautionary measures*, if controverted, or impeachment.

Id. (emphasis added).

109. FED. R. EVID. 407 advisory committee's note.

110. STEPHEN A. SALTZBURG ET AL., FEDERAL RULES OF EVIDENCE MANUAL § 407.02 (8th ed. 2002).

111. *See* FED. R. EVID. 407.

112. Partial Award-Ethiopia, 43 I.L.M. 1275, ¶ 7 (Eritrea-Ethiopia Claims Comm'n Apr. 28, 2004).

113. *Id.* ¶ 6.

114. Weeramantry, *supra* note 104, at 467.

Both sides agreed on a few facts involving the attack on Mekele, but diametrically opposed assertions were made with respect to whether the fourth sortie even hit the civilian area.¹¹⁵ This may have been why the EECC could not bring itself to find that the attack on civilians was intentional or, at the least, disproportionate.¹¹⁶ As discussed above, more objective evidence on the cluster weapon used could have shored up the “failure to take feasible precautions” analysis,¹¹⁷ as well as supported an analysis that would have found the attack to be indiscriminate or disproportionate.

b. The EECC Dismissed Even Landmine Claims Due to a Lack of Clearly Binding Treaty Prohibitions on the Parties.

One of the objectionable aspects of cluster submunitions is that when they fail to explode on contact, they act as de facto anti-personnel landmines. With respect to actual anti-personnel landmines, the Commission dismissed all claims, holding that minefields placed in defensive positions were “the type of use that has been common and permissible under customary international law.”¹¹⁸ The Commission’s decision on landmines noted that the treaties restricting anti-personnel landmines had been relatively recently concluded, and that state practice was inconsistent.¹¹⁹ It did note that Protocol II of the Certain Convention Weapons treaty and its prohibition on indiscriminate use of landmines “reflect fundamental humanitarian law obligations of discrimination and protection of civilians.”¹²⁰

According to J. Romesh Weeramantry, the Commission did point out that “landmines used in ways that intentionally targeted civilians or were indiscriminate could not constitute a defensive measure.”¹²¹ Had the Commission more carefully considered the actual nature of the cluster munition in question (i.e., that it had a propensity to leave duds), a de facto

115. *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 6.

116. *Id.* ¶ 108.

117. *Id.* ¶ 110.

118. *Id.* ¶ 50.

119. Weeramantry, *supra* note 104, at 470 (citing *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 18; see also *Partial Award, Central Front (Eri. v. Eth.)*, Eritrea’s Claims 2, 4, 6, 7, 8 & 22, 43 ILM 1249, ¶ 24 (Eritrea-Ethiopia Claims Comm’n Apr. 28, 2004) [hereinafter *Partial Award-Eritrea*], available at <http://www.pca-cpa.org/upload/files/Eritrea%20Central%20Front%20award.pdf>.

120. *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 18; *Partial Award-Eritrea*, 43 I.L.M. 1249, ¶ 24.

121. Weeramantry, *supra* note 104, at 470.

landmine proportionality analysis could have been undertaken along the lines discussed *infra*.¹²²

In dismissing a claim concerning landmines, the Commission did recognize the danger posed to returning civilians and that the “risk posed to civilians from even lawful defensive uses of landmines demonstrates the importance of the rapid development in recent years of new international conventions aimed at restricting and even prohibiting all future use of anti-personnel [landmines].”¹²³ We may be on the cusp of similar “rapid development” in the area of cluster munition regulation, with efforts gathering momentum at both the national and international levels.¹²⁴

In conclusion, the EECC reached the right result in holding Eritrea liable for the killings of civilians. However, it should also have considered the nature of the cluster weapon used to reach that decision.

V. THE MARTIĆ JUDGMENT: PANIC ALL AROUND¹²⁵

*It was a very nice, sunny day I reached the Ban Jelacic Square, which is the very centre of Zagreb, and I decided to take a walk to the central railway station However, I never reached the central railway station because it was about 10.00 in the morning when I heard the sound of a shell, and I instinctively threw myself on the ground and felt a sharp pain in my head and in the area of my stomach. In my immediate vicinity, a car blasted. There was smoke and dust around me. I heard in the background women and children screaming. There was panic all around.*¹²⁶

On June 12, 2007, the International Criminal Tribunal for the Former Yugoslavia convicted Milan Martić, the former president of the now defunct Republic of Serbian Krajina (“RSK”), of war crimes and crimes against humanity.¹²⁷ In 1995, Milan Martić was the President of the RSK, an area in

122. See *infra* Part VII.F.

123. Weeramantry, *supra* note 104, at 470 (quoting *Partial Award-Ethiopia*, 43 I.L.M. 1275, ¶ 51).

124. See, e.g., Docherty, *supra* note 10, at 69-70 (describing the current movement to ban cluster munitions).

125. I initially addressed the facts and conclusions of Martić’s initial 1995 indictment and the 1996 Rule 61 decision of the Trial Chamber to issue an international arrest warrant in *Footprints of Death*, Wiebe, *supra* note 80. The current article re-evaluates the initial indictment evidence in light of the subsequent arrest, trial, and conviction of Martić.

126. Transcript of Record at 5761, Prosecutor v. Milan Martić, No. IT-95-11-T (June 19, 2006) (Testimony of Prosecution Witness Sanja Buntić) [hereinafter Trial Testimony of Buntić], available at <http://www.un.org/icty/transe11/060619IT.htm> (summarizing cluster bomb rocket attack by Serb Separatists on Zagreb, Croatia on May 2, 1995).

127. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 477 (June 12, 2007).

what is now Croatia.¹²⁸ On May 1, the Croatian army launched an offensive to capture RSK territory.¹²⁹ Martić responded on May 2 and 3 with submunition-filled rockets targeting Zagreb.¹³⁰ The attacks killed seven people and seriously or slightly injured over two hundred.¹³¹

With respect to the attack on Zagreb, the ICTY trial chamber convicted Martić of murder, inhumane acts, and cruel treatment (crimes against humanity), as well as for attacks on civilians (a war crime).¹³² What follows is a detailed history of the case, from the attack to the Trial Chamber judgment.¹³³ In Part VI, I lay out the charges against Martić. In Part VII, I address the central issues relating to cluster munitions, considering evidence from the inception of the case through trial.¹³⁴

VI. THE MARTIĆ INDICTMENT(S): DEVELOPMENTS FROM 1995 TO 2005

The initial indictment focused only on the Zagreb attack.¹³⁵ As Martić did not turn himself in, the ICTY held a “Rule 61” hearing to consider whether the charges against him should stand in order to issue an international arrest warrant.¹³⁶ A Trial Chamber issued a decision and the

128. *Id.* ¶ 2.

129. *Id.* ¶ 303.

130. *Id.* ¶ 305.

131. *Id.* ¶¶ 308, 313. For a complete summary of the procedural history, see *id.* ¶¶ 521-36.

132. *Id.* ¶¶ 471-72, 518. Martić was convicted on other counts as well. *Id.* ¶ 518.

133. Martić appealed the decision on July 13, 2007. *Rebel Serb Leader Martić Appeals Conviction*, REUTERS, Jul. 13, 2007, <http://www.alertnet.org/thenews/newsdesk/L13784394.htm>.

134. The Trial Chamber stated that it considered the charges against Martić “in light of the entire trial record” and “evaluated all evidence within the context of the trial record as a whole.” *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 20, 30. This suggests that pre-trial evidence was *not* considered. Pre-trial evidence is nonetheless evaluated because it contributed to the Rule 61 decision to issue the arrest warrant in 1996 (a decision to which other tribunals have subsequently referred and that also sheds light on how the case subsequently developed).

135. See *Martić*, Case No. IT-95-11-T, Initial Indictment (July 25, 1995), *available at* <http://www.un.org/icty/indictment/english/mar-ii950725e.htm>.

136. See *Martić*, Case No. IT-95-11-R61, Transcript of the Trial Chamber, Rule 61 Proceedings (Feb. 27, 1996) [hereinafter Rule 61 Proceedings], *available at* <http://www.un.org/icty/transe11/R61/960227IT.htm>; see also *Martić*, Case No. IT-95-11-T, Case Information Sheet at 5 (July 14, 2007) [hereinafter Case Information Sheet], *available at* <http://www.un.org/icty/cases-cis/Martić/cis-Martić.pdf>. The Case Information Sheet states:

[W]here the Tribunal has been unable to obtain custody of an accused, it has proceeded under Rule 61 of its Rules of Procedure and Evidence. In such proceedings a full Trial Chamber examines an indictment and the supporting evidence in public and, if it determines that there are reasonable grounds for believing that the accused committed any or all of the crimes charged, confirms the indictment and issues an international arrest warrant.

Case Information Sheet, *supra*, at 5.

warrant on March 8, 1996.¹³⁷ Following his surrender in May 2002,¹³⁸ Martić faced additional charges on a wider range of crimes in December of 2002.¹³⁹ The prosecutor amended the indictment yet again in 2003.¹⁴⁰ Martić pled not guilty to all counts.¹⁴¹

A. Factual Allegations in the Indictments: Deaths and Injury Resulting from the 1995 Attack on Zagreb

The original indictment made specific allegations about the Zagreb attacks:

On 2 May 1995, at approximately 10.25 hours, upon the orders of MILAN MARTIC, Orkan rockets fitted with “cluster-bomb” warheads were fired into the central part of Zagreb by the ARSK [Army of Republic of Serbian Krajina], causing death and injury to civilians in Zagreb. This was an unlawful attack against the civilian population and individual citizens.

On 3 May 1995 at approximately 12.10 hours, upon the orders of MILAN MARTIC, the ARSK fired additional Orkan rockets with “cluster-bomb” warheads into the central part of Zagreb, again causing death and injury to civilians in Zagreb. This was also an unlawful attack against the civilian population and individual citizens.¹⁴²

137. See *Martić*, Case No. IT-95-11-61, Rule 61 Decision 130 (Mar. 8, 1996), available at <http://www.un.org/icty/transe11/R61/960308IT.htm>; Press Release, Int’l Criminal Tribunal for the Former Yugoslavia, The Tribunal Issues an International Arrest Warrant Against Milan Martić, U.N. Doc. CC/PIO/042-E (Mar. 8, 1996), available at <http://www.un.org/icty/pressreal/p042-e.htm>.

138. Agence France Presse, *Serb Leader Flies to Hague Trial*, COURIER MAIL (Queensland, Australia), May 16, 2002, at 21.

139. *Martić*, Case No. IT-95-11, Amended Indictment (Dec. 18, 2002) available at <http://www.un.org/icty/indictment/english/mar-ai021218e.htm>.

140. The Second Amended Indictment was signed on July 14, 2003 and filed on September 9, 2003. See Case Information Sheet, *supra* note 136, at 4. The Second Amended Indictment was refiled on December 9, 2005 to correct a pagination error. *Id.* The corrected Second Amended Indictment is available online. See *Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected (signed July 14, 2003, refiled Dec. 9, 2005) available at <http://www.un.org/icty/indictment/english/mar-2ai051209e.pdf>. The author has on file an electronic version of the original Second Amended Indictment from 2003. *Martić*, Case No. IT-95-11-T, Second Amended Indictment (July 14, 2003) (on file with author).

141. On May 21, 2002, Martić appeared before the Trial Chamber for the first time and pled not guilty to the four counts in the original indictment. *Martić*, Case No. IT-95-11-I, Initial Appearance at 12 (May 21, 2002), available at <http://www.un.org/icty/transe11/0205211A.htm>. After the indictment was amended, Martić again plead not guilty to all counts. *Martić*, Case No. IT-95-11-I, Further Appearance and Status Conference 79-80 (Jan. 28, 2003), available at <http://www.un.org/icty/transe11/030128SC.htm>.

142. *Martić*, Case No. IT-95-11-T, Initial Indictment ¶¶ 8-9 (July 25, 1995).

The later amended indictments alleged more details about the attacks, stating from where the rockets were fired and detailing precise locations in Zagreb where they fell.¹⁴³ They also alleged that at least 7 civilians were killed and 194 wounded.¹⁴⁴ The indictments charged that the victims were all civilians protected by the laws and customs of war, and that Martić was required to abide by the laws and customs of war.¹⁴⁵

B. Crimes Against Humanity and War Crimes Under the ICTY Statute

Article 3 of the ICTY Statute specifies that the International Tribunal has the power to prosecute persons for violating the laws or customs of war.¹⁴⁶ Article 5 states that certain acts, including murder and other inhumane acts, when committed in armed conflict and directed against any civilian population, constitute crimes against humanity.¹⁴⁷

Article 7(1) of the ICTY Statute allows for individual criminal responsibility for acts of state: “A person who planned, instigated, ordered, committed or otherwise aided and abetted in the planning, preparation or execution of a crime referred to in articles 2 to 5 of the present Statute, shall be individually responsible for the crime.”¹⁴⁸ Article 7(3) addresses command responsibility, as the commission of war crimes or crimes against humanity by a subordinate

does not relieve his superior of criminal responsibility if he knew or had reason to know that the subordinate was about to commit such acts or had done so and the superior failed to take

143. See *Martić*, Case No. IT-95-11, Amended Indictment ¶¶ 49-54.

144. With regard to the attack on May 2, both subsequent amended indictments are identical (at least 5 killed and 146 wounded). With regard to May 3, the prosecution claimed at least five were killed. In the Second Amended Indictment, the prosecution reduced the number of wounded from fifty to forty-eight. *Id.* ¶¶ 51-52; *Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected ¶¶ 51-52. On the basis of additional evidence presented at trial, the judgment found that a total of at least 214 people were injured. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 308, 312 (June 12, 2007).

145. *Martić*, Case No. IT-95-11-T, Initial Indictment ¶¶ 13-14. These allegations were laid out in greater detail in the amended indictments. See *Martić*, Case No. IT-95-11, Amended Indictment ¶¶ 1-20; *Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected ¶¶ 1-20.

146. See Statute of International Criminal Tribunal for Former Yugoslavia, art. 3, May 25, 1993, 32 I.L.M. 1192, (amended May 13, 1998, Nov. 30, 2000, May 17, 2002, Aug. 14, 2002, May 19, 2003, April 20, 2005, Feb. 28, 2006); see also S.C. Res. 827, U.N. Doc. S/RES/827 (May 25, 1993), available at <http://www.un.org/icty/legaldoc-e/index.htm>.

147. S.C. Res. 827, *supra* note 146, art. 5(a) & (i).

148. *Id.* art. 7(1).

the necessary and reasonable measures to prevent such acts or to punish the perpetrators thereof.¹⁴⁹

C. The Charges Against Martić for Zagreb: Murder, Inhumane Acts, Cruel Treatment, and Attacks on Civilians

On the basis of these factual allegations, Martić originally faced four charges alleging the 1995 commission of war crimes.¹⁵⁰ In December of 2002, the prosecution not only filed additional charges against Martić for other crimes relating to ethnic cleansing dating back to 1991, but revised the charges concerning the Zagreb bombing.¹⁵¹ The new charges retained the earlier elements of personal criminal responsibility and/or command responsibility for the commission of war crimes, and added allegations of crimes against humanity. New counts 15 to 19 laid out the charges.¹⁵²

Count 15: Murder, a CRIME AGAINST HUMANITY, punishable under Articles 5(a) and 7(1) and 7(3) of the Statute of the Tribunal.

Count 16: Murder, a VIOLATION OF THE LAWS OR CUSTOMS OF WAR, as recognised by Common Article 3(1)(a) of the Geneva Conventions of 1949, punishable under Articles 3 and 7(1) and 7(3) of the Statute of the Tribunal.¹⁵³

149. *Id.* art. 7(3).

150. Two charges (Count I for May 2 and Count III for May 3) accused Martić of “knowingly and wilfully order[ing] an unlawful attack against the civilian population and individual civilians of Zagreb” causing at least seven deaths and numerous injuries in violation of “the laws and customs governing the conduct of war,” crimes recognized by “Articles 3 and 7(1)” of the ICTY Statute. *Martić*, Case No. IT-95-11-T, Initial Indictment ¶ 15. As an alternative to intentional attacks on civilians, the Prosecutor charged Martić in Count II (for May 2) and Count IV (for May 3) with knowing or having reason to know that a subordinate “was about to commit and did commit a war crime (“the rocket attack on civilians in Zagreb”) and that he “failed to take the necessary and reasonable measures to prevent the attack and failed to punish the perpetrators of the attack,” in violation of Articles 3 and 7(3) of the ICTY Statute. *Id.* ¶¶ 15-18.

151. *See Martić*, Case No. IT-95-11, Amended Indictment ¶ 55 (Dec. 18, 2002).

152. Counts 15-19 below are from the Martić Amended Indictment. *Id.* The Second Amended Indictment repeated these charges verbatim. *Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected ¶¶ 1-20 (signed July 14, 2003, refiled Dec. 9, 2005).

153. Common Article 3(1)(a) to the Geneva Conventions states in part:

- (1) Persons taking no active part in the hostilities, including members of armed forces who have laid down their arms and those placed hors de combat by sickness, wounds, detention, or any other cause, shall in all circumstances be treated humanely, without any adverse distinction founded on race, colour, religion or faith, sex, birth or wealth, or any other similar criteria. To this end, the following acts are and shall remain prohibited at any time and in any place whatsoever with respect to the above-mentioned persons:

- (a) violence to life and person, in particular murder of all kinds, mutilation, cruel treatment and tortures . . .

Geneva Conventions, *supra* note 42, common art. 3.

Count 17: Inhumane acts, a CRIME AGAINST HUMANITY, punishable under Articles 5(i) and 7(1) and 7(3) of the Statute of the Tribunal.

Count 18: Cruel treatment, a VIOLATION OF THE LAWS OR CUSTOMS OF WAR, as recognised by Common Article 3(1)(a) of the Geneva Conventions of 1949, punishable under Articles 3 and 7(1) and 7(3) of the Statute of the Tribunal.

Count 19: Attacks on civilians, a VIOLATION OF THE LAWS OR CUSTOMS OF WAR, as recognised by Article 51(2) of Additional Protocol I and Article 13(2) of Additional Protocol II to the Geneva Conventions of 1949, punishable under Articles 3 and 7(1) and 7(3) of the Statute of the Tribunal.¹⁵⁴

VII. THE MARTIĆ JUDGMENT AND THE EVIDENCE SUPPORTING IT: CENTRAL ISSUES CONCERNING CLUSTER MUNITIONS

A. *Requisite Mens Rea: What Did Martić Know, When Did He Know It, and Why Should We Care?*

A brief turn to the mens rea (mental state) requirement for the allegations is in order before examining the nature of the Orkan system. A central element of the case against Martić was that the nature of the weapon was known in advance. The mental state required for a finding of guilt has implications for future uses of cluster munitions, particularly when advanced knowledge of their effects is at issue.

According to the International Committee of the Red Cross's ("ICRC") treatise on customary international humanitarian law, "[i]nternational case law has indicated that war crimes are violations that are committed wilfully, i.e., either intentionally (*dolus directus*) or recklessly (*dolus eventualis*)."¹⁵⁵

154. The cited articles of the Additional Protocols to the Geneva Conventions prohibit attacks on civilians, including attacks intended to spread terror. See *supra* note 17 and accompanying text (language of Geneva Protocol I art. 51(2)); see *supra* note 18 (text of Geneva Protocol II art. 13(2)).

155. HENCKAERTS & DOSWALD-BECK, *supra* note 25, at 574 (citing Prosecutor v. Delalić, Case No. IT-96-21-T, Trial Chamber II, ¶¶ 437, 439 (Nov. 16, 1998)); see also Fenrick, *supra* note 25, at 157. ("Where the crime base consists of shelling or sniping incidents in a combat environment, it must first be proved that death, injury or damage was caused by an unlawful attack, that is, one directed against civilians or civilian objects or one directed against a military objective which may be expected to cause disproportionate incidental losses, before moving on to determine whether the additional elements necessary to establish the commission of other offences have also been established If a civilian is killed or injured during an attack on a military objective which was

In the Martić judgment, the Trial Chamber stated that

[t]he *mens rea* of murder is the intent to kill, including indirect intent, that is the knowledge that the death of the victim was a probable consequence of the act or omission. . . . [It is not] sufficient that the perpetrator knew that death would be a *possible* consequence of his act or omission.¹⁵⁶

The Trial Chamber noted that for murder, “[n]either negligence nor gross negligence on the part of the perpetrator is sufficient,”¹⁵⁷ strongly suggesting, however, that recklessness would be sufficient. Similar *mens rea* requirements were cited for cruel treatment¹⁵⁸ and for inhumane acts.¹⁵⁹

Attacks on civilians must be made with “direct or indirect intent” (i.e. must be wilful) in order to qualify as a grave breach.¹⁶⁰ The Trial Chamber relied on the ICRC commentary for defining wilful intent as including acts of recklessness:¹⁶¹

Wilfully: the accused must have acted consciously and with intent, i.e., with his mind on the act and its consequences, and willing the (“criminal intent” or “malice aforethought”); this encompasses the concepts of “wrongful intent” or “recklessness”, viz., the attitude of an agent who, without being certain of a particular result, accepts the possibility of it happening; on the other hand, ordinary negligence or lack of foresight is not covered, i.e., when a man acts without having his mind on the act or its consequences, (although failing to take the necessary precautions, particularly failing to seek precise information, constitutes culpable negligence punishable at least by disciplinary sanctions)¹⁶²

not reasonably expected to result in civilian casualties or damage to civilian objects disproportionate to the expected military advantage, then no crime has been committed because, once again, it is a lawful act of war.”)

156. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 60 (June 12, 2007).

157. *Id.* ¶ 60 n.113 (citing Prosecutor v Stakić, Case No. IT-97-24-T, Judgment, ¶ 587 (Oct. 29, 2003); Prosecutor v. Brdanin, Case No. IT-99-36-T, Judgment, ¶ 386 (Sep. 1, 2004); Prosecutor v. Orić, Case No. IT-03-68-T, Judgment, ¶ 348 (June 30, 2006)).

158. *Id.* ¶ 79 (stating that the “perpetrator must be shown to have acted with direct intent or with indirect intent, that is, in the knowledge that cruel treatment was a likely [i.e., probable] consequence of his act or omission.”).

159. *Id.* ¶ 85 (citations omitted).

160. *Id.* ¶ 72 & n.138 (quoting art. 85 of Geneva Protocol I, *supra* note 17) (citations omitted).

161. *Id.* The commentary was cited approvingly by the Appeals Chamber in the *Galić* case. Prosecutor v. Galić, Case No. IT-98-29-A, Judgment, ¶ 140 (Nov. 30, 2006).

162. ICRC, Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I): Commentary, ¶ 3474 (June 8, 1977) [hereinafter 1977 ICRC Commentary], available at <http://www.icrc.org/ihl.nsf/COM/470-750111?OpenDocument> (citations omitted) (cited in *Martić*, Case No. IT-95-11-T, Judgment, ¶ 72).

Individual criminal responsibility attaches to a person who orders the execution of a crime:¹⁶³

Ordering requires that a person in a position of authority instructs another person to commit a crime The *mens rea* is either direct intent in relation to the perpetrator's own ordering or indirect intent, that is, a person, who orders with the awareness of the substantial likelihood that a crime will be committed in the execution of that order¹⁶⁴

The prosecution was therefore faced with the task of proving intent in the following manner:

[T]hat Martić ordered acts, either directly, or indirectly, knowing there was a substantial likelihood that crimes would be committed; that to be found guilty for murder, cruel treatment, and inhuman acts, Martić knew there was a probability that the use of cluster munitions in Zagreb would result in those consequences; that to be found guilty for attacks on civilians, Martić ordered attacks on civilians or at least acted recklessly in ordering the use of cluster munitions, i.e., acting with knowledge, he accepted the possibility of indiscriminate and/or disproportionate deaths and injuries to civilians.¹⁶⁵

This task proved most difficult with respect to the attacks on May 2, before the actual effects of such attacks on Zagreb were known.¹⁶⁶ The prosecution called on Lieutenant Colonel Jozef Poje, an artillery expert recognized by the ICTY in other cases.¹⁶⁷ Poje testified that those making the decision to use the Orkan rocket may not have known of its

Another section of the ICRC Commentary not referenced by the Trial Chamber opines that "the concept of recklessness that may come into play—the person in question accepts the risk in full knowledge of what he is doing—must also be taken to be part and parcel of the concept of 'willfulness.'" *Id.* ¶ 493.

163. Statute of the International Tribunal, art. 7(1), May 25, 1993, 32 I.L.M. 1192, 1194 (amended May 13, 1998, Nov. 30, 2000, May 17, 2002, Aug. 14, 2002, May 19, 2003, April 20, 2005, Feb. 28, 2006).

164. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 441 (citations omitted).

165. *See id.* ¶¶ 456-78. The Trial Chamber's judgment does not resolve the apparent conflict between the recklessness standard laid out for murder (knowledge of probable consequences) as opposed to the recklessness standard laid out for attacks on civilians (accepting the *possibility* of a particular result).

166. *See id.* ¶¶ 302-08.

167. Fenrick, *supra* note 25, at 163.

characteristics, but that they had a responsibility to inquire of those in their chain of command who did know.¹⁶⁸ That alone would have been sufficient only for a finding of negligence.

The prosecution also questioned Rade Rašeta, a high-ranking intelligence officer in the Serbian Krajina army, who testified that “persons who were familiar with [the Orkan] knew that they were intended for targeting wider areas and not points, and that as such they could entail a lot of casualties.”¹⁶⁹ Martić had military men who “made proposals to [him] about the use of the armed forces. It was up to him to hear them out and then to either agree or disagree with the decision they proposed.”¹⁷⁰ The prosecution, relying on other ICTY precedent (including the Rule 61 Decision),¹⁷¹ also argued that intent could be inferred from the indiscriminate nature of the weapon used.¹⁷²

The defense argued that Martić, even assuming he ordered the shelling, could not be “held responsible for the choice of appropriate weapons” because he “did not have appropriate military knowledge” and that such responsibility was that of the Main Staff of the military.¹⁷³

168. Transcript of Record at 5114, *Martić*, Case No. IT-95-11-T (June 6, 2006) (testimony of Jozef Poje) [hereinafter Trial Testimony of Poje], available at <http://www.un.org/icty/transe11/060606ED.htm>, cited in Final Brief of Prosecution, ¶ 263, *Martić*, Case No. IT-95-11-T (2007), available at <http://www.un.org/icty/indictment/english/mar-clbrf070117a.pdf>.

169. Final Brief of Prosecution, ¶ 263, *Martić*, Case No. IT-95-11-T (2007) (citing Transcript of Record at 3939, *Martić*, Case No. IT-95-11-T (May 2, 2006) (testimony of Rade Rašeta) [hereinafter Trial Testimony of Rašeta], available at <http://www.un.org/icty/transe11/060502ED.htm>).

170. Trial Testimony of Rašeta, *supra* note 169, at 3915. The defense quotes this portion at page 3915, but inadvertently cites to page 3916. Public Redacted Final Trial Brief of Milan Martić, ¶ 150, *Martić*, Case No. IT-95-11-T (2007) (on file with author).

171. See *supra* note 137.

172. Final Brief of Prosecution, ¶¶ 461-62 & nn.1118-19, *Martić*, Case No. IT-95-11-T (2007) (citing Prosecutor v. Galić, Case No. IT-98-29-A, Judgment, ¶ 132 (Nov. 30, 2006) (referring to Prosecutor v. Galić, Case No. IT-98-29-T, Judgment, n.101 (Dec. 5, 2003)); see also Prosecutor v. Blaškić, Case No. IT-95-14-T, Judgment, ¶ 512 (Mar. 3, 2003); *Martić*, Case No. IT-95-11-61, Rule 61 Decision ¶¶ 23-31 (Mar. 8, 1996).

A direct attack can be inferred from the indiscriminate character of the weapon used [T]he expression ‘directed against’ is an expression which ‘specifies that in the context of a crime against humanity the civilian population is the primary object of the attack. In order to determine whether the attack may be said to have been so directed, the Trial Chamber will consider, *inter alia*, the means and method used in the course of the attack, the status of the victims, their number, . . . the nature of the crimes committed in its course, the resistance to the assailants at the time and the extent to which the attacking force may be said to have complied or attempted to comply with the precautionary requirements of the laws of war.

Id. at 462, (quoting *Galić*, Case No. IT-98-29-A, Judgment, ¶ 132).

173. Public Redacted Final Trial Brief of Milan Martić, ¶ 149, *Martić*, Case No. IT-95-11-T (2007). The defense pointed to Rašeta’s testimony that Martić “did not have the same knowledge about the use of the armed forces that professional soldiers have.” Trial Testimony of Rašeta, *supra* note 169, at 3915, cited in Public Redacted Final Trial Brief of Milan Martić, ¶ 150, *Martić*, Case No. IT-95-11-T (2007). The defense also relied on Colonel Poje’s testimony that

perhaps not everyone is familiar with the consequences of the use of the Orkan, and some

The Trial Chamber found that General Čeleketić (the direct subordinate of Martić) had ordered the Serbian Krajina's only M-87 Orkan rocket unit to be in position south of Zagreb and that the rocket unit was under his command.¹⁷⁴ The only evidence implicating Martić with direct knowledge of the weapon systems was the fact that he made a request for a loan of Orkan rockets from Serbia.¹⁷⁵

The Trial Chamber concluded that by "2 May 1995, the effects of firing the M-87 Orkan on Zagreb were known to those involved."¹⁷⁶ It is perhaps a bit peculiar to find that the effects were known to "those involved," as Martić was the only person on trial. Did the Trial Chamber find that Martić actually knew about the nature of the weapon, arriving at that conclusion by connecting the dots of powerful circumstantial evidence; or did it impute to Martić, based on command responsibility, the knowledge of others in his chain of command?

The evidence concerning Martić's actual knowledge is much stronger for the weapon's use on May 3. Rašeta testified that on May 2, he submitted a report to the Serbian Krajina main staff estimating the attack caused 30 civilians deaths and 130 civilian injuries and that Čeleketić would have informed Martić about outcome of the attacks.¹⁷⁷ There were also multiple reports in the media.¹⁷⁸ The Trial Chamber found that by May 3, "the full impact of using such an indiscriminate weapon was known beyond doubt."¹⁷⁹

With respect to the mental element of murder, the Trial Chamber held as follows:

Having regard in particular to the Trial Chamber's findings concerning the nature of the M-87 Orkan and that Milan Martić,

of those people may have been the people who decided to use it. And the people who made the decision on the use may not have been familiar with its consequences, but in any case, they should have informed themselves.

Trial Testimony of Poje, *supra* note 168, at 5114. In the alternative, the defense argued that the selection of the Orkan rocket was actually the best one to make, in light of the alternatives available at the time. Public Redacted Final Trial Brief of Milan Martić, ¶ 151, *Martić*, Case No. IT-95-11-T (2007). This issue is addressed *infra* Part VII.E.

174. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 303-04 (June 12, 2007).

175. *Id.* ¶ 315 (citing Trial Ex. 475).

176. *Id.* ¶ 463 (citing Section II.G.2 of the judgment).

177. Trial Testimony of Rašeta, *supra* note 169, at 3937-39; Transcript of Record at 3978, *Martić*, Case No. IT-95-11-T (May 3, 2006) (further testimony of Rade Rašeta), available at <http://www.un.org/icty/transe11/060503ED.htm>.

178. Final Brief of Prosecution, ¶¶ 264-65, *Martić*, Case No. IT-95-11-T (2007) (citing Trial Testimony of Rašeta, *supra* note 169, at 3937-39, 3972, 3977-79).

179. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 463.

who ordered the use of the M-87 Orkan, was aware that death was a probable consequence of this attack, the Trial Chamber finds that the mental element of the crime of murder is established.¹⁸⁰

With regard to attacks on civilians, the Trial Chamber held as follows: “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.”¹⁸¹

A military commander’s familiarity with the capabilities of weapons in the arsenal can have profound effects on an eventual war crimes prosecution. Knowledge about what a cluster munition can do in a civilian environment may expose military personnel and their civilian commanders to criminal liability. The nature of the weapon itself can be used as evidence of intent to attack civilians. A negligent failure to inquire about the nature of cluster munitions can lead to disciplinary action, at the least, which would imply courts martial or similar national level proceedings.

B. Working as Designed: Weapon Characteristics

So what are the “nature and effects” of the Orkan rocket system? And why should we care? Many countries build and stockpile similar Multiple Launch Rocket Systems (“MLRS”).¹⁸² The serious humanitarian-law concerns raised by the ICTY about the Orkan system implicate similar characteristics in other similar weapons systems.

The Orkan is an MLRS system, with each rocket having a range (in 1995) of fifty kilometers. As with many other MLRS systems, each launcher can fire up to twelve rockets at a time.¹⁸³ The *Martić* case highlighted the following characteristics: (1) submunition design and effects; (2) the “footprint” of the scattered submunitions when dispersed from the warhead; (3) the unguided targeting system; and (4) the unexploded ordnance left after the attacks.¹⁸⁴

180. *Id.* ¶ 470. The Trial Chamber also concluded “that Martić knew that the shelling was likely to cause such suffering, and thus intentionally committed acts which amount to cruel treatment under Article 3 and inhumane acts under Article 5 against these persons.” *Id.* ¶ 471.

181. *Id.* ¶ 472.

182. Army Technology, <http://www.army-technology.com/projects/mlrs/> (last visited Oct. 24, 2007) (listing the United States and fourteen other countries that have ordered the MLRS from Lockheed Martin Missiles and Fire Control).

183. Rule 61 Proceedings, *supra* note 136, at 99-100 (testimony of Ted Itani) [hereinafter Rule 61 Testimony of Itani]. Major Itani had forty years of experience in the Canadian military, including extensive experience as an artillery officer and trainer. *Id.* at 93-97.

184. *See infra* Part VII.B.1-4.

1. Deadly Dual Purpose: Submunition Design and Effects

Both pre-trial and trial prosecution witnesses presented evidence about the Orkan submunitions.¹⁸⁵ Each rocket used in the Zagreb attack carried 288 KB-1 bomblets, also referred to as “dual purpose improved conventional munitions” (“DPICMs”).¹⁸⁶ The “dual purposes” are to kill or injure people and to destroy armor.¹⁸⁷ The system was intended for use against troops in the open, “soft targets” (such as supply depots, fuel & ammunition dumps, or unhardened communications centers), and mass tank and armor formations (e.g. over an area 1 km x 1 km).¹⁸⁸

The prosecution presented evidence as to the submunitions’ gruesome effects on the human body, their ability to penetrate vehicles, and their minimal effect on buildings. The prosecution summarized the immediate and lasting effects:

Rašeljka GRMOJA was seventeen years old when her school was hit by one of the ORKAN rockets, leaving her with a metal ball in her shoulder and glass in her eye, as well as cuts all over her face and arms [A]lthough her physical injuries healed and she could return to school after a month, the psychological consequences of the shelling took much longer to disappear. Mina ZUNAC was talking to her mother on the street when she heard a series of explosions and realised that her leg ‘had been blown apart.’ She described the shock and panic of the moment, as well as the endless process of treatment and partial recovery from injuries to her hand, leg, and her badly damaged foot. Despite more than ten surgeries, the doctors have never been able to remove all of the shrapnel.¹⁸⁹

The Trial Chamber concluded in 2007 that:

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

185. Trial Testimony of Poje, *supra* note 168, at 5068-79.

186. Rule 61 Proceedings, *supra* note 136, at 100, 102.

187. *Id.* at 41 (testimony of Kevin Curtis) [hereinafter Rule 61 Testimony of Curtis]; *id.* at 100-02, 107-08 (testimony that each bomblet carries between 400 and 450 stainless steel pellets capable of killing at a radius of ten meters to fifty meters and that a shaped charge capable of penetrating up to sixty millimeters of armor accomplishes the second purpose).

188. Rule 61 Testimony of Curtis, *supra* note 187, at 43-44, *see also* Rule 61 Testimony of Itani, *supra* note 183, at 103-04.

189. Final Brief of Prosecution, ¶ 255, *Prosecutor v. Martić*, Case No. 1T-95-11-T (2007).

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 Each pellet has a lethal range of ten metres.¹⁹⁰

2. The Footprint of Death: The Dispersion of Submunitions

A single Orkan rocket can disperse its 288 bomblets over an ellipse of approximately 150 meters by 200 meters, or about two hectares in area.¹⁹¹ Colonel Rašeta, the Serbian intelligence officer, testified that “persons who are familiar with these artillery pieces knew that they were intended for targeting wider areas and not points, and that as such they could entail a lot of casualties.”¹⁹² The Trial Chamber found that the Orkan was a “non-guided high dispersion weapon, [which] . . . by virtue of its characteristics . . . was incapable of hitting specific targets.”¹⁹³

States and humanitarian groups are increasingly raising the alarm about these indiscriminate characteristics, especially when the weapons are used in civilian areas.¹⁹⁴

190. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 462 (footnote omitted). The judgment echoed the Rule 61 Decision. *Martić*, Case No. IT-95-11-61, Rule 61 Decision 146-47 (Mar. 8, 1996) (“The effects of these rockets have been known for many years.”).

191. *See Martić*, Case No. IT-95-11-T, Judgment, ¶ 463 (June 12, 2007); Rule 61 Testimony of Itani, *supra* note 183, at 103; *see also* Trial Testimony of Poje, *supra* note 168, at 5068, *cited in Martić*, Case No. IT-95-11-T, Judgment, ¶ 462 & n. 1249 (“[T]he surface area on which the bomblets drop is two hectares.”). The area formula of an ellipse is Pi times one-half length times one-half width. Mudd Math Fun Facts, *Area of an Ellipse*, <http://www.math.hmc.edu/funfacts/ffiles/10006.3.shtml> (last visited July 25, 2007). Thus, the area of an ellipse 150m x 200m is 23,562m². A hectare is 10,000 square meters. Encyclopædia Britannica Online, *Hectare*, <http://www.britannica.com/eb/article-9039780/hectare> (last visited July 25, 2007). One point of contradiction between Major Itani and Colonel Poje was that Itani stated that the warhead opened at 400 meter altitude, while Poje stated 800 to 1000 meters. *Compare* Rule 61 Testimony of Itani, *supra* note 183, at 103, *with* Trial Testimony of Poje, *supra* note 168, at 5068, 5126, 5129-30, 5133.

192. Trial Testimony of Rašeta, *supra* note 169, at 3939, *cited in Martić*, Case No. IT-95-11-T, Judgment, ¶ 462, n.1248. Major Itani testified that several rockets are usually fired at a target, with overlapping footprints, and that a salvo of three or six rockets could saturate an area that could be from 500 meters by 500 meters to 1,200 meters by 1,200 meters. Rule 61 Testimony of Itani, *supra* note 183, at 103.

193. *See, e.g., Martić*, Case No. IT-95-11-T, Judgment, ¶ 463.

194. Norway, Working Group on Explosive Remnants of War, *Responses to Document CCW/GGE/XI/WG.1/WP.2, Entitled IHL and ERW, Dated 8 March 2005*, ¶ 15, U.N. Doc. CCW/GGE/XI/WG.1/WP.5 (2005) (July 29, 2005).

[D]ue to the wide dispersal and large number of submunitions contained within many kinds of cluster munitions, there is a question of the impact of article 51 paragraph 4 of GC AP I with regard to the use of such munitions against military targets located in or near civilian areas (this would of course in many cases also be considered prohibited according to other principles, i.a. [sic] the proportionality principle

3. *This is Rocket Science?: Targeting Difficulties in MLRS Systems*

Where will that two-hectare footprint of 288 bomblets fall? Few unguided weapons can be fired with absolute precision:

Generally speaking, munitions from anything other than small arms can, at best, be expected to land within a particular area of the point at which they are aimed. This area is given various names in different armed forces, such as Circular Error Probable (CEP) or Error Ellipse. The expression is used to indicate the percentage of munitions fired from a particular type of weapon system . . . which can be expected to land within a given area of the aiming point.¹⁹⁵

The “Error Ellipse” or “Circular Error Probable” is not to be confused with the dispersion ellipse or footprint of submunitions. The center of the footprint can fall anywhere within the error ellipse. The Trial Chamber found that the Orkan’s error ellipse at its extreme range of fifty kilometers could undershoot or overshoot, or go to the left or right, of its target by about 1,000 meters.¹⁹⁶ With cluster munitions, this means that not just one explosive misses its target, but that 288 smaller explosives miss the target.

4. Indiscriminate as Designed

The Rule 61 Decision and the final judgment both considered these three features in reaching their conclusions. These characteristics were entirely intended by their designers. Prosecution witnesses testified at the Rule 61 hearing and at trial that if the intent had been to destroy military or police buildings, the Orkan rocket was the wrong weapon to use because of the minimal explosive power of the individual bomblets.¹⁹⁷ Colonel Poje testified that

Id.; see also Human Rights Watch, *Memorandum to CCW Delegates, Cluster Munitions and International Humanitarian Law: The Need for Better Compliance and Stronger Rules* (July 2004), at 3, available at <http://www.hrw.org/background/arms/clusters0704/clusters0704.pdf> (“Cluster munitions are area weapons, useful in part for attacking dispersed or moving targets. They cannot, however, be directed at specific soldiers or tanks, a limitation that is particularly troublesome in populated areas. Cluster bombing a populated area in order to kill individual soldiers is not unlike carpet bombing a city in order to destroy separate military bases. In both cases the attack is indiscriminate.”).

195. Fenrick, *supra* note 25, at 162.

196. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 462-63.

197. Rule 61 Testimony of Curtis, *supra* note 187, at 43; see also Rule 61 Testimony of Itani, *supra* note 183, at 113, 141 (“[Zagreb] is a built up area. I would have used some other system that would have provided me with appropriate precision, and appropriate destructive force . . . [M]y

[i]n view of the fact that it has high dispersion capabilities, ORKAN is not principally suitable for use in populated areas. It is designed for use outside populated areas. The reason for this is primarily that its effects in populated areas, regardless of the fact that there might be military targets in populated areas, there is a high probability that parts of the rocket should be dispersed and affect the civilian population, especially when the civilian population has not been evacuated on time or has not taken refuge or shelter. So I would like to mention once again ORKAN is not intended for deployment in populated areas.¹⁹⁸

The final judgment found as follows:

The evidence shows that the M-87 Orkan was fired on 2 and 3 May 1995 from the Vojnić area, near Slavsko Polje, between 47 and 51 kilometres from Zagreb. However, the Trial Chamber notes in this respect that the weapon was fired from the extreme of its range. Moreover, 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 Orkan is an indiscriminate weapon, the use of which in densely populated civilian areas, such as Zagreb, will result in the infliction of severe casualties.¹⁹⁹

The Trial Chamber also held that “in particular due to the characteristics of the M-87 Orkan and due to the large-scale nature of the attack, the Trial Chamber finds that the shelling constituted a widespread attack directed against the civilian population of Zagreb.”²⁰⁰ That an attack is widespread or systematic is “an essential element to be considered prior to any prosecution for crimes against humanity.”²⁰¹ The Trial Chamber stated that “[w]idespread’ refers to the large-scale nature of the attack and the number of targeted persons”²⁰² The International Criminal Tribunal for Rwanda has defined “widespread” as “massive, frequent, large scale action,

preference would have been to use precision guided munitions of heavy calibre, such as a 250 pound bomb with a laser-guided nose, so that you could take out specific installations.”)

198. Trial Testimony of Poje, *supra* note 168, at 5065.

199. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 463.

200. *Id.* ¶ 469.

201. CLAIRE DE THAN & EDWIN SHORTS, INTERNATIONAL CRIMINAL LAW AND HUMAN RIGHTS 91 (2003).

202. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 469.

carried out collectively with considerable seriousness and directed against a multiplicity of victims.”²⁰³

The attacks on May 2 and 3, 1995 consisted of only eight to twelve Orkan rockets.²⁰⁴ If the court found such an attack to be “widespread,” other instances in which large numbers of cluster munitions have been used against civilian areas must come under close scrutiny. The use of cluster munitions in south Lebanon by Israeli forces during 2006 presents the starkest recent example. By December 3, 2007, the Mine Action Coordination Centre for South Lebanon had mapped 960 cluster munition strikes covering 444 areas and 38,638,788 square meters.²⁰⁵

C. *Targets in Urban Areas: How Can Military Objectives in Civilian Populations Be Attacked?*

Eight to twelve rockets hit Zagreb over two days, killing seven people, and injuring over two hundred others (all but a handful of which were considered to be civilians).²⁰⁶ Among the civilian structures hit were a children’s hospital, the National Theatre, and a high school.²⁰⁷

203. DE THAN & SHORTS, *supra* note 201, at 91 (quoting Prosecutor v. Akayesu, Case No. ICTR-96-4-T, Judgment, ¶ 580 (Sept. 2, 1998), *aff’d sub silentio*, Case No. ICTR-96-4-A, Judgment (June 1, 2001)). The authors go on to note that

[h]ow “widespread” the attack must be is a question of enormity in relation to the scale of the atrocities and the number of victims involved Factors to be considered include the actual numerical size of the group, the area in which the population lives, and the grave consequences that resulted from the attack on a particular group.

Id. at 91-92.

204. The *Martić* judgment did not make a specific finding on how many rockets were fired. See generally *Martić*, Case No. IT-95-11-T, Judgment. The prosecution in its closing brief argued that four rockets fell on May 2 and another four fell on May 3. Final Brief of Prosecution, ¶¶ 251, 253, *Martić*, Case No. IT-95-11-T (2007) (citing, *inter alia*, Transcript of Record at 5623-24, 5631, 5646-52, *Martić*, Case No. IT-95-11-T (June 15, 2006) (testimony of Branko Lazarević) [hereinafter Trial Testimony of Lazarević], available at <http://www.un.org/icty/trans11/060615IT.htm>). Detective Curtis testified in 1996 that there were twelve rockets fired over the two days. Rule 61 Testimony of Curtis, *supra* note 187, at 38-39, 56. A map attached as the final page of the Trial Chamber judgment shows twelve separate strikes, numbered one through eight (several of the strikes in the same immediate bear the same number). *Martić*, Case No. IT-95-11-T, Judgment, at p. 199. This map was identified as Exhibit 22 at trial, and Exhibit 6 at the Rule 61 proceedings. An internal report on May 2 to the Serbian Krajina high command reported eight rockets on the first day. See *infra* note 222 and accompanying text.

205. Mine Action Coordination Center South Lebanon, Cluster Bomb Strikes as of July 31, 2007, <http://www.maccsl.org/photogallery/Cluster%202006/CBU%20%2003%20Dec%2007.jpg> [hereinafter MACCSL Map] (last visited Dec. 30, 2007).

206. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 305-13.

207. *Id.* ¶¶ 305, 307, 309.

The defense did not dispute that the Orkan rockets killed and injured civilians in downtown Zagreb. Rather, the defense argued that the effort was to hit military targets, namely the Ministry of Defense, the Ministry of the Interior, the Presidential Palace, and the airport.²⁰⁸ The prosecution argued two alternatives. First, it claimed there were no military targets at all in downtown Zagreb.²⁰⁹ Second, it claimed that even if there were such targets, the Orkan was inappropriate for urban use.²¹⁰ The Trial Chamber agreed with the second theory, concluding that between the poor targeting capability and the low explosive charge of the submunitions, the Orkan was not an appropriate weapon for use against the alleged military targets. A detailed look at the facts of the case graphically illustrates the peril of using such weapons in populated areas.

1. What is a “Densely Populated Civilian Area”?

The Trial Chamber judgment found that “the M-87 Orkan is an indiscriminate weapon, the use of which in *densely populated civilian areas*, such as Zagreb, will result in the infliction of severe casualties.”²¹¹ The only mention of the phrase *densely populated area* in humanitarian treaty law is found in Article 58 of Additional Protocol I, and applies to co-locating targets.²¹² Parties to a conflict, to the maximum extent feasible, are to “avoid locating military objectives within or near densely populated areas.”²¹³ The complete phrase, “*densely populated civilian area*,” appears nowhere in treaty law.²¹⁴ Dictionary definitions of “dense” include “marked by compactness or crowding together of parts,”²¹⁵ and “crowded closely together.”²¹⁶ Zagreb, a capital city with a population of nearly 780,000, should easily qualify as densely populated.²¹⁷ The prosecution cited multiple witnesses testifying that on May 2, 1995, at the time of the attack, the streets of Zagreb were filled with people and stated that rockets on that day impacted “in the heart of Zagreb’s city centre.”²¹⁸

208. Public Redacted Final Trial Brief of Milan Martić, ¶ 90, *Martić*, Case No. IT-95-11-T (2007).

209. *Id.* ¶ 260.

210. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 463.

211. *Id.* ¶ 463 (emphasis added).

212. Geneva Protocol I, *supra* note 17, art. 58(2).

213. *Id.* See *supra* note 33 for full text.

214. See *supra* notes 17, 33 and accompanying text.

215. MERRIAM-WEBSTER ONLINE DICTIONARY, <http://www.m-w.com/dictionary/dense> (last visited Oct. 25, 2007).

216. COMPACT OXFORD ENGLISH DICTIONARY, http://www.askoxford.com/concise_oed/dense?view=uk (last visited Oct. 25, 2007).

217. Welcome to Zagreb, Facts and Figures, <http://zagreb-touristinfo.hr/?id=32&l=e&nav=nav2> (last visited Oct. 25, 2007).

218. Final Brief of Prosecution, ¶ 251, *Prosecutor v. Martić*, Case No. IT-95-11-T (2007).

2. What Are Military Objectives?

The prosecution in 1996 initially presented evidence that there were no legitimate military targets anywhere near where the rockets fell.²¹⁹ By the end of trial, the prosecution argued that even if there were military targets in Zagreb, the weapon was inappropriate to target them.²²⁰ The defense claimed that the Orkan rockets were aimed at legitimate military targets in Zagreb, namely the Ministries of Defense and Interior, the Military Airport, and the Presidential Palace.²²¹ As evidence that civilians were not the intended target, the defense cited to a confidential document dated May 2, 1995, from the Security Department of the Main Staff of the SVK Army, which stated:

Today at 1030 hrs, the Artillery units of the Serbian Army of Krajina fired eight rockets from and [sic] Orkan multiple rocket launcher on the Banski Dvori/Presidential Palace/ [sic], the Ministry of Defence and Pleso airport.²²²

Three of the four alleged targets were single buildings or groups of buildings: the Ministry of Defense, the Presidential Palace, and the Ministry of the Interior. All of these potential targets are located in downtown Zagreb, sometimes within meters of civilian structures.²²³ The Pleso airport, the main international airport for Zagreb, is surrounded by civilian neighborhoods.²²⁴ Are these military targets?

219. Rule 61 Proceedings, *supra* note 136, at 28. “The intent quite clearly was not to go after military targets. There were no military targets in downtown Zagreb on May 2nd, on May 3rd, or at any other time. The intent of those attacks was to murder civilians and to terrorize the population. They were successful.” *Id.* at 124. An ICTY investigator who had visited the strike sites claimed there were no military installations at any of them and that minor damage had been done to civilian structures. *Id.* at 40, 42-43, 54-55. A senior Croatian police official testified that “in the centre of Zagreb there are no military installations of any kind whatever” and that a “European city like Zagreb does not have military installations in the centre of the city.” *Id.* at 64, 68, 78, 79 (testimony of Franjo Tuksa) [hereinafter Rule 61 Testimony of Tuksa].

220. Final Brief of Prosecution, ¶¶ 250, 259, *Martić*, Case No. IT-95-11-T (2007) (referencing evidence and testimony about the civilian nature of the sites hit and stating that an investigator “also testified that, as far as he knows, there was not a single military feature in the immediate vicinity of the locations that was hit.”).

221. Public Redacted Final Trial Brief of Milan Martić, ¶ 147, *Martić*, Case No. IT-95-11-T (2007).

222. *Id.* ¶ 167.

223. See *infra* notes 229-230, 232.

224. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 305-08 (June 12, 2007).

a. *Pleso Airport*

Was the Pleso airport a legitimate military objective? In the Eritrea Judgment case, the EECC concluded that the airport outside of town was “unquestionably” a legitimate military objective as military aircraft were parked there at the time of the attack.²²⁵ Neither party in the *Martić* case presented evidence that military aircraft were located at the Pleso airport at the time of the attack, but state practice with respect to whether or not airports constitute military targets does not seem to turn on whether military aircraft are present.²²⁶ The Pleso airport, therefore, seems to have been a legitimate target.

Was the Orkan MLRS appropriate for targeting it? Cluster submunitions of the KB-1 Orkan type could destroy an aircraft as easily as they could destroy other vehicles or tanks.²²⁷ If the purpose was to destroy or impede use of the runway, the argument faces the same challenge as that facing the argument that cluster munitions could be used against hardened structures. The explosive impact of the KB-1 bomblets simply does not do great damage to concrete or asphalt surfaces.²²⁸

225. Partial Award-Ethiopia, 43 I.L.M. 1275, ¶ 101 (Eritrea-Ethiopia Claims Comm’n Apr. 28, 2004).

226. See generally Final Brief of Prosecution, ¶¶ 250, 259, *Martić*, Case No. IT-95-11-T (2007); Public Redacted Final Trial Brief of Milan Martić, *Martić*, Case No. IT-95-11-T (2007).

227. See *supra* text accompanying notes 187-188, 190.

228. There are some cluster munitions created specifically to create large craters on runways. The British JP233 is one such weapon. See, e.g., [2.0] Dumb Bombs (2): Cluster Munitions & Other Bombs, http://www.vectorsite.net/twbomb_02.html (last visited Dec. 30, 2007). In April 2007, I visited South Lebanon to examine the impact of cluster munitions from the 2006 war. In driving throughout the region, I saw hundreds of cluster munition pockmarks on roads that did not affect the automobile mobility. See, e.g., Cluster Bomblet Pockmarks - Yohmor, Lebanon, <http://www.youtube.com/watch?v=6-tqPDd2sg> (posted April 23, 2007). Israel made extensive use of MLRS rockets containing bomblets similar in size and explosive power to the KB-1. See, e.g., Steve Goose, *Convention on Conventional Weapons (CCW): First Look at Israel’s Use of Cluster Munitions in Lebanon in July-August 2006* (Aug. 30, 2006), <http://hrw.org/english/docs/2006/08/30/global14155.htm>.

b. Ministry of Defense / Ministry of Interior / Presidential Palace

The Ministries of Defense²²⁹ and Interior²³⁰ are classic military targets. The prosecution did not argue that those installations were not “by their nature, location, purpose or use mak[ing] an effective contribution to military action and whose total or partial destruction, capture or neutralisation in the circumstances ruling at the time, offer[ed] a definite military advantage.”²³¹ Located on St. Mark’s Square, the Presidential Palace is the seat of the Croatian government.²³² While one might argue that the civilian center of political life might not constitute a legitimate military target, the prosecution made no such effort. As stated earlier, the military experts argued that the bomblets could not significantly damage buildings.²³³

3. Co-location, Co-location, Co-location: The Obligations of Attackers and Defenders When Military Targets are Intermingled in Civilian Areas

By the conclusion of trial, the prosecution was arguing that the Orkan rockets had landed “nowhere near” the alleged military targets.²³⁴ The

229. The Ministry of Defense is located several kilometers to the east of the National Theater, one of the buildings hit in the attack. According to a police investigator at trial, the Ministry of Defense is located at Peter Kralj Kresimira Square IV, near the Zvonimir Hotel. Rule 61 Testimony of Tuksa, *supra* note 219, at 81. The MOD complex is about 300m by 400m in size. Trial Testimony of Lazarević, *supra* note 204, at 5662-64. That the Ministry of Defense is located at this Square is confirmed by Croatian government websites. Croatian Ministry of Defence On-line, http://www.morh.hr/en/kontakti_en.asp (last visited Dec. 30, 2007). The Zagreb Tourist Bureau provides a website that pinpoints government ministries down to the block. Zagreb Tourist Board, <http://www.zagreb-touristinfo.hr/?id=101&l=e&nav=nav9&solo=314> (last visited Dec. 30, 2007). The Ministry is located on the Petra Kralja Square, on a block bounded by Antuna Bauera street (on the west), Kralja Zvonimira (on the north), the Square itself (on the south), and on Stančićeva (on the east). *Id.* Križanićeva Street is located about 200m away. *Id.* “The [Krajina Serb Army] report also provides that ‘[a]ccording to our source, the Ministry of Defence in Križanićeva Street was hit.’ However, the Trial Chamber notes that the Ministry of Defence is not located in this street but in the nearby Baureova Street.” *Martić*, Case No. IT-95-11-T, Judgment, ¶ 461 (citations omitted).

230. The Ministry of the Interior was located at Ulica Grada Vukovara 33. Croatian Ministry of Interior Contact Information, <http://www.mup.hr/main.aspx?id=1269> (last visited Dec. 30, 2007); *see also* Zagreb Tourist Board, <http://www.zagreb-touristinfo.hr/?id=101&l=e&nav=nav9&solo=338> (last visited Dec. 30, 2007).

231. Geneva Protocol I, *supra* note 17, art. 52(2).

232. Trial Testimony of Lazarević, *supra* note 204, at 5664 (referring to Exhibit 804).

233. *See supra* note 197 and accompanying text.

234. Prosecution Filing Regarding Site Visit, ¶ 4, *Martić*, Case No. IT-95-11-T (Feb. 28, 2007) (on file with author). (“The visit to Zagreb reinforced the evidence that this city was a densely populated civilian location. The visits to the specific locations where Orkan rockets fell showed that nearly all of these locations were nowhere near purported military targets in Zagreb.”).

question then becomes one of the obligations of both attackers and defenders when military targets are intermingled in civilian areas—duties which do not evaporate just because one side or the other violates its obligations.²³⁵

a. Obligations of Attackers

As noted earlier, Article 57 of Additional Protocol I spells out the requirements of distinguishing civilian populations from those actively taking part in hostilities, insuring that civilians not be object of attack, sparing civilians from the ravages of war, and taking all necessary precautions, including the choice of weapons, to achieve these obligations.²³⁶ At the same time, the presence of civilians does not render a target non-military in nature. Many states acknowledge that “[n]oncombatants in the vicinity of a military objective must share the danger to which the military objective is exposed.”²³⁷

The 1996 Rule 61 decision in *Martić* assumed that military targets did exist but made clear that

[e]ven if an attack is directed against a legitimate military target, the choice of weapon and its use are clearly delimited by the rules of international humanitarian law. There exists no formal provision forbidding the use of cluster bombs in armed conflicts. Article 35(2) of Additional Protocol II, however, prohibits the employment of “weapons, projectiles, and material and methods of a nature to cause superfluous injury or unnecessary suffering.”²³⁸

In addition, paragraph 4(b) of Article 51 of the same Protocol states that indiscriminate attacks are prohibited.²³⁹ These include attacks “which employ a method or means combat which cannot be directed at a specific military objective.” Last, under the terms of paragraph 5(b) of that same Article, the attacks must not cause damage and harm to the

235. “Any violation of these prohibitions shall not release the Parties to the conflict from their legal obligations with respect to the civilian population and civilians, including the obligation to take . . . precautionary measures” Geneva Protocol I, *supra* note 17, art. 51(8).

236. See *supra* note 32.

237. See *supra* notes 29 & 30 and accompanying text. The defense also cited to the *Kupreškić* case for the proposition that protections for civilians cease or are diminished “when, although the object of a military attack is comprised of military objectives, belligerents cannot avoid causing so-called collateral damage to civilians.” Public Redacted Final Trial Brief of Milan Martić, ¶ 76, *Martić*, Case No. IT-95-11-T (2007) (citing Prosecutor v. Kupreškić, Case No. IT-95-16-T, Judgment, ¶ 522 (Jan. 14, 2000)).

238. Rule 61 Proceedings, *supra* note 136, at 140.

239. *Id.*

civilian population disproportionate in relation to the concrete and direct military advantage anticipated.²⁴⁰

b. Obligations of Defenders

As stated above, Article 58 charges those defending an area to take precautions to protect civilians from attack, including “to the maximum extent feasible,” not placing military objectives in or near densely populated areas.²⁴¹ The ICRC commentary on Article 58 states that

[a]s regards permanent objectives, governments should endeavour to find places away from densely populated areas to site them. These concerns should already be taken into consideration in peacetime. For example, a barracks or a store of military equipment or ammunition should not be built in the middle of a town.²⁴²

The defense emphasized the obligations of the party being attacked to take measures to protect its own civilians by citing to the ICRC commentary:

[B]oth by the party launching the attack during the planning, decision and actions stages of the attack, and by the party that is attacked Each party should, in good faith design such measures and adapt them to the specific circumstances, bearing in mind the means available to it, an based on the general principles relating to the protection of the civilian population.²⁴³

The prosecution, acknowledging the duties of defenders, cited to the *Galić* judgments as reaffirming other obligations under Article 58:

[T]he parties to a conflict are under an obligation to remove civilians, to the maximum extent feasible from the vicinity of

240. *Id.*

241. Geneva Protocol I, *supra* note 17, art. 58(2). *See supra* note 33 for full text. Notably, [Article 58] is a corollary to the numerous articles contained in the Protocol of the benefit of the population of enemy countries. It is not concerned with laying down rules for the conduct to be observed in attacks on territory under the control of the adversary, but with measures every Power must take in its own territory in favour of its own nationals, or in territory under its control.

1977 ICRC Commentary, *supra* note 162, ¶ 2239.

242. *Id.* ¶ 2251.

243. Public Redacted Final Trial Brief of Milan Martić, ¶ 75, *Martić*, Case No. IT-95-11-T (2007) (quoting 1977 ICRC Commentary, *supra* note 162, ¶ 4772).

military objectives and to avoid locating military objectives within or near densely populated areas [but] the failure of a party to abide by the obligation does not relieve the attacking side of its duty to abide by the principles of distinction and proportionality when launching an attack.²⁴⁴

The final judgment agreed with the prosecution, holding that “the presence or otherwise of military targets in Zagreb is irrelevant in light of the nature of the M-87 Orkan.”²⁴⁵

4. Putting it All Together: Mapping Footprints, Error Ellipses, and Commingled Targets

With respect to military targets in populated areas, the case came down to each side blaming the other.²⁴⁶ The prosecution said the Serbian Krajina army intentionally targeted civilians, and that in the alternative, it used the wrong weapon if it meant to hit and truly damage the alleged military targets.²⁴⁷ The defense said that Croatia bore the blame for locating military objectives in a city, and that collateral damage is regrettable but inevitable in such a setting.²⁴⁸

While the explosive power of cluster submunitions to damage buildings and airports has been discussed above,²⁴⁹ the issue of proximity bears closer examination.²⁵⁰ A somewhat analogous situation would be that of “attacking military installations on which civilian facilities exist The question is whether an entire area or installation can be treated as a single unitary whole during an attack.” Michael N. Schmitt answers the question by concluding that “the presence of a clearly distinct civilian area, such as a shopping complex or housing area, on a military installation precludes treating the entire installation as targetable [IHL] requirements auger against treating military installations as a single entity for targeting purposes.”²⁵¹

Assuming the obligations to target only military objectives and limit death and injury to civilians and damage to civilian objects, how close is too

244. Final Brief of Prosecution, ¶ 466 n. 1127, *Martić*, Case No. 1T-95-11-T (2007) (quoting Prosecutor v. Galić, Case No. IT-98-29-A, Judgment ¶ 194 (Nov. 30, 2006)).

245. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 461 (June 12, 2007).

246. *Id.*

247. *Id.*

248. *Id.*

249. See, e.g., *supra* Part VII.B.2.

250. Michael N. Schmitt, *Targeting and Humanitarian Law: Emerging Issues*, 34 ISRAELI YB ON HUM. RTS. 59, 97-99 (2004).

251. *Id.*

close? When the prosecution claims the cluster strikes were nowhere near the intended targets, what does that actually mean?

A close examination of the results of an attack, as well as the pre-strike information available to the attacker, can shed light on that question. How a strike actually turns out may aid in determining the intent of the attacker or in how well the proportionality/discrimination equation was made in the first place.²⁵²

Colonel Poje provided detailed testimony about the “error ellipse.” An Orkan rocket fired from forty-nine kilometers (the approximate distance of the firing) “could land as much as 1,032m to the left or right of its intended target, and 972m in front of or past its intended target.”²⁵³ As cluster munitions are dispersion weapons, the error ellipse concerns all of the area where the center of the footprint could land.²⁵⁴ Assuming the center point of the footprint landed on the outside edge of the error ellipse, the footprint itself would extend even beyond the edge of the ellipse.²⁵⁵

Martić Trial Exhibit 22, reproduced at page 199 of the *Martić* judgment, shows the strikes from the two days of attacks.²⁵⁶ The following analysis takes its measurements from that map.

The strikes hitting downtown Zagreb came closest to the alleged targets, but are nonetheless a fair distance away. The closest was strike three, less than 300m from the Ministry of Defense (a bomblet reportedly struck the Ministry). Strikes one and two were each about equidistant both from the Presidential Palace and the Ministry of Defense (strike one, approximately 750m; strike two, approximately 850m). Strike four came closest to the Presidential Palace, missing it by about 780m. Strike five was about equidistant between the Presidential Palace and the Ministry of Interior (between 900m and 970m from the targets).

As for the airport, the three strikes designated by the number six did come relatively close. The point nearest the airport is about 160m from the nearest airport parking lot (indeed, one bomblet reportedly hit the parking

252. It is accepted that the anticipated military advantage versus the anticipated collateral damage is the central question. See Fenrick, *supra* note 25, at 175. “The actual results of the attack may assist in inferring the intent of the attacker as he or she launched the attack but what counts is what was in the mind of the decision maker when the attack was launched.” *Id.*

253. Final Brief of Prosecution, ¶ 260 & n.840, *Martić*, Case No. IT-95-11-T (2007) (citing Trial Testimony of Poje *supra* note 168, at 5084-91, 5099-104).

254. Schmitt, *supra* note 250, at 97-99.

255. *Id.*

256. *Martić*, Case No. IT-95-11-T, Judgment, p. 199 (June 12, 2007) (citing Trial Ex. 22). All of the information in the following four paragraphs detailing the attacks on Zagreb is derived from this source.

lot), 240m from what appears to be the nearest terminal building, and 350m from the airstrip itself. The furthest strike point was no more than 500m from the airstrip.

Strikes seven and eight should definitely classify as nowhere near an alleged target. The strikes designated as number seven were over 5500m from the Ministry of Defense and over 4000m from the closest point at the airport. Strike eight was over 6000m from the Ministry of the Interior.

Overall, six of the eight strike areas—eight of the twelve actual rockets—were located within the Orkan error ellipses—within a 1000-meter radius—of the alleged targets. A fine-grained look at the data supports the Trial Chamber’s conclusion that the weapon was indiscriminate, even assuming a good faith effort to hit legitimate targets.

As an example, we can place the Ministry of Defense at the center of an error ellipse that size (with a one-kilometer radius) and plot cluster bomb “footprints” around the actual strike points. The defense argued that because the Ministry of Defense complex fills an area about 300 meters by 400 meters,²⁵⁷ an area weapon like the cluster bomb (with a footprint of 150 meters by 200 meters in which the bomblets fall)²⁵⁸ made sense to use. Three rockets fell well within the error ellipse (and thus the rockets performed as well as could be expected), but they fell nowhere near the Ministry of Defense.²⁵⁹

In addition, there are innumerable civilian objects within the error ellipse around the Ministry of Defense. At the very edge of the error ellipse (and firmly within the error ellipse of the Presidential Palace) is Ban Jelacic Square, the main square of Zagreb (described by one witness injured in the attack as “the heart of the town, the very centre of the town.”)²⁶⁰ Also located in the error ellipse are the main bus terminal, the Zagreb Cathedral, the popular Strossmayer Square, and several schools.²⁶¹

Although the rockets performed as well as could be expected according to specifications, falling within a certain distance of the intended target, there were so many non-military targets within the error ellipse, in addition to the intended target, that the use of the Orkan was indiscriminate.

Legitimate military targets existed in downtown Zagreb, but the evidence supported the Trial Chamber’s conclusion that the Orkan MLRS system was inappropriate for use against military targets in an urban environment for three basic reasons: (1) the inability to target an unguided rocket at the far reaches of its range created a high probability that the

257. Trial Testimony of Lazarević, *supra* note 204, at 5663-64.

258. Rule 61 Proceedings, *supra* note 136, at 12.

259. See *Martić*, Case No. IT-95-11-T, Judgment, at 199.

260. Trial Testimony of Buntić, *supra* note 126, at 5763.

261. Trial Testimony of Lazarević, *supra* note 204, at 5663-64; Trial Testimony of Buntić, *supra* note 126, at 5764-65.

rockets would stray onto civilian objects; (2) the large footprint of the weapon equally endangered nearby civilians; and (3) the bomblet explosive charge lacked the ability to do serious damage to hardened structures.²⁶²

D. If Cluster Munitions Are Deemed Indiscriminate, Won't Bigger Unitary Bombs Be Used Instead?

If cluster munitions cannot be used in civilian areas, militaries may feel they must resort to other weapons systems with larger ordnance. The Martić defense team strenuously argued that Martić and his staff made the right choice in selecting the Orkan, because the only other weapon at their disposal was the more powerful Luna M rocket system.²⁶³ The weapon chosen was the “one where the possibility of incidental damage is of a lesser degree.”²⁶⁴ The Luna rocket was described as having a very large warhead (more than 400 kilograms), offering poor targeting (with circular error probable/error ellipses of 500-700m), and being “completely inappropriate for shelling targets situated in towns like Zagreb.”²⁶⁵ Because of the uncertainty of being able to hit its target, “many rockets [would] have to be launched” to hit intended targets, resulting in much greater incidental damage.²⁶⁶

The ICTY Trial Chamber, *sub silentio*, rejected the argument that restricting the use of cluster munitions use in populated areas would force belligerents to use more destructive unitary warheads in such areas.²⁶⁷ Professor Greenwood argues to the contrary, along the lines of the Martić defense, and raises the possibility that the cure—limiting cluster munition use in civilian areas—may be worse than the disease—the deleterious effects of cluster munitions.²⁶⁸ This becomes a viable question only if military

262. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 461-63.

263. Public Redacted Final Trial Brief of Milan Martić, ¶ 152, *Martić*, Case No. IT-95-11-T (2007). The defense was clearly arguing alternative theories. Earlier in their argument, they claimed that Martić had no knowledge about the Orkan rockets. *Id.* ¶¶ 149-50.

264. *Id.* ¶ 151.

265. *Id.* ¶¶ 158-60.

266. *Id.* ¶¶ 162-63; see also [globalsecurity.org](http://www.globalsecurity.org), *FROG-7A (3R-11, 9K21, 9M21, R-65) FROG-7B (9K52, 9M52, R-70), Luna-M*, <http://www.globalsecurity.org/military/world/russia/frog-7.htm> (last visited Dec. 30, 2007) (describing the basic characteristics of the Luna).

267. See *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 465-68.

268. Group of Governmental Experts of the States Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Weapons Which May Be Deemed to be Excessively Injurious or to Have Indiscriminate Effects, *Legal Issues Regarding Explosive Remnants of War*, ¶ 24, U.N. Doc. CCW/GGE/I/WP.10 (May 23, 2003) [hereinafter *Legal Issues Regarding Explosive Remnants of War*] (prepared by Christopher Greenwood) (“If the alternative to an attack by means of cluster munitions is the heavy use of unitary weapons, the damage to the civilian infrastructure and the

commanders are given the green light to violate the discrimination principle²⁶⁹ and the proportionality principle²⁷⁰ in order to avoid violating the distinction principle. Although the overall discrimination principle may prohibit use of a particular weapon, it does not necessarily allow the use of an even worse weapon for the particular situation. The proportionality equation concerns the balancing of military advantage against collateral damage with respect to a particular attack.²⁷¹ For that course of action to be acceptable, the military advantage must outweigh the anticipated collateral damage of *that* attack.²⁷² The balancing test is *not* between an attack that is less costly to civilians as opposed to another attack that is more costly to civilians. If neither alternative results in an anticipated military advantage that outweighs the anticipated collateral damage of either action, than neither course of action is acceptable.²⁷³

The *Martić* case provides an excellent example of this principle in practice. The Trial Chamber held that the Orkan rocket was an indiscriminate weapon when used in a densely populated area.²⁷⁴ The seemingly logical next step would be to use unitary ordnance against the targets. But the Luna M rockets, with large warheads capable of doing major damage, have targeting systems nearly as poor as the Orkan.²⁷⁵ And as the defense rightly stated, a Luna rocket missing its target in downtown Zagreb on a busy morning would have devastating effects on

overall harm to the civilian population might well be increased By concentrating on the problem of ERW [explosive remnants of war] to the exclusion of other effects of particular weapons, it may be that the protection of the civilian population is diminished rather than enhanced.”)

269. See *supra* Part II.B.

270. See *supra* Part II.C.

271. See *supra* note 31 and accompanying text.

272. See *supra* note 31 and accompanying text.

273. Virgil Wiebe, *Ongoing Humanitarian Considerations in Cluster Munition Regulation, Presentation to Group of Governmental Experts*, Geneva, Nov. 22, 2005, at slide 29 (on file with author). See also *supra* note 31 and accompanying text; Human Rights Watch, *Myths and Realities about Cluster Munitions*, Feb. 2007, <http://www.hrw.org/campaigns/clusters/myths0307myths0307web.pdf>. “While some attacks with unitary munitions in populated areas may be lawful, those that are indiscriminate and disproportionate are a violation of IHL. It is untenable to argue that the only alternative to an illegal cluster munition attack is an illegal attack with unitary weapons.” *Id.* at 2. Fenrick has also addressed the general principle:

It should be remembered, however, that an artillery commander will have a limited choice of weapons systems to use and he or she may have to rely on one which is not the most appropriate. It must also be remembered that an attack which is conducted in accordance with military doctrine, that is, using the appropriate number of munitions in accordance with weapons expenditure norms to achieve a desired effect on a given target, may, nevertheless, be unlawful if, in the circumstances, it is indiscriminate or is expected to cause excessive collateral injury to civilians or damage to civilian objects.

Fenrick, *supra* note 25, at 163.

274. Prosecutor v. Martić, Case No. IT-95-11-T, Judgment, ¶ 463 (June 12, 2007).

275. Public Redacted Final Trial Brief of Milan Martić, ¶¶ 158-60, *Martić*, Case No. IT-95-11-T (2007).

civilians.²⁷⁶ The bottom line is that the Serbian Krajina army simply did not have at its disposal acceptable weapons to attack military targets in downtown Zagreb.

E. Death by Duds: The Lasting Effects of Unexploded Ordnance

What role did duds play in the *Martić* decision? The immediate and longer term dangers posed by unexploded cluster bomblets have been at the center of the debate over cluster bomb regulation. A recent study by Handicap International estimates that civilians account for ninety-eight percent of all reported casualties from cluster munitions.²⁷⁷ All munitions have some level of failure rate, and cluster submunition “duds” arguably were not intended by the designers or manufacturers of these weapons—after all, most would recognize that the desired outcome for an explosive device is to explode. The failure of bomblets to explode on contact nonetheless creates de facto anti-personnel mines, a characteristic exacerbated by the sheer numbers scattered during use.²⁷⁸

The *Martić* judgment marks a significant breakthrough and a missed opportunity. The Trial Chamber held *Martić* accountable for the immediate post-attack effects of cluster munitions,²⁷⁹ but missed the opportunity to hold him accountable for injuries caused by unexploded ordnance in the longer term.

1. If You Can Count the Immediate Effects of Unexploded Submunitions . . .

The bomblets in the Zagreb attack failed to explode on contact at an astonishing rate, based on testimony at the Rule 61 proceedings in 1996.²⁸⁰ Mario Petric, Chief of the Anti-Explosives Department, testified at the Rule 61 proceedings that his personnel retrieved about 1599 unexploded bomblets in the weeks following the attacks.²⁸¹ The duds were either armed (and failed to explode because they hit at an angle) or were not armed at all as a

276. *See id.* ¶ 162.

277. HANDICAP INT’L, CIRCLE OF IMPACT, *supra* note 101, at 136.

278. *Id.*

279. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 476.

280. *See* Rule 61 Proceedings, *supra* note 136, at 90.

281. *Id.* Franjo Tuksa, head of Croatia’s war crimes and terrorism unit, told of leaving his Zagreb office after the May 2 attack. In a nearby park he found bomblets “all around the place” and “hanging from trees.” Rule 61 Testimony of Tuksa, *supra* note 219, at 61-63.

result of the rocket opening too late in flight.²⁸² Depending on whether eight or twelve rockets fell (each carrying 288 bomblets),²⁸³ the failure rate was between forty-six and sixty-nine percent.

On May 3, Police Officer Ivan Markulin died while trying to defuse a bomblet in the yard of the children's hospital on Klaićeva Street.²⁸⁴ Three hours after the attack, the hospital director showed foreign diplomats the scene: "This is part of the jaw of the man who tried to defuse the thing," he said. A reporter described Markulin's body as "peppered with shrapnel wounds above the waist," and having "no recognisable [sic] face."²⁸⁵ The ICTY convicted Martić for Markulin's murder.²⁸⁶ Police Officer Ivica Pukšec suffered severe injuries on May 3 while defusing a bomblet.²⁸⁷ His left arm was amputated.²⁸⁸ Pukšec was included among those for whom Martić was held criminally liable for inhumane acts and cruel treatment.²⁸⁹

Legal commentators increasingly recognize that the risks of unexploded submunitions must be factored in to the proportionality calculus. Professor Greenwood formulates the issue as follows:

If there is known to be a serious risk: (a) that a significant percentage of the munitions or sub-munitions used against a target will not explode and will remain dangerous; and (b) those ERW will cause civilian casualties, then the resulting risk to the civilian population is a factor which may have to be taken into account in applying the proportionality test.²⁹⁰

282. Rule 61 Proceedings, *supra* note 136, at 90, 92-93; *see also* Rule 61 Testimony of Itani, *supra* note 183, at 111.

283. *See supra* note 204.

284. Rule 61 Proceedings, *supra* note 136, at 64, 76-78. Markulin died after having disarmed hundreds of bomblets. *Id.* at 78, 92; Trial Testimony of Lazarević, *supra* note 204, at 5650.

285. *Serb Rebels Agree to Ceasefire*, THE HERALD (Glasgow), May 4, 1995, at 8 (cited in Wiebe, *supra* note 80, at n.162).

286. *Prosecutor v. Martić*, Case No. IT-95-11-T, Judgment, ¶ 470 (June 12, 2007); *see also* Rule 61 Proceedings, *supra* note 136, at 136.

287. Rule 61 Proceedings, *supra* note 136, at 86-87, 89.

288. *Id.* at 86-87, 92. Mario Petric was the Chief of the Anti-Explosives Department of the Zagreb Police. *Id.* at 85. In the transcript, Officer Pukšec's name is spelled phonetically as "Buksec." The spelling "Pukšec" is found in Annex II of the Corrected Second Amended Indictment of those injured on May 3. *Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected, Annex II, at 19 (signed July 14, 2003, refiled Dec. 9, 2005).

289. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 470.

290. Legal Issues Regarding Explosive Remnants of War, *supra* note 268, ¶ 22. Charles Garraway has also argued that "[i]f it is known that there is likelihood, or even a certainty, that an attack will leave behind some explosive remnants of war, then that must be factored into the equation." Group of Governmental Experts of the States Parties to 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, *Working Paper: How Does Existing International Law Address the Issue of Explosive Remnants of War?*, ¶ 16, U.N. Doc. CCW/GGE/XII/WG.1/WP.15 (Dec. 15, 2005) (based on the presentation of Charles Garraway to the

Professor McCormack and his colleagues Paramdeep Mtharu and Sarah Finnin have drawn similar conclusions about the rule of proportionality, particularly when cluster munitions are used “in any close proximity to civilians or in an area to which civilians are expected to return after the cessation of hostilities.”²⁹¹

Professor Greenwood goes a step further and argues that such a rule must be limited to the “immediate risk,” defined as the risk “from unexploded sub-munitions in the hours immediately after the attack.”²⁹² The death of Officer Markulin and the serious injury of Officer Pukšec in the hours immediately after the attack on Zagreb clearly fit this situation.

As for the culpable *mens rea* of Martić in this case, the question again seems to be based on knowledge—did he know there was a risk of significant unexploded ordnance, and that it would place civilians at risk? As stated above, the prosecution presented considerable evidence at the Rule 61 hearing about the nearly 2,000 unexploded bomblets cleared in the aftermath of the attacks. But were Martić and his subordinates on notice that such unexploded ordnance could endanger civilians in the immediate aftermath of their use?

Serbian forces in Croatia used the Orkan over two years prior to the Zagreb attack.²⁹³ Following an Orkan cluster bomb attack on Sibenik in March 1993 that immediately wounded twenty-three civilians, the authorities also issued warnings about duds.²⁹⁴ Another attack on the town of Muc the previous March caused immediate injuries and left behind

12th Session of the Group of Governmental Experts of the States Parties to the CCW held in Geneva on November 12, 2005).

291. TIMOTHY L. H. MCCORMACK ET AL., REPORT ON STATES PARTIES' RESPONSES TO THE QUESTIONNAIRE: INTERNATIONAL HUMANITARIAN LAW & EXPLOSIVE REMNANTS OF WAR 19 (2006), available at http://www.gichd.ch/fileadmin/pdf/CCW/XIIIth_Mtg_Mar06/CCW_McCormack_Report.pdf.

[T]he expected dud rate and the expected dispersal area of the submunitions will be highly relevant Some Respondent States were of the view that it can be anticipated, and must be expected, that any ERW left behind after an attack will lead to a loss of civilian life, injury to civilians, damage to civilian property, or a combination thereof. A weapons system that has a high failure rate, such as a cluster bomb, is likely to cause a much higher rate of ERW thereby generating higher levels of collateral damage as the duds subsequently explode. Whether this outweighs the military advantage depends on the situation and must be assessed on a case by case basis.

Id.

292. Legal Issues Regarding Explosive Remnants of War, *supra* note 268, ¶ 23. The issue of longer term effects is discussed in more detail in the following section, Part VII.F.2.

293. See *Croatian Radio*, *supra* note 2.

294. *Id.*

dangerous unexploded ordnance.²⁹⁵ Just as those within the Serb Krajina army knew of the characteristics related to the explosive effects, wide area footprints, and targeting challenges of the Orkan, they must also surely have known of the problems with duds.

2. . . . Then Why Not Count the Longer-Term Effects of Unexploded Submunitions?

But what of the longer term effects of unexploded submunitions? A bomblet found in July of 1995 caused severe injuries to Alen Kicic, Alen Prokic, Anto Saraf, and Damir Jambresic.²⁹⁶ The bomblet exploded as they were playing with it, near a spot where an explosion had occurred on May 3.²⁹⁷ These boys were not included in the indictment list of those injured, and therefore Martić escaped liability for their injuries.²⁹⁸ Major Itani testified about the long-term dangers at the Rule 61 proceedings:

The large numbers of unarmed, so to speak, bomblets, that could be recovered still pose a danger, as would be the case with those that are armed, and it is a residual danger that can last for many, many years, because if it is soft ground these things can get buried 25, 30 centimetres, and at some future date, through frost action or farming activity or construction, these could be dug up and accidentally exploded.²⁹⁹

The Prosecution in its closing brief did not emphasize earlier evidence about the very high dud rates of the submunitions in Zagreb and did not try to include the injuries suffered by the four children in the July 1995 incident.³⁰⁰

295. *The Croatian-Yugoslav Conflict in Brief: "Cluster-Bomb Warhead" Reportedly Used in Attack on Muc* (BBC Summary of World Broadcasts, Mar. 12, 1993).

296. Rule 61 Testimony of Tuksa, *supra* note 219, at 66-67. Tuksa first testified that the event occurred on July 27, then later stated it occurred on July 20. *Id.*

297. *Id.*

298. Prosecutor v. Martić, Case No. IT-95-11-T, Second Amended Indictment – Corrected, Annexes, at 14-19 (signed July 14, 2003, refiled Dec. 9, 2005). The online version of the earlier Amended Indictment of 2002, *supra* note 139, makes reference to a list of victims in Annex II, but that list is not available on-line. Martić, Case No. IT-95-11-T, Second Amended Indictment – Corrected. The Amended Indictment of 2002 alleges fifty wounded victims on May 3 whereas the Second Amended Indictment, alleges only forty-eight wounded victims. *Id.* ¶ 52. Without access to the original Annex II, it is unclear why the number of alleged wounded dropped to forty-eight, but it seems unlikely that the reduction in number was due to the removal of these children from the list, simply because there were four of them, and the children were not actually injured on May 2 or May 3, but in July.

299. Rule 61 Testimony of Itani, *supra* note 183, at 111.

300. In an e-mail exchange with the lead prosecutor, the question of longer term consequences prompted the following response:

I wish I could say that we made a considered decision on the issue that you identify, but

Martić could have been held accountable for the injuries suffered by these children, even though they were injured more than two months after the attacks. A fairly clear causal chain was established between the Orkan rocket attack and the bomblet that injured the children. Large numbers of duds were recovered.³⁰¹ Zagreb had never been cluster bombed before,³⁰² supporting the conclusion that the bomblet had come from the May attack. The event also occurred nearby the site of an earlier explosion on May 3.³⁰³

The Trial Chamber also had no problem pinning the later death of Luka Skračić on Martić. Skračić experienced a blast wound to the head in the May 3 attack and died on June 6.³⁰⁴ The autopsy established a cause-effect relation between the injury and the subsequent death.³⁰⁵

Accountability could have been reached through either theory posited by the prosecution for the other deaths and injuries and eventually accepted by the Trial Chamber: intentionally attacking civilians (regardless of the weapon used) *or* causing harm to civilians by using a weapon inappropriate for the purported military installations targeted.

Under the first theory, the prosecution proved that Martić and his highest general had acted on their earlier threats to bomb civilians in Zagreb and other Croatian cities if Croatia launched an offensive against Serbian Krajina.³⁰⁶ The Trial Chamber accepted the theory that Martić had violated the basic principle of distinction, holding Martić liable for harm to those civilians killed or injured by the bomblets.³⁰⁷ The passage of time, so long as it or some other intervening act does not break the causal link between act and injury, should not have immunized Martić from the achieved consequences of his intended actions. None of the balancing tests related to proportionality would be needed.

the truth is that it is not an issue that i [sic] really considered. I was focused on the effects on the two days that the rockets hit and figured that the death and injury and terror caused on those two days was sufficient [sic] for our purposes.

E-mail from Alex Whiting, Assistant Clinical Prof. of Law, Harvard Law Sch. and U.N. Prosecutor in *Prosecutor v. Martić* (Mar. 21, 2007, 13:11:00 CST) (on file with author). Mr. Whiting did point out that the indictment did include deaths of person who died later as a result of injuries. *Id.*

301. Rule 61 Testimony of Itani, *supra* note 183, at 111.

302. Rule 61 Testimony of Tuksa, *supra* note 219, at 82 (“The centre of Zagreb was never shelled, had never been shelled prior to that, as far as I know, not even during the Second World War. Nobody ever shelled Zagreb.”).

303. *See Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected ¶ 52 (signed July 14, 2003, refiled Dec. 9, 2005).

304. *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 310, 313, n.975 (June 12, 2007) (exhibit citations omitted).

305. *Id.* at n.975; *see also* Trial Testimony of Lazarević, *supra* note 204, at 5653.

306. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 313.

307. *Id.* ¶ 472.

Under the second theory, the prosecution stressed that even if there were military targets in downtown Zagreb, the known attributes of cluster munitions made them the wrong choice in a densely populated area.³⁰⁸ The weapons were indiscriminate. The prosecution would have had to prove not only that submunition duds occur, but that Martić knew the duds could cause deaths or injuries months after use.

Such evidence did exist. In a disturbingly similar case, two children died and another was injured after trying to dismantle an unexploded Orkan bomblet in Sibenik, Croatia on June 13, 1993.³⁰⁹ This incident occurred as a result of the cluster bombing of Sibenik by Serbian forces beginning in January 1993.³¹⁰

Assuming mens rea could have been established, the debate moves to the question of proportionality. Can longer term deaths and injuries (as well as other ongoing damages) be considered a part of the proportionality equation? Professor Greenwood has argued longer-term risks of ERW are too uncertain to be a part of the calculus:

The degree of that risk turns on too many factors which are incapable or assessment at the time of the attack, such as when and whether civilians will be permitted to return to an area, what steps the party controlling that area will have taken to clear the unexploded ordnance, what priority that party gives to the protection of civilians and so forth. The proportionality test has to be applied on the basis of information reasonably available at the time of the attack.³¹¹

Professor McCormack disagrees:

[M]ilitary planners and commanders are obviously going to take into account not just the expected short-term military advantage but also the longer-term military advantage. And if that is the case . . . , it should be both the short-term as well as the longer-term expectation [of civilian death and property damage] that ought to be part of the equation The balancing test does not obligate military planners to factor in the ‘unknowable,’ . . . [but] [i]t is very

308. See *Martić*, Case No. IT-95-11-T, Second Amended Indictment – Corrected ¶¶ 23(f), 51-54.

309. *Croatia: Two Children Killed While Playing with Unexploded Bomb in Sibenik* (BBC Summary of World Broadcasts, June 16, 1993).

310. Todd Bensman, *Life Shattered for Croatians Targeted in Serb Missile Raids*, ST. PETERSBURG TIMES (Fla.), Apr. 14, 1993, at 8A (“[T]he people who remain here will have to watch the ground as well as the sky. The small, unexploded bells scattered by the Orkan rockets are turning up with dangerous consequences—a child’s hand blown off one day, a car tire exploded the next.”).

311. Legal Issues Regarding Explosive Remnants of War, *supra* note 268, ¶ 23.

difficult for military planners to say “we can have no idea about the long-term expected consequences for the civilian population from the particular choice of weapons that we are engaged in” because statistics are available to indicate, for example, the likely or expected level of dud submunitions.³¹²

Military planners in the U.S. are directed to consider collateral effects of a very broad range. The Joint Chiefs of Staff instruct war planners that “effects often spill over to create unintended consequences, which may be counterproductive An example of a counterproductive consequence entails injury or collateral damage to persons or objects unrelated to the intended target Consider second-, third-, and higher-order effects, especially political-military effects, during planning and assessment.”³¹³

Michael Schmitt has pointed out that “although it is sometimes questioned whether reverberating effects must be assessed during proportionality calculations, US doctrine affirmatively requires planners to consider them.”³¹⁴ The reverberating effects to be considered include a range of issues involving damage to the civilian infrastructure, such as industry, power, petroleum, communications, transportation, public services; these issues are at least as complex as that of unexploded ordnance, if not more so.³¹⁵

And the longer term consequences of unexploded ordnance resulting from MLRS rockets are well-known not only with respect to the Orkan, but

312. Timothy McCormack, *International Humanitarian Law Principles and Explosive Remnants of War*, UN Doc. CCW/GGE/XI/WG.1/WP.19, ¶¶ 9, 11 (Aug. 25, 2005).

313. US Joint Chiefs of Staff, Joint Pub. 3-60, Joint Targeting, I-11 (April 13, 2007), available at http://www.dtic.mil/doctrine/jel/new_pubs/jp3_60.pdf.

314. Schmitt, *supra* note 250, at 59, 63.

315. Jefferson D. Reynolds, *Collateral Damage on the 21st Century Battlefield: Enemy Exploitation of the Law of Armed Conflict, and the Struggle for a Moral High Ground*, 56 A. F. L. Rev. 1, 90 n. 356 (2005) (citing CHAIRMAN OF THE JOINT CHIEFS OF STAFF, JOINT METHODOLOGY FOR ESTIMATING COLLATERAL DAMAGE AND CASUALTIES FOR CONVENTIONAL WEAPONS: PRECISION, UNGUIDED AND CLUSTER CJCSM 3160.01A (Draft), at A-4 (Feb. 2004)) [hereinafter CJCS COLLATERAL DAMAGE METHODOLOGY]. The methodology defines “Collateral Effects”:

Collateral Effects. This term encompasses all non-CBRN [chemical, biological, radiological and nuclear] effects resulting from military operations, beyond the immediate incidental physical damage caused by the weapon's detonation. These include unintentional or incidental effects or damage to the civilian infrastructure (e.g., industry, power, petroleum, communications, transportation, public services), economy, environment, political stability, Allied/Coalition partnerships, etc. within a region, country or affecting the territory of surrounding states, cross boundaries or buffer zones that were not intended in relation to the commander's objectives or functional target systems being struck.

Id.

with similar systems as well. In the U.S. invasion of Iraq, field commanders recognized those dangers:

MLRS [multiple-launch rocket system] in counterfire was very effective. Every time the enemy tried to mass his artillery, he got *whacked* with something. We do need to come up with an alternative for DPICM [Dual Purpose Improved Conventional Munitions] bomblets on the battlefield. Unexploded bomblets are a problem for innocent civilians and our light forces, our dismounted infantry, who come after MLRS has been used in an urban environment.³¹⁶

There have been periodic rumors that the dud rate is intentional, in order to leave de facto minefields behind. In a call-in radio news program in June 2007, a caller claiming to be a former U.S. field artillery officer stated that his instructors said the dud rate on MLRS rockets was intentionally designed for that purpose.³¹⁷ It may well be that the design was not intentional, but that the well-known effect was acknowledged and factored into plans for use of the weapon suggests that longer term effects can be worked into the calculus.³¹⁸

316. Patricia Slayden Hollis, *Trained, Adaptable, Flexible Forces = Victory in Iraq*, *Interview with Lt. General W. Scott Wallace, CG of V Corps in Iraq During OIF*, *Field Art.*, Sept.–Oct. 2003, at 5, 6 (brackets and italics in original; typographical error of “battlefiweld” corrected), http://sill-www.army.mil/famag/2003/SEP_OCT_2003/SEP_OCT_2003_PAGES_5_12.pdf. This quote indicates the utility of MLRS equipped with submunitions as effective in suppressing counter fire, but at the same time acknowledges the persistent problem of unexploded ordnance for civilians and soldiers alike.

317. *Local Professor Works to Eliminate Cluster Bombs*, *Midmorning*, Minnesota Public Radio, June 27, 2007, <http://minnesota.publicradio.org/display/web/2007/06/27/midmorning2/>. The caller claimed to be “BJ from St. Paul” and that he was a former field artillery officer involved in planning fire missions in training with MLRS systems.

As I was trained, and it could be the instructors were misinformed, but as I was trained there’s a failure rate in these is actually designed in to be about 10% or so The dud rate, and some of which may be armed, some of which may not be armed, that’s also designed in, and the reason is to prevent, is to basically an area denial so that the enemy that you’re firing these at can’t get in to either recover equipment or use that area again in defending against the attackers It actually does serve a military purpose to have some failure rate and to have that actually be random so they’re not easily cleared. Now that once peace comes or a ceasefire comes this becomes really difficult to clear, but when you’re in the middle of combat, that’s not something that you necessarily consider.

Id. at 18:56–21:07.

318. *See, e.g.*, REINHILDE WEIDACHER ET AL., *CLUSTER WEAPONS: NECESSITY OR CONVENIENCE 27* (2005), *available at* http://www.passievoorvrede.nl/upload/wapens/report_cluster_weapons.pdf. (citing an Argentinian Ministry of Defence background paper that “emphasized that the self-destruct feature of submunitions that failed to explode on impact can be used for tactical and strategic purposes”).

F. Reprisals: The Devil Made Me Do It

An analysis of the *Martić* case would be incomplete without brief consideration of the reprisal defense. Martić argued that the Zagreb attack was necessary to stop the ethnic cleansing being committed by Croatian troops.³¹⁹ A reprisal argument concedes that the disputed action was illegal, but that it was done to stop another illegal act. The Rule 61 decision in 1996 concluded that customary international law had evolved to the point of outlawing reprisals against civilians completely.³²⁰ That ruling subsequently came under stinging critique.³²¹

At trial, the defense argued that Operation Flash (the May 1, 1995 Croatian offensive that prompted Zagreb shelling) violated humanitarian law and resulted in the deaths of hundreds of local Serb civilians.³²² They presented evidence of intentional massacres of civilians by Croatian forces on May 1 and May 2.³²³ The defense claimed the attack on Zagreb was a “lawful military operation,” i.e., a necessary “counter action in order to protect civilians from further atrocities.”³²⁴

The defense argued that the ostensible threats against Croatian cities were actually warnings in fulfillment of the obligation to protect civilians when reprisals are taken.³²⁵ Prior warnings to bomb Zagreb were evidence that it “was not an unexpected military operation.”³²⁶ The threats were to prevent aggression against Serbian Krajina and also to “warn the Croatian Government to take necessary measures for the protection of the Croatian civilians.”³²⁷ The defense conceded that the warnings were given long before May 1995, but emphasized that each time such a threat was made, it was in direct response to an attack by Croatia.³²⁸

319. Prosecutor v. Martić, Case No. IT-95-11-T, Judgment, ¶ 464 (June 12, 2007).

320. *Martić*, Case No. IT-95-11-61, Rule 61 Decision, 140 (Mar. 8, 1996) (“[T]he rule which states that reprisals against the civilian population as such, or individual civilians, are prohibited in all circumstances, even when confronted by wrongful behaviour of the other party, is an integral part of customary international law and must be respected in all armed conflicts.”).

321. For a summary of the critiques by Professors Kalshoven and Greenwood, see Shane Darcy, *The Evolution of the Law of Belligerent Reprisals*, 175 MIL. L. REV. 184, 231-35 (2003).

322. Public Redacted Final Trial Brief of Milan Martić, ¶¶ 130-33, *Martić*, Case No. IT-95-11-T (2007).

323. *Id.* ¶ 131.

324. *Id.* ¶¶ 135-36.

325. *Id.* ¶ 142.

326. *Id.*

327. *Id.*

328. *Id.* ¶ 144.

The ICTY Trial Chamber in the 2007 judgment rejected Martić's argument, but did not claim that customary international law had outlawed the practice entirely.³²⁹ Instead, it examined ICRC commentaries and state practice and concluded:

*[B]elligerent reprisals are acts resorted to by one belligerent which would otherwise be unlawful, but which are rendered lawful by the fact that they are taken in response to a violation of that law committed by the other belligerent. Reprisals are therefore drastic and exceptional measures [They] may be used only as a last resort and only when all other means have proven to be ineffective.*³³⁰

The Trial Chamber found that well-established conditions had not been met.³³¹ Even assuming Croatian violations, the action by the Serbian Krajina Army had not been a last resort and formal and timely warnings had not been made.³³² Critical to the larger point of this article is that for this argument to even be made, the defense must concede that shelling Zagreb constituted a war crime.

VIII. LESSONS TO BE LEARNED

Nations have used cluster munitions extensively over the past four decades in multiple conflicts around the world.³³³ Each time they are used, significant concerns have been raised about their relative military utility when balanced against the death and destruction to civilians and civilian property. Their wide-area coverage and poor targeting dramatically increase the likelihood that civilians will be injured during a conflict. Their unacceptably high failure rates result in thousands if not hundreds of thousands of unexploded bomblets which kill and injure children and adults, deny access to agricultural and grazing land, and prevent rapid post-conflict reconstruction and development. Prior to these two cases no party has been found to have illegally used cluster munitions.

329. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 468 (June 12, 2007).

330. *Id.* ¶¶ 465-66 (emphasis added) (citations omitted).

331. *Id.* ¶ 468.

332. *Id.* Three high ranking Croatian military leaders were indicted in 1996 for crimes related to the ethnic cleansing of the Serbian population from the Krajina region in Operation Storm from August 1995 to November 1995. The case has not yet gone to trial. Gotovina et. al., Operation Storm (IT-06-90), <http://www.un.org/icty/cases-e/gotovina/cis-gotovina/cis-gotovina.pdf> (last visited July 23, 2007). To the author's knowledge, no Croatians have been charged for the ethnic cleansing of Serbs that occurred during Operation Flash, the predecessor to Operation Storm and the offensive to which Martić was allegedly responding.

333. Wiebe, *supra* note 80, at 91-96.

While these two cases fall short in their analyses and conclusions in some respects, their lasting effect nonetheless should be that military commanders and their civilian superiors think hard before using such weapons in civilian areas. Leaders can no longer claim lack of knowledge about the immediate and long-term effects of cluster submunitions warheads. Stockpiles of unguided systems incorporating submunitions with high failure rates proven in actual combat situations should be destroyed.

Efforts to distinguish these cases away as aberrations due to their extreme and clearly disproportionate outcomes should be resisted, and more prosecutions of cluster munition misuse must be undertaken.³³⁴

While the *Martić* case resulted in a conviction and may have a deterrent effect, it also came at great expense and took many years to prosecute. To its credit, the prosecution persistently presented detailed evidence about the known nature and effects of the Orkan MLRS system.³³⁵ Effective prosecution requires such attention to detail, but a more effective check on the indiscriminate effects of cluster munitions should come through a more systematic regulation or ban of these weapons.

A. Advance Awareness of Cluster-Weapon Characteristics Can Lead to Criminal Liability

Advance knowledge of the characteristics of cluster munitions may contribute to findings of intentional targeting of civilians, conducting indiscriminate and disproportionate attacks, or failing to take reasonable precautions in attack. Direct knowledge of the effects of cluster munitions (and perhaps even reckless disregard in not learning of such potential effects) can lead to criminal indictment for war crimes and crimes against humanity, or to disciplinary action.

Proving such knowledge presents a challenge, but the principle itself is of great importance. Under the *Martić* judgment, willfulness included either malice aforethought or recklessness.³³⁶ The Trial Chamber inferred direct knowledge of weapon characteristics from circumstantial evidence.³³⁷

334. See Fenrick, *supra* note 25, at 177 (“No tribunal to date has ever explicitly determined in a well articulate[d] manner that disproportionate damage was caused when assessing an incident in which the disproportionate impact of the attack was not blatant or conspicuous.”).

335. See *Martić*, Case No. IT-95-11-T, Judgment, ¶ 462.

336. *Id.* ¶ 72 & n.138.

337. *Id.* ¶ 337.

Had the EECC applied the same level of scrutiny to weapon characteristics, it might have found that the Eritrea had intentionally attacked civilians. Eritrea avoided such a finding in part because it actually hit a legitimate military target and because its pilots were woefully under-trained.³³⁸ Cluster munition characteristics nonetheless could have been used to prove an indiscriminate—as opposed to an intentional—attack. Nonetheless, once it determined that the effects of the weapon were clearly apparent to the Eritrean command, the EECC held Eritrea accountable for failing to take immediate steps the very same day to prevent further civilian deaths.³³⁹ The Eritrean failure in the period following the attack to take remedial action counted as evidence of not taking feasible precautions in the Mekele attack itself.³⁴⁰

B. The Use of Unguided Cluster Munitions with Wide-Area Effects May Lead to Criminal Liability.

The large footprints of lethal submunitions may be evidence of intentional targeting of civilians in urban areas. The targeting difficulties of unguided MLRS rockets, particularly at their maximum range, contributed significantly to the finding that the attack on Zagreb was indiscriminate.³⁴¹ The use of multiple cluster munition warheads in populated areas also may be considered a “widespread attack” against civilian populations. Cluster munitions defenders will argue that *Martić* may be distinguished because the ICTY Trial Chamber found that *Martić* intentionally targeted civilians.³⁴² But the judgment also notes that regardless of the presence of military targets, the Orkan is indiscriminate when used in densely populated areas.³⁴³

Militaries around the world field MLRS systems.³⁴⁴ Artillery crews have long been aware of the difficulties in targeting unguided MLRS rockets similar to those considered in the *Martić* case.

United States MLRS rockets share characteristics with the Orkan. The U.S. MLRS may fire up to twelve rockets at a time up to a range of thirty-

338. See *supra* notes 47-67 and accompanying text.

339. See *supra* notes 59-111 and accompanying text.

340. See generally Weeramantry, *supra* note 104.

341. See *Martić*, Case No. IT-95-11-T, Judgment, ¶¶ 462-63.

342. See *id.* ¶¶ 66-72, 472.

343. See *id.* ¶¶ 461-63.

344. For example:

[t]he [US MLRS] system is operational in the US Army, and fourteen countries have fielded or ordered MLRS: Bahrain, Denmark, France, Germany, Greece, Israel, Italy, Japan, South Korea, The Netherlands, Norway, Turkey and United Kingdom. The system has also been built in Europe by an international consortium of companies from France, Germany, Italy and the UK.

MLRS Multiple Launch Rocket System, USA, ARMY-TECHNOLOGY.COM, <http://www.army-technology.com/projects/mlrs/index.html> (last visited July 30, 2007).

two kilometers (less than Orkan's fifty-kilometer range).³⁴⁵ Each U.S. MLRS rocket warhead contains 644 "dual purpose" bomblets (as opposed to 288 in the Orkan).³⁴⁶ The Israeli army fired thousands of U.S.-made MLRS rockets into southern Lebanon during the July/August 2006 war with Hezbollah.³⁴⁷ Hezbollah also fired rockets loaded with submunitions into Israel, striking civilian areas in a manner that could be deemed indiscriminate.³⁴⁸

Unguided air-dropped cluster munitions similar to the CB-250K used at Mekele are also found in arsenals around the world. The U.S.-manufactured CBU-87 combined effects munition shares many characteristics with the CB-250K. The CBU-87 contains 202 submunitions (BLU-97 munitions)³⁴⁹ with similar size and designed purposes as the 240 PM-1 bomblets found in the CB-250K.³⁵⁰ The typical footprint for a CBU-87 is 200 meters by 400 meters (while the CB-250K is approximately 275 meters by 230 meters).³⁵¹

The two cases considered in this article should be instructive to prosecutors of violations of humanitarian law. Prosecutors must present detailed evidence of weapon characteristics that were known or should have been known to warfighters, and must also look at what actually happened and what users of cluster munitions did after seeing those effects in actual combat.

C. Cluster Munition Use Against Military Targets in Civilian Areas Should be Presumptively Off-Limits.

In both cases considered, cluster bombs hit populated areas with little warning during daylight hours.³⁵² Both tribunals characterized the towns hit as "densely populated areas."³⁵³ An obvious lesson is that use of cluster

345. *Id.*

346. *Id.*

347. Yuval Azoulay, *Panel to Probe Alleged IDF War Crimes in Second Lebanon War*, HAARETZ, July 24, 2007, <http://www.haaretz.com/hasen/spages/885676.html>.

348. Human Rights News, *Questions & Answers: 122mm Cluster Munition Rockets*, HUMAN RIGHTS WATCH, Oct. 18, 2006, <http://hrw.org/english/docs/2006/10/18/global14408.htm>.

349. *BLU-97/B Combined Effects Bomb (CEB)*, GLOBALSECURITY.ORG <http://globalsecurity.org/military/systems/munitions/blu-97.htm> (last visited Jan. 1, 2008).

350. *CBU-87/B Combined Effects Munitions (CEM)*, GLOBALSECURITY.ORG <http://globalsecurity.org/military/systems/munitions/cbu-87.htm> (last visited Jan. 1, 2008).

351. *Id.* The BLU-97 bomblet also purports to have three "effects": anti-personnel, anti-vehicle, and incendiary. *Id.* It is 20 centimeters by 6 centimeters in diameter. *CBU-87/B Combined Effects Munitions (CEM)*, *supra* note 350. Planning and design began in the mid-'70s and production in the mid-'80s. *BLU-97/B Combined Effects Bomb (CEB)*, *supra* note 349.

352. See discussion *supra* Parts III & IV.

353. Partial Award-Ethiopia, 43 I.L.M. 1275, ¶ 103(6) (Eritrea-Ethiopia Claims Comm'n Apr. 28,

munitions in city centers during busy times of day, even when military targets are co-located, should be presumptively off-limits.

In June 2000, the ICTY Prosecutor declined to prosecute NATO for its use of cluster munitions in the 1999 Kosovo conflict based on an investigation carried out by her staff.³⁵⁴ The final staff report referenced the 1996 *Martić* Rule 61 decision, which it noted

regarded the use of the Orkan rocket with a cluster bomb warhead in that particular case as evidence of the intent of the accused to deliberately attack the civilian population because the rocket was inaccurate, it landed in an area with no military objectives nearby, it was used as an antipersonnel weapon launched against the city of Zagreb and the accused indicated he intended to attack the city as such.³⁵⁵

The staff report concluded that there was “no indication cluster bombs were used in such a fashion by NATO.”³⁵⁶

The final *Martić* judgment undermines key elements of the 2000 staff report analysis. The *Martić* Trial Chamber in the 2007 judgment acknowledged evidence that the Serbian Krajina military had targeted *military* objectives in Zagreb but emphasized that the rockets largely missed their targets and that “the presence or otherwise of military targets in Zagreb is irrelevant in light of the nature of the M-87 Orkan.”³⁵⁷ Thus, NATO in its 1999 Kosovo campaign had used cluster bombs similar to how *Martić* had used them in Zagreb, i.e., to attack military objectives in densely populated civilian areas.³⁵⁸

A limitation of the *Martić* judgment may be that the Orkan rocket was fired from its maximum range, thus limiting the ability of the user to accurately target the munition. One might argue that cluster munitions, properly used, might be a legal weapon. While that may be the case, the Circular Error Probable/Error Ellipse concept has now worked its way into the case law of IHL. Simply because a weapon was fired within its range

2004).

354. FINAL REPORT TO THE PROSECUTOR BY THE COMMITTEE ESTABLISHED TO REVIEW THE NATO BOMBING CAMPAIGN AGAINST THE FEDERAL REPUBLIC OF YUGOSLAVIA, June 13, 2000, ¶ 27, <http://www.un.org/icty/pressreal/nato061300.htm> [hereinafter FINAL REPORT TO PROSECUTOR].

355. *Id.*

356. *Id.*

357. Prosecutor v. *Martić*, Case No. IT-95-11-T, Judgment, ¶ 461 (June 12, 2007); see also Public Redacted Final Trial Brief of Milan *Martić*, ¶¶ 167, 182, *Martić*, Case No. IT-95-11-T (2007).

358. Commentators critiqued the ICTY’s failure to consider this question. See, e.g., Thomas Michael McDonnell, *Cluster Bombs Over Kosovo: A Violation of International Law?*, 44 ARIZ. L. REV. 31, 117 (2002) (critiquing the ICTY committee’s failure, among other things, to consider “whether NATO’s use of cluster bombs in some populated areas constituted prohibited target area bombing”).

and performed as expected should not be sufficient as a defense, particularly in the case of cluster munitions fired into civilian areas. Close examination of actual cluster munition use also may well reveal that MLRS rockets have been used at or beyond their maximum range.

What about the use of cluster munitions in urban areas against “softer” targets? The *Martić* judgment made much of the fact that the explosive power of submunitions could do only slight damage to buildings like the Ministry of Defense. In U.S. military actions in Iraq, the U.S. army used MLRS in combination with precision guided unitary munitions to attack mobile artillery units in Baghdad. Suppressing artillery and tank fire, as opposed to hitting hardened structures, raises more difficult questions, but civilian deaths and injuries must be taken into account.

At a conference held in Dublin in 2003, Irish journalist Richard Downes recounted the death, terror, and havoc produced when U.S. forces attacked artillery and tanks hidden in a Baghdad civilian neighborhood with MLRS rockets and precision guided munitions in combination.³⁵⁹ He described being in a small convoy, trying to leave Baghdad and being diverted into a heavily populated neighborhood near the Mother of All Battles Mosque, described as a “Mesopotamian paradise of diverted rivers . . . and market gardens” and “*very densely populated* by tens of thousands of people.”³⁶⁰ He also described tanks cleverly hidden in houses and an artillery piece hidden in a market garden.³⁶¹ The attack occurred at 1:20 p.m. and struck a large market with many stalls.³⁶² As ripples of cluster munitions exploded, “people [were] dropping left, right and center.” A shower of explosive rain from cluster bomblets fell and he saw “a boy running into the rain He falls, he slumps, he was hit.”³⁶³ [It was] not a normal falling down.”³⁶⁴ He termed the use by Iraqi forces of civilian shields as a “despicable and disgusting turn of events.”³⁶⁵

359. See Personal Notes by Author, Presentation by Richard Downes, RTE News, Explosive Remnants of War: Voices from the Field Conference, Dublin Castle, Dublin, Ireland (Apr. 23, 2003) (on file with author) [hereinafter Richard Downes Presentation]; see also Audio Broadcast: Richard Downes Reports from Amman in Jordan after his Dramatic and Terrifying Journey out of Baghdad, RTE NEWS (Apr. 7, 2003), http://www.rte.ie/news/2003/0407/news1pm_av.html?1060113.null,200 [hereinafter Richard Downes Audio Reports].

360. See Richard Downes Presentation, *supra* note 359; see generally Richard Downes Audio Reports, *supra* note 359.

361. See Richard Downes Presentation, *supra* note 359; see generally Richard Downes Audio Reports, *supra* note 359.

362. See Richard Downes Presentation, *supra* note 359.

363. Richard Downes Audio Reports, *supra* note 359.

364. See Richard Downes Presentation, *supra* note 359.

365. See *id.*; see also Nadim Ladki, *Dodging Danger on the Road out of Baghdad*, REUTERS, Apr.

The situation pitted the responsibilities of attacker and defender towards the civilian population against one another. While the Iraqi army intentionally placed its civilians in harm's way, the attacking forces were not relieved of their duty to nonetheless take precautions to limit civilian deaths and injuries. While acknowledging that allied forces subjected MLRS strikes in Iraq in 2003 to legal reviews, Human Rights Watch concluded:

The precautions to reduce civilian casualties did not prevent widespread use of cluster munitions in populated areas. The no-strike lists included certain civilian structures but not residential neighborhoods. Forward observers either ignored or failed to see civilians in populated areas. U.S. military lawyers did not challenge the proposed strikes although they raise serious concerns under IHL's proportionality test The Coalition may have fired on legitimate military targets, especially when responding to incoming Iraqi fire, but the use of cluster munitions in populated areas almost always leads to civilian casualties. For that weapon, neighborhoods still occupied by their residents should be put on a no-strike list, to be overridden only with excellent information and careful consideration.³⁶⁶

D. Restricting Cluster Munition Use Should Not Be Seen as a Green Light to Use Even More Destructive Weapons Indiscriminately

The *Martić* judgment rejected the argument in this case that prohibiting the use of cluster munitions against military targets in an urban environment would force the belligerent to use more powerful unitary warheads instead.³⁶⁷ The discrimination analysis *begins* with an examination of the particular action in question to determine whether the military advantage outweighs anticipated collateral damage.³⁶⁸ Anticipated disproportionate or indiscriminate collateral damage may simply trump the use of large unguided unitary weapons in populated areas.³⁶⁹

6, 2003.

366. HUMAN RIGHTS WATCH, OFF TARGET: THE CONDUCT OF THE WAR AND CIVILIAN CASUALTIES IN IRAQ 97 (2003), available at <http://www.hrw.org/reports/2003/usa1203/usa1203.pdf>; see also HUMAN RIGHTS WATCH, U.S. USE OF CLUSTERS IN BAGHDAD CONDEMNED (Apr. 16, 2003), <http://hrw.org/english/docs/2003/04/16/iraq5653.htm>.

367. See discussion *supra* Part VII.D.

368. See *supra* notes 268-73 and accompanying text.

369. See discussion *supra* Part VII.D.

*E. Duds Matter: Probable Harm in the Immediate and Longer Term
Aftermath Must Be a Part of the Proportionality Equation*

The EICC in the Eritrea case did not discuss duds, while the *Martić* judgment held the defendant liable for the death of one person and the injury of another by unexploded bomblet duds.³⁷⁰ The ICTY 2000 final report to the ICTY prosecutor about NATO cluster bomb use downplayed the dangers of unexploded ordnance of cluster munitions by stating that there was no international consensus that unexploded submunitions were landmines.³⁷¹ The *Martić* ruling makes clear that such treaties are not necessary to prosecute, so long as intent and knowledge can be shown.³⁷² At the very least, the short-term dangers of cluster munitions to civilians and clearance personnel must be factored into the proportionality equation.

The longer-term effects should also be taken into consideration. The claim of indeterminacy becomes increasingly difficult as the documentation by clearance teams becomes increasingly more and more detailed. The longer-term effects on both city centers and agricultural areas can be calculated after the fact for the use of cluster munitions, and this evidence can be used both as an indication of intent by the user, as well as notice to the next user about the effects.³⁷³

The medium- and long-term effects of unexploded cluster munitions are most starkly represented in Southern Lebanon. Millions of square meters of urban, agricultural, and pastoral lands were placed out of commission by unexploded ordnance.³⁷⁴ Media reports at the time indicated that Israel claimed to be attacking Hezbollah rocket launchers in many of the areas hit by cluster munitions.³⁷⁵ Even assuming that was the case, the long-term effects should nonetheless have been accounted for in the proportionality calculus.

370. See Prosecutor v. Martić, Case No. IT-95-11-T, Judgment, ¶ 476 (June 12, 2007).

371. FINAL REPORT TO PROSECUTOR, *supra* note 354, ¶ 27.

372. See *id.*

373. See discussion *supra* Part VII.E.2.

374. See, e.g., MACCSL Map, *supra* note 205; Jim Campbell, *Lebanese Agriculture Still Ailing Nine Months after End of War*, DAILY STAR (Lebanon), June 16, 2007, http://www.dailystar.com.lb/article.asp?edition_id=1&categ_id=3&article_id=83077.

375. See *supra* notes 347-48 and accompanying text.

F. *Magic Bullets? Why Trying to Build Better Cluster Bombs Does Not Resolve All the Indiscriminate Effects Associated with Their Use.*

Can't technology resolve the issues raised in these cases? If warfighters can target cluster munitions better, and can be assured that fewer "duds" will result, won't the problems be resolved? The unitary and cluster munition variants of the new U.S. Guided Multiple Launch Rocket System are used as examples to address this argument.

Some planners seem to understand that cluster munition use in urban environments creates problems not only for civilians, but also for their own combatants. In October 2004, the U.S. commanding general of the multinational corps in Iraq "signed an urgent needs statement asking for a longer range, indirect fire weapon that could be fired . . . into an urban environment with a low probability of collateral damage and, at the same time, leave no unexploded ordnance."³⁷⁶

Precision guided munitions ("PGMs") with unitary warheads are one possible alternative. The U.S. Army's response was the XM31 Guided Multiple Launch Rocket System ("GMLRS") Unitary. The XM31 carries a unitary two hundred pound warhead, has a range of fifteen to seventy kilometers, and a claimed circular error probable ("CEP") of less than ten meters³⁷⁷ (as opposed to the 1000-meter CEP of the Orkan). This unitary warhead seems to have become the alternative of choice to MLRS cluster submunitions in Iraq.³⁷⁸

So how about a cluster munition that is more accurately delivered, has fewer submunitions, and has a lower "dud" rate? The M30 GMLRS (a close relative to the XM 31 mentioned above) uses essentially the same precision guided rocket as the XM31.³⁷⁹ Its proponents claim a dud rate of two percent or less, and the rocket carries one third fewer submunitions than the current M26 rocket

376. Col. Gary S. Kinne et al., *FA PGMs: Revolutionizing Fires for the Ground Force Commander*, FIELD ARTILLERY, May/June 2006, at 18, available at http://sillwww.army.mil/famag/2006/MAY_JUN_2006/MAY_JUN_06_PAGES_16_21.pdf (discussing PGM unitary weapons, including the GMLRS).

377. *Id.* at 16, 18.

378. Capt. Andrew D. Lantz & Maj. Paul C. Weyrauch, *GMLRS Unitary Battle Drill and the Ready First Combat Team*, Field Artillery, Mar./Apr. 2007, at 34-36 (Describing highly accurate combat use of unitary rocket in urban fighting in Ramadi); see also Maj. Christopher W. Wendland, Letter to the Editor, *GMLRS Unitary in the Close Fight*, FIELD ARTILLERY, Jan./Feb. 2007, at 4. An initial reaction by battle-tested Special Operations Forces to the suggestion of using "MLRS" were comments like "You mean that thing with all those cluster bombs that can take out and entire grid square . . . you think we can really use that at [sic] in Iraq . . ." That initial skepticism assumed all MLRS were cluster munitions. *Id.*

379. Kinne et al., *supra* note 376, at 18; see also *GMLRS Used Successfully in Iraq Battles*, DEFENSE INDUSTRY DAILY, Oct. 3, 2005, available at <http://www.defenseindustrydaily.com/gmlrs-used-successfully-in-iraq-battles-01280/>.

(404 as opposed to 644).³⁸⁰ Proponents claim, “fewer PGM rockets will be fired to get the desired effects on target, and each rocket will have fewer submunitions with a reduced dud rate.”³⁸¹

Additionally:

It gives commanders precise destructive or protective/suppressive fires against targets arrays or expanded target areas too large for unitary warheads. It also can be employed to mitigate less than optimal sensor target location errors (TLEs). Whereas unitary warheads need “tight” target location accuracy, GMLRS can accept a slightly larger error and still provide effects on the target.³⁸²

Responses to such claims have been made.³⁸³ Before presenting those arguments, it is important to remember that during the 1970s effort to ban cluster bombs, military experts gave similar assurances about the next generation of munitions.³⁸⁴ Those assurances proved hollow given the realities of warfare.³⁸⁵

1. If Cluster Munitions Are Used in Large Numbers, “Even Submunitions with Low Failure Rates Risk Causing Disproportionate Human Suffering.”³⁸⁶

For the M30, a reduction from 644 bomblets to 404 is certainly an improvement; however, it is still much higher than the 288 bomblets in the Orkan system. Large numbers, working as designed, create an impact a deadly killing field in civilian areas.

380. Kinne et al., *supra* note 376, at 18.

381. *Id.* at 18-19.

382. *Id.* at 19.

383. WEIDACHER ET AL., *supra* note 318, at 38-44.

384. *Id.*

385. See e.g., Wiebe, *supra* note 80, at 152-56 (comparing promises made about the British BL-755 cluster bomb with its actual performance in the Falklands and Kosovo).

386. WEIDACHER ET AL., *supra* note 318, at 38.

2. “Operational” Dud Rates Are Typically Much Higher than Dud Rates Claimed by Industry and Governments.³⁸⁷

The M30 GMLRS reportedly uses the M85 bomblet or a variant as its low dud-rate option.³⁸⁸ Israeli Military Industries (“IMI”) manufactures (or licenses for manufacture) the M85 bomblet, and makes extravagant claims as to its reliability: “[t]he valuable and unique IMI Self-Destruct Dual Purpose (Anti Personnel & Anti Armour) M85 Bomblet *ensures that no hazardous duds are encountered* by advancing friendly forces.”³⁸⁹ While the dud rate for M85s is likely lower than for earlier versions of DPICM munitions, their limited use in Lebanon and Iraq has raised concern about dud rates much higher than those claimed by the manufacturer.³⁹⁰

3. A “[S]ense of [R]eliability [M]ay [E]ncourage [A]rmed [F]orces” to Use More Cluster Munitions.³⁹¹

Human Rights Watch reported that during the initial invasion of Iraq in 2003, British forces may have been less restrained in their use of cluster munitions with M85s in urban areas due to their perceived increased reliability.³⁹²

4. Huge Stockpiles of Unacceptable Weapons Remain and Continue to Be Used.

Even assuming new-fangled technology can “fix” all of the concerns currently associated with cluster munitions, hundreds of millions of defective submunitions remain in stockpiles around the world. Relying on Pentagon data, Human Rights Watch reported in 2005 that the U.S. had stockpiled about 728,500,000 submunitions, of which only about 31,000 had self-destruct devices to lower the dud rate.³⁹³

387. *Id.*

388. *Id.* at 33 n.131 (citing Anthony J. Melita, *A Viewpoint from OSD*, Apr. 16, 2001, presented at The 45th Annual Fuze Conference, available at <http://www.dtic.mil/ndia/2001fuze/1Melita.pdf>).

389. ISRAELI MILITARY INDUSTRIES, LTD. (IMI), THE SDF BOMBLET, <http://www.imi-israel.com/Business/ProductsFamily/TankAmmunition.aspx?FolderID=31&docID=300> (last visited Oct. 20, 2007) (italics added).

390. Stephen Fidler, *UK to Phase Out Cluster Bombs*, FIN. TIMES, Mar. 21, 2007, at 4 (quoting Simon Conway, Director of Landmine Action: “I stood in fields of unexploded M85 munitions [in Lebanon]. They have a much higher failure rate than the Israelis or the UK military maintain.”). See also HUMAN RIGHTS WATCH, OFF TARGET, *supra* note 366 (“Human Rights Watch could not determine the rate from the field [in Iraq], but it did find evidence of duds . . .”).

391. WEIDACHER ET. AL., *supra* note 318, at 38.

392. *Id.* at 38-39 (citing HUMAN RIGHTS WATCH, OFF TARGET, *supra* note 366).

393. Human Rights Watch, *U.S.: Destroy Stockpile of Unsafe Cluster Submunitions*, July 21, 2005, available at http://hrw.org/english/docs/2005/07/21/usdom11363_txt.htm.

Access to new technology does not prevent the use of the older and less-reliable munitions. Israel fired at least 1,159,000 older, unreliable submunitions delivered by U.S.-made M26 MLRS rockets (as well as approximately 2,800,000 other submunitions delivered by artillery rounds) during the 2006 war with Hezbollah,³⁹⁴ despite the fact that Israel is the designer and manufacturer of the M85 submunition. The reported reason? “Israel uses military aid funds to purchase cluster bombs from the U.S., and in order to buy IMI-made bombs, the Israel Defense Forces would have to dip into its own budget.”³⁹⁵ The M85 submunition was used in limited numbers in Lebanon. Additionally, many nations stockpiling MLRS cluster munition systems cannot afford precision guided munitions.

5. Wide Area Munitions Are Still Wide Area Munitions—Their Use in Civilian Areas Should Still Be Presumptively Illegal.

Using the GMLRS cluster munition against “expanded target areas too large for unitary warheads” in order “to mitigate less than optimal sensor target location errors”³⁹⁶ seems to be a recipe for indiscriminate use if the weapons are deployed in a densely populated civilian area.

IX. CONCLUSION: CLUSTER BOMBS ARE NOT MACHETES

Defenders of measured use of cluster munitions will attempt to write off the two cases discussed in this article. Of course, they will say, killing civilians intentionally should be condemned, whether it is done with cluster munitions or machetes. They will say that the murder weapon in these cases just happened to be cluster bombs. But the *Martić* case goes well beyond finding that Martić intentionally killed and injured civilians, to make the clear case that cluster munitions are in a distinct category of weapons, particularly when used in an area where military targets are commingled in civilian areas.³⁹⁷ The judgment acknowledged that Martić’s forces had attempted to hit legitimate military targets in Zagreb, but held that the indiscriminate and disproportionate characteristics of the Orkan rocket could

394. HANDICAP INT’L, CIRCLE OF IMPACT, *supra* note 101, at 120.

395. Meron Rapoport, *Israel Opted for Cheaper, Unsafe Cluster Bombs in Lebanon War*, HAARETZ, Nov. 14, 2006; *see also* HUMAN RIGHTS WATCH, OFF TARGET, *supra* note 366, at 113 (“[d]espite the availability of new technology, the Coalition continued to use old cluster munitions with high dud rates [in Iraq].”).

396. Kinne et al., *supra* note 376, at 19.

397. *See* discussion *supra* Part IV.

be anticipated to cause collateral damage reaching the level of war crimes and crimes against humanity.³⁹⁸

The EECC did not find that Eritrea had deliberately targeted a civilian neighborhood in the Mekele case.³⁹⁹ Instead, it held that Eritrea had failed to take adequate precautions in attack.⁴⁰⁰ Such a holding should restrict cluster munition use in civilian areas even more than a finding of deliberate targeting. Rather than a straightforward case of killing civilians (with cluster munitions being the instant weapon of choice rather than machetes, machine guns, or strafing runs), the EECC looked at deficient pre- and post-strike Eritrean military preparation and training.⁴⁰¹ Desired but undemonstrated changes in military planning and procedure most surely would have included heightened awareness of the unique characteristics and limitations of cluster munitions which can result in indiscriminate and disproportionate damage to civilians.

Has advanced technology rendered these cases quaint verdicts on by-gone weapons of yore? Not by a long shot. Weapons similar to those used in these cases remain in stockpiles in vast numbers and continue to be used by belligerents—not to mention that past technological “fixes” for cluster bombs have proven hollow in practice.

Claims that eliminating cluster munitions will result in increased use of large unitary bombs causing even greater damage comes very close to a form of civilian hostage taking (for example, “you must allow us to kill fewer civilians legitimately or we will be forced to kill more illegitimately”). Replacing one illegal form of attack with one that is even more illegal should not be acceptable. The *Martić* judgment rejected precisely that argument out of hand, and so should the rest of the international community.

The *Martić* judgment also provided case support for considering the short-term impact of unexploded cluster bomblets when it held *Martić* responsible for the death and injury of clearance personnel following the attack. That decision must be consciously strengthened in future prosecutions, as the well-known humanitarian consequences of unexploded cluster munitions last beyond the hours and days after attack.

With each new conflict in which cluster munitions are used, the news stories unfortunately can be written in advance: cluster bombs are dropped on a town and immediately kill scores of civilians; curious children pick up and play with unexploded bomblets and are killed and maimed; cluster bombs are dropped on an agricultural area, and a farmer returns to his field to harvest or plant crops and is killed or maimed. The deadly tolling of

398. *Id.*

399. *See* discussion *supra* Part III.

400. *Id.*

401. *Id.*

cluster bomblet *zvoncici* rings out not only during the heat of battle, but continues long after open hostilities have ceased. The doomed who fall as a result of cluster munitions are not only the young combatants eulogized by Wilfred Owen, but also the curious children who will certainly die as a result of unexploded cluster bomb ordnance:

*What passing-bells for these who die as cattle?
Only the monstrous anger of the guns.
Only the stuttering rifles' rapid rattle
Can patter out their hasty orisons.
No mockeries now for them; no prayers nor bells;
Nor any voice of mourning save the choirs, –
The shrill, demented choirs of wailing shells;
And bugles calling for them from sad shires.
What candles may be held to speed them all?
Not in the hands of boys but in their eyes
Shall shine the holy glimmers of goodbyes.
The pallor of girls' brows shall be their pall;
Their flowers the tenderness of patient minds,
And each slow dusk a drawing-down of blinds.*

Wilfred Owen, Anthem for Doomed Youth (1917)⁴⁰²

402. Wilfred Owen, Anthem for Doomed Youth, The War Poetry Website (1999), <http://www.warpoetry.co.uk/owen2.html>.

